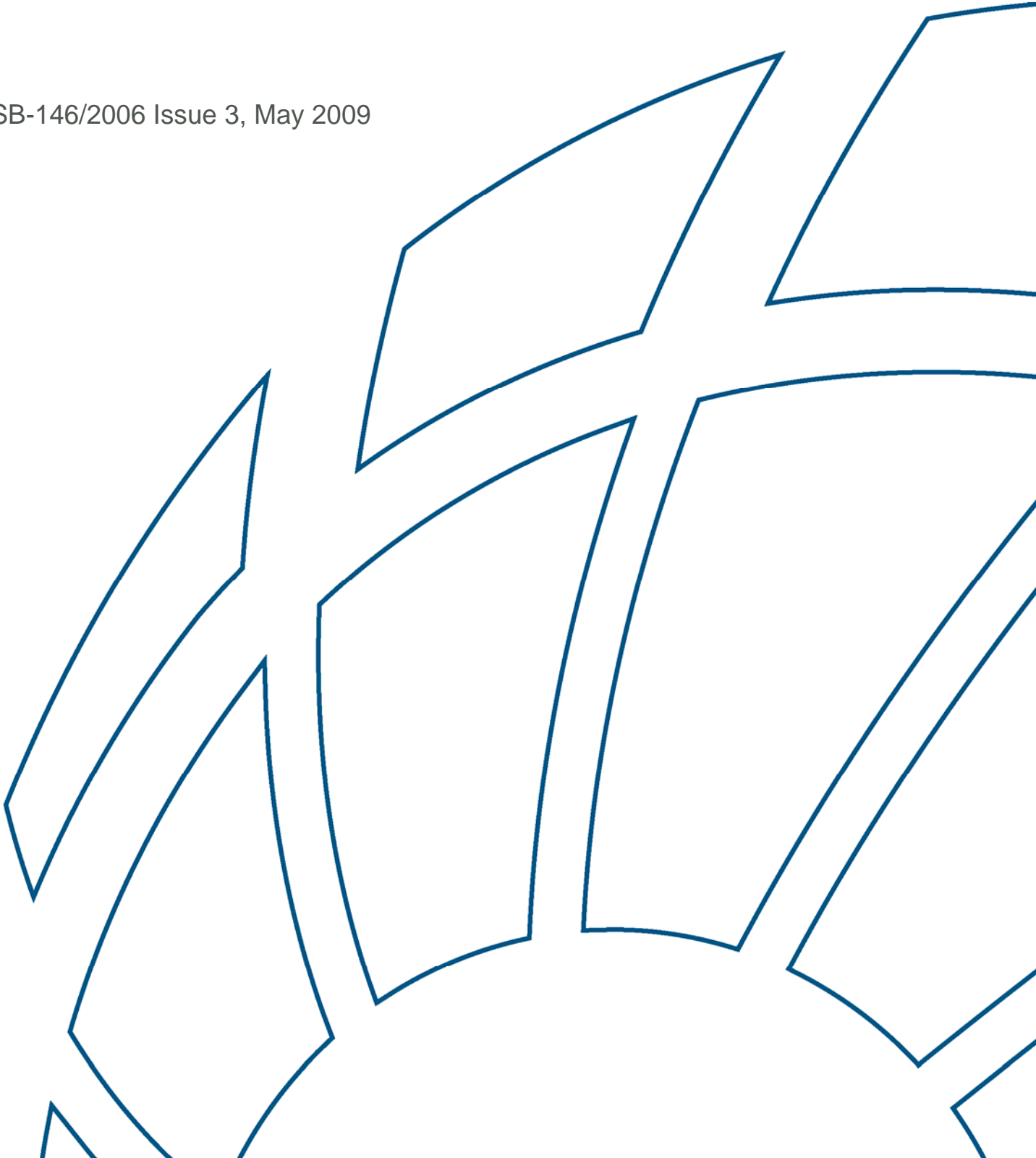


Appendix 4H - Draft Oil Spill Management Plan Outline

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Draft Oil Spill Management Plan Outline

Prepared under the Management of:

Name: *Richard D Colwill*

Position: *Managing Director*

Signature:

Reviewed and Approved by:

Name: *Richard D Colwill*

Position: *Managing Director*

Signature:

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1 Purpose & Scope

This draft plan defines the preliminary requirements for effective emergency preparedness and response, specifically with respect to oil spills. The purpose of the report is to act as a foundation for future stakeholder development.

This plan establishes the procedures for activation and operation of the Project Emergency Management Team in order to:

- Ensure that care/treatment is provided for any injuries, illness or loss,
- Prevent escalation of the incident,
- Provide timely & accurate information to stakeholders (including Regulatory Authorities, Public and other concerned parties), and
- Effectively manage post oil spill recovery

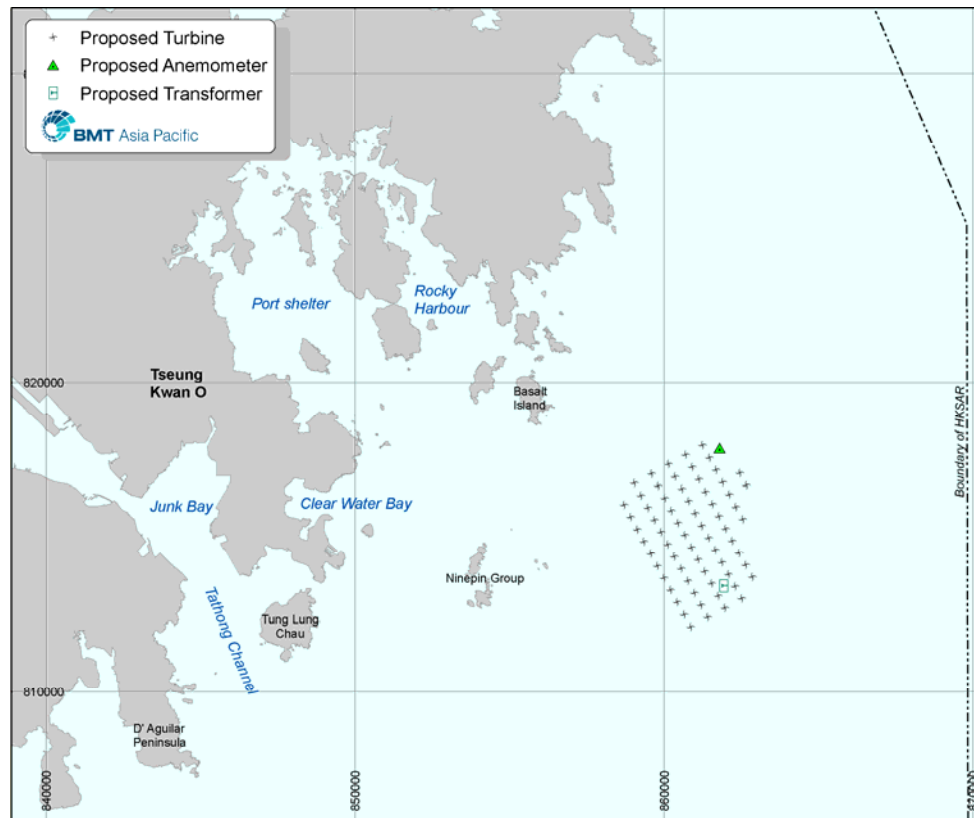
This plan is applicable to all Project personnel, including employees, Contractors, Subcontractors and site visitors, when performing tasks and activities on behalf of the Project or Company (including travel to and from the work site).

This plan is also applicable to all plant, tools, equipment and facilities utilised for and on behalf the Project, whether owned, hired, leased or borrowed by the Project, its employees, contractors, subcontractors or visitors.

2 Site Characteristics

The Hong Kong Offshore Wind Farm is sited in the south-eastern waters of the HKSAR. The following figure illustrates the location of turbines:

Figure 2.1 Location of Hong Kong Offshore Wind Farm



The Project components are anticipated to include:

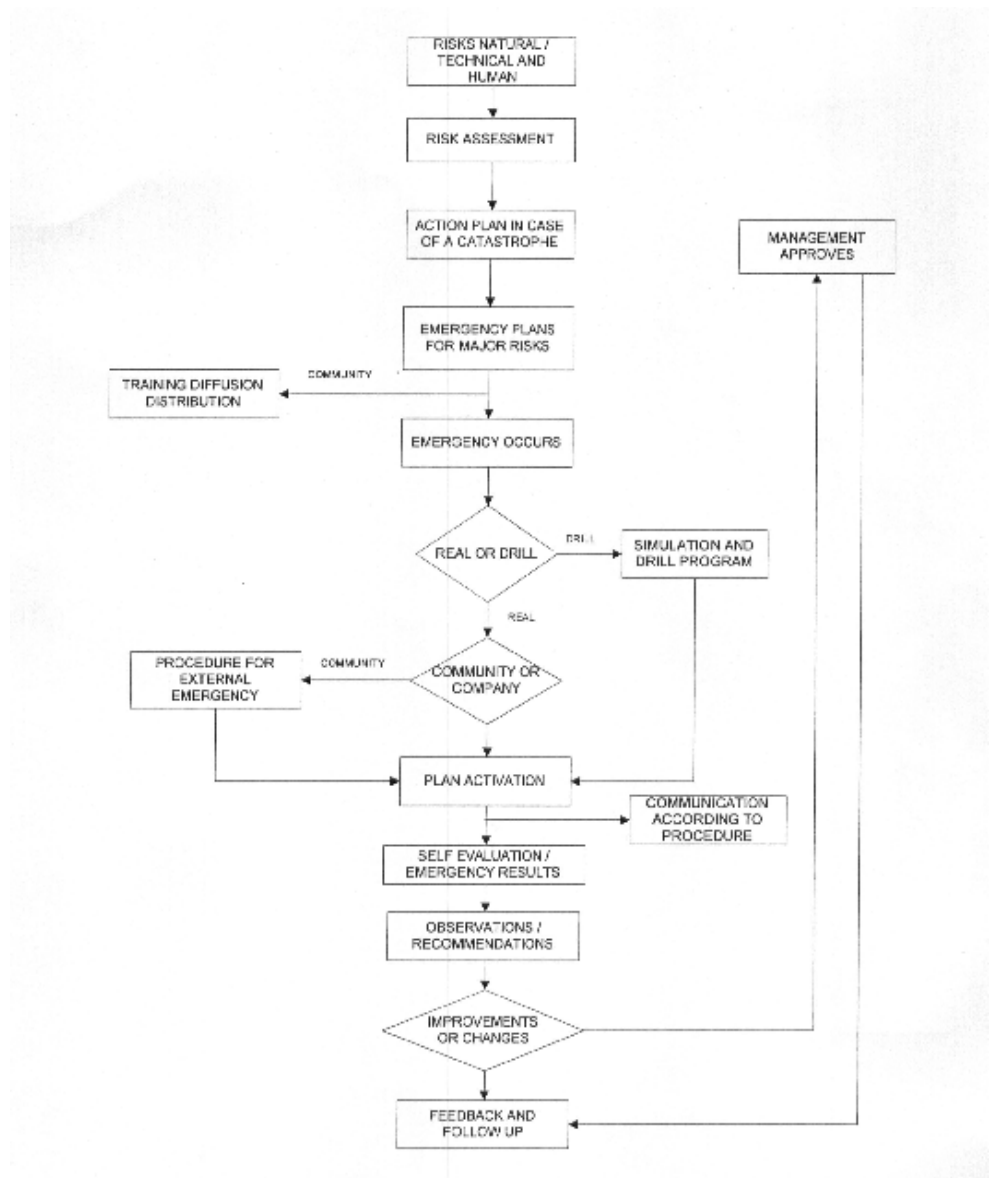
- Up to 67 wind turbines;
- An offshore transformer platform;
- Sub sea collection and transmission cables;
- Research Mast

The offshore wind farm will be linked by sub sea cables that collect electricity from the various turbines, and via an offshore transformer, for transmission to shore.

3 Emergency Response Overview

The Hong Kong Offshore Wind Farm in south-eastern Waters operates within the overall framework of an Emergency Response process.

Figure 3.1 Emergency Response Plan Process ‘Procedure’ Flowchart



4 Definitions

Term	Definition
Communication Teams (ComT)	Provides administrative support to the EMT to maintain a written record of all communication and actions during the course of the emergency including the termination, final report and remedial actions.
Contractor	Contractors, Contractor management and supervision, Contractor employees, subcontractors, Vendors and Suppliers assigned to carry out Contract works on the Project.
Emergency	An abnormal event (or series of events), a significant incident or a set of circumstances that has the potential to disrupt the normal work routine and/or cause an adverse impact on people, the environment, community, assets or reputation of the Project.
Emergency Management (EM)	A program to control the consequences (human, operational, environmental, legal, financial and assets) of an emergency. It incorporates both the emergency response to the triggering incident and the functions required to support the emergency response. It is also concerned with any adverse impact to the Project's reputation, operability and liabilities.
Emergency Management Centre (EMC)	The Wind Farm Control Centre is designated the EMC; It shall be provided with necessary and sufficient documents and equipment to execute the duties of the Emergency Response Team, in particular with respect to liaison with Marine Department Maritime Rescue Coordination Centre.
Emergency Management Team (EMT)	A team, fully responsible for the 'Emergency Management' of the incident.
Emergency Support Team (EST)	Staff supported by coopted personnel assigned with specific duties to offer assistance in handling any emergency when called upon.
Emergency Response & Rescue Vessel (ERRV)	The multi role Wind Farm maintenance and 1 st response vessels operated for to maintain safe and efficient operations at site. The ERRV is the location at the emergency site from which response is exercised and the location of the Incident Commander (IC) who is in direct control of the response.
Emergency Response (EC)	Actions taken at the scene of a physical incident to preserve lives and property; restore/maintain operations and protect the environment. It also encompasses the direction, provision of resources and direct support of these actions and external communications and notifications of a reactive and urgent nature.
Emergency Response Team (ERT)	A water borne team, under the direction of the IC, responsible for the direct and immediate response to incidents at the scene.
Incident Commander (IC)	The Incident Commander is the ERRV vessel master. He is responsible for the management of incident activities and has overall command, control and co-ordination of the ERRV and its role in the immediate site emergency response.

4.1 External Emergency Services

External Emergency Services (e.g. Marine Department, Marine Police, Fire and Rescue, Ambulance, Regulatory Agencies) have legislative authority to control specific incidents and emergencies active within the Project sites.

The Project Emergency Response Plan shall be integrated with those of external emergency services where there is an interface. In all circumstances the project EMT will support the role of the External Emergency Services; these include:

Marine Department Maritime Rescue Coordination Centre (MRCC)

Hong Kong Maritime Rescue Coordination Centre (MRCC) is responsible to co-ordinate all maritime search and rescue (SAR) in international waters of South China Sea, bounded by Latitude 10° North and Longitude 120° East. In response to the report of an Incident MRCC will initiate a series of basic rescue control and co-ordination functions. Initially the centre will investigate and verify the reported distress to determine if an SAR response is needed. If the need is validated, efforts will be directed towards determining the type of assistance required, taking into consideration such variables as the nature of the distress, and the availability of SAR resources.

Once the need for a SAR response has been verified and the type of response selected, an SAR plan will be developed. MRCC officers will then co-ordinate SAR resources to execute the SAR plan. They will be fully engaged in tracking the progress of each resource responding to the mission, updating participants on any changes to the distress situation, coordinating support requirements and documenting all activities associated with the mission. When all rescue activities have terminated, a report on the mission will be submitted to the Director of Marine.

For SAR cases within Hong Kong waters, Hong Kong MRCC will draw resources from Government Flying Service (GFS), Hong Kong Marine Police (Marpol) and Fire Services Department (FSD). Within or adjacent to the Wind Farm site the resource capability of the ERRV vessel may also be available.

HK MRCC operates 24 hours a day with a Marine Officer, a Marine Inspector and a GMDSS Operator on duty all the time.

Hong Kong Marine Police

The Hong Police provides services including:

- Maintaining law and order,
- Protecting life and property,

- Conducting marine and road control operations,
- Overseeing the conducting of external site evacuations,
- Ensuring all casualties are registered,
- Securing evacuated off site areas, and
- Recovering bodies and identifying the deceased.

Ambulance Service

The Ambulance Service provides care services for the local Project community including treatment and transport for sick and injured persons to hospital.

Fire Service Department (FSD)

FSD provides services including:

- Dealing with outbreaks of fire and the provision of the Ambulance Service,
- Diving Rescue Unit
- Rescuing persons trapped by fire,
- Dealing with hazardous materials incidents, and
- Providing fire protection for vehicle accidents and rescue operations.

5 Project Emergency Management Team (EMT)

5.1 EMT Key Roles & Responsibilities

The key roles and responsibilities of the EMT are to:

- Provide strategic decision, advice and arrange resources to the ERT (including additional resources, specialist staff, mobilization of equipment etc.),
- Shield the IC from non-essential external communications,
- Manage the media and any public enquiry (through Public Affairs Manager),
- Manage human resource issues,
- Provide logistics and technical support,
- Provide and update information to the IC,
- Co-ordinate follow up /feedback to Government, law enforcement, emergency services and other external parties,
- Manage the on-going situation, develop recovery and reconstruction plans,
- Collect and incorporate relevant post emergency reports for recommending and endorsing continuous improvement and/or lessons learnt.

5.2 EMT Composition

The composition of EMT for the Offshore Wind Farm Project is outlined below:

Role	Composition
EMT Team	Duty Wind Farm Manager Duty Wind Farm Operator(s) Public Information Officer Liaison Officer
Logistics & External Support Team	Project Manager External Resources: <ul style="list-style-type: none"> • Marine Department • Police • Fire & Rescue • Ambulance Technical Services Resources Support Communications Resources Support

Operation of the EMT should be flexible to meet the resources available, particularly in the first hour after mobilization. Since some EMT members may be still on the way to the EMC, roles given in the above table are the prime duty of EMT members.

During the early activation period of the EMT and when changing situations of an emergency demand flexibility, there may be occasions when individual members of the EMT have to assume more than one role.

5.3 Composition of the Site Operations Team

Role	Composition
Incident Commander (IC) Operations	ERRV Vessel Master ERRV Vessel Crew Emergency Response Team First Aid Officer Fire & Rescue Trained Crew

As required the IC may:

- Assume operational co-ordination of SAR facilities on scene;
- Receive and implement the clean-up and search action plan from the MRCC;
- Modify the action plan based on prevailing environmental conditions, Oil Spill Vessel deployment, Search & Rescue Units (SRUs) / Search & Rescue (SAR) Facilities availability and capability, new target information and new developments on scene, keeping the MRCC advised of any changes to the plan;
- Establish and maintain communications with all SRUs using the designated on scene channels;
- Provide relevant information to the other SAR facilities;
- Monitor the performance of other units participating in the search. Co-ordinate and divert surface units or helicopters to evaluate sightings;
- Develop and implement the response plan (when needed);

5.4 Emergency Management Centre (EMC)

Centres	Locations	Teams
Emergency Management Centre	The Wind Farm Control Centre	Emergency Management Team Logistics

5.5 Emergency Response & Rescue Vessel

Centres	Locations	Teams
Emergency Response & Rescue Vessel	Wind Farm site in South Eastern Waters	Incident Commander Vessel Crew including trained Emergency Response Teams

6 Emergency Response Procedure

6.1 General Requirements

This procedure shall be implemented to ensure that the Project Emergency Response Plan is tested, regularly updated and clearly communicated. The procedure shall address:

- Response strategies for handling potential emergencies,
- Details of responsibilities and authorities associated with emergencies,
- Co-ordination with HKSAR Government agencies and
- Follow up plan.

Recommendations resulting from this emergency exercise program shall be documented, and communicated to the EMT. The implementation of this plan shall be confirmed through:

- The availability of the Emergency Response Plan at all project facilities,
- Completion of all scheduled emergency exercises/drills,
- Records of emergency response training and competency for relevant personnel,
- Desktop Reviews and Auditing
- Effective management of any incidents where this plan has been implemented

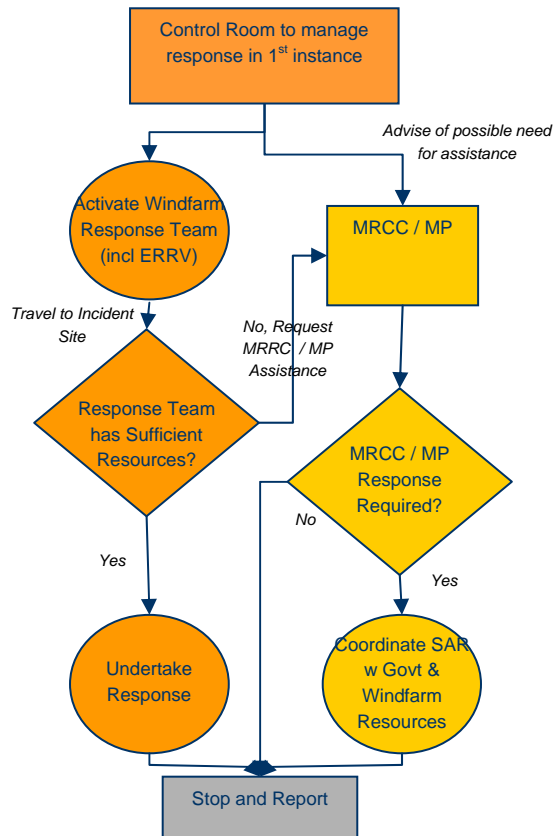
EMT Call-Out/Activation Procedure

The decision to activate the EMT will be made by the Duty Wind Farm Manager in consultation with the ERRV Vessel Master. On activation of the EMT the Duty Wind Farm Manager becomes the Emergency Response Manager (ERM) and the ERRV Vessel Master becomes the Incident Commander. The ERM shall then arrange the mobilization of the EMT and the IC will mobilize the Operational elements to execute the emergency response.

After an initial round of contacts to EMT members, messages left and estimated reporting times will be kept by the EMT and the records will be maintained and passed to the Logistic Communication Resource Support cell, who will take over the call-out procedure for the EMT members that have not yet arrived at the EMC.

For severe emergency incidents, which cannot be handled effectively by the IC and the ERM, and which require more resources and support, the Emergency Management Team (EMT) will begin resource support activation.

Figure 6.1 Notification/Activation Flowchart



Specific Requirements

The emergency response procedure is designed to minimise environmental impacts in response to an oil spill. It also aims to cover other marine pollution events associated with construction such as grout or chemical spillages.

Since sub-contractors will perform most of the construction works offshore, should an oil/chemical spill occur it would be the responsibility of the sub-contractor to ensure a suitable response. In the event of a marine pollution incident from the project the Engineering Site Manager will be responsible for ensuring a response proportionate to the size of the spill and informing and mobilising the appropriate members of all teams that may need to be involved in a spill.

The potential for spills are likely to come from the construction vessels themselves, and such potential spills would be covered adequately by the vessels own procedures. However it should be noted that the vessel Shipboard Oil Pollution Emergency Plan (SOPEP) is only appropriate to the vessel itself and do not take

into consideration the construction activities that may be performed on the vessel. Therefore, during project planning and preparation phases, the construction activities being carried out on vessels will be assessed by the sub-contractor independently of the vessel SOPEP to establish the risk of a spill occurring and consider appropriate control measures over and above that provided by the vessel SOPEP.

Oil spills include.

- Any spillage of diesel, hydraulic oils; gear oil and lube oil
- Any visible sheen of oil on the seas surface;
- Any oil spill of unattributable source (possibly by others outside the wind farm project).
- Any chemical spill including antifreeze, anti corrosion substances, grout and
- plasticisers

It is the responsibility of the person observing the spill to report this immediately to their immediate supervisor who shall inform the Engineering Site Manager providing as much information as possible including:

- Name and position;
- Type and size of spill;
- Location of spill;
- Source of spill and whether ongoing situation;

In the event of a significant incident the Wind Farm Control Centre (which it is assumed will be active during this phase to manage offshore operations) will liaise with the Engineering Site Manager and the Site H&S Manager to assess the situation. Depending on the severity of the incident the EE Site Manager will declare the appropriate response to mobilise internal and Government resources.

6.2 Drills & Training Exercises

Four levels of exercises / drills are identified:

Courses	Description
(1) Facilities set up and familiarization (annually)	Each EMT member is required to set up a basic EMC alone within a reasonable time since he/she may be the first one to arrive at the EMC.
(2) Call Out and Mobilization Exercise (yearly)	This is an unannounced and out-of-hours call out of the entire EMT with all the support functions and the setting up of facilities with displays, communications etc.
(3) Mobilization and Desktop Exercise (yearly)	As (2) except that it will be announced in advance. The exercise will continue with a very limited number of role players for an appropriate period. During the desktop exercise, 'time outs' may be taken to discuss issues, which arise. It is a useful opportunity to brief newcomers to the team.
(4) Desk Top Exercise (yearly)	As (2) except that it will be announced in advance. There will be considerable participation by role players, including role players from the emergency services and authorities, but role players will be located together to allow a greater degree of control by the Exercise Director. The exercise will be conducted in real time and a post exercise report will be produced.
(4) Live Drill (every two years)	A full scale exercise involving the emergency services, authorities and other relevant parties playing from their own locations and a predetermined level of live play at the site. A formal post exercise presentation will be held.