

RenewableUK

APPROVED TRAINING STANDARD

Issue 1: 2011

Marine Safety Training (MST)

**Marine Safety Training – Vessel Transit & Transfer
&
Refresher for Marine Safety Training – Vessel Transit & Transfer**

Editorial & Approval

This standard has been developed in consultation with key industry representatives covering OEM's, developers, training providers, construction and supply chain partners and key industry stakeholders.

The final editorial and approval of this standard has been made by the RenewableUK Training Sub-group subject to ratification of the full RenewableUK Health and Safety Strategy Group¹.

Control Log

Amendments & Dates	Version	Changes	Check	Approved
Full Review	Issue 1 : 2011	Full Review	OK	Rhys Jones
Final sign off:				
Name	Position	Date	Approved	
C Streatfeild	Director of Health & Safety - RenewableUK	10/05/2011	C Streatfeild	
C Bell	Chair – RenewableUK Training Group	10/05/2011	C Bell	

Disclaimer

It is the responsibility of the sponsoring organisation or individual attending any RenewableUK approved training course to identify what its particular training requirements are and to determine whether any training approved by RenewableUK meets those requirements. Detailed professional advice should be obtained before taking or refraining from taking action in relation to any of the contents of this training standard and any associated training course delivered against this standard.

¹ Note: This is until a new approvals system has been agreed by RenewableUK.

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Summary of significant changes: Issue 1:2011

This standard encompasses a full revision of the BWEA / OPITO Marine Safety Training Standard, now called RenewableUK Marine Safety Training – Vessel Transit & Transfer & Refresher for Marine Safety Training – Vessel Transit & Transfer Standard. The key changes to the training standard and approvals system applicable to this revised version of the standard are:

- RenewableUK are now responsible for all standards and approvals protocolsⁱⁱ;
- The new title of the standard is “RenewableUK Marine Safety Training – Vessel Transit and Transfer” and will be referred to as Marine Safety Training (MST) ;
- The pre course requirements to attend the Marine Safety Training – Vessel Transit and Transfer or Marine Safety Training – Vessel Transit and Transfer Refresher now includes the requirement for the attendee to hold a current RenewableUK Working at Height & Rescue – Wind Turbines certificate;
- The required syllabus content of 2.2.2 Transfer has been expanded to include; common industry practice for personnel transfer, and common industry practice for lifting operations involved in the transfer of work equipment;
- The required syllabus content of 2.2.3 Transfer (Practical) has been clarified;
- The required syllabus content of 2.3.1 Evacuation and Recovery (Theory) has been expanded to include Helicopter passenger safety;ⁱⁱⁱ
- The required syllabus content of 2.3.2 Evacuation and Recovery (Practical) has been expanded;
- The required syllabus content of 2.3.3 Marine Survival First Aid has been clarified;
- The duration of training has revised;
- The content scope and duration of refresher training has been revised;
- The recommended minimum time intervals of repeat and refresher has been amended as follows:
 - Full re-training against the latest version of Marine Safety Training – Vessel Transit and Transfer Refresher standard shall be conducted at least once every 2 years.
- The requirements for training provider’s facilities and resources 3.3 General Requirements Personnel now includes the requirement that all trainers delivering, supervising, and assessing personnel transfer theory or practical sessions to hold a current RenewableUK Working at Height & Rescue – Wind Turbines certificate.
- Approved training providers will be subject to revised periodic inspections and audits. These will include:
 - New **annual** reporting requirement by approved training providers to confirm status of administrative and practical arrangements to meet the latest version of the standard;
 - Undergoing an **annual** inspection and audit of a delivered course subject to reasonable notification of available course dates;

ⁱⁱ With effect from 31st December 2009 RenewableUK (previously known as BWEA) took full control of the standards and approvals protocols for all RenewableUK accredited courses. OPITO no longer provide approvals or administration.

ⁱⁱⁱ Note that any personnel using Helicopter transfer as a form of transit (for any reason other than as a subject of emergency rescue and recovery) must hold a in date suitable Helicopter Underwater Escape Training and emergency breathing system certification that takes into account the specific equipment to be used during helicopter transfer.

- Full re-accreditation to the standard at least every **3 years**;
- Provision of a statistical report detailing number of courses held, number of trainees and feedback of course content;
- The standard will be subject to a full review no later than **3 years** from the date of publication.

Section A

Introduction

1. About RenewableUK

RenewableUK (formerly known as BWEA) is the voice of wind and marine energy and the UK's leading trade association representing the interest of the renewable power sector. This standard supersedes all previous standards and in particular the BWEA Marine Safety Training Standard approved by OPITO.

This training standard has been developed in consultation with key industry representatives covering OEM's, developers, training providers, construction and supply chain partners and key industry stakeholders. The objective is ensuring that all personnel operating in the offshore renewable energy sector are able to demonstrate a common level of basic competency for small work boat vessel transfer to offshore renewable energy facilities.

2. Overview of the RenewableUK Marine Safety Training standard

The RenewableUK Marine Safety Training – Vessel Transit and Transfer Standard outlines the basic safety training and competence required by RenewableUK for all personnel involved in Vessel Transit and Transfer for passengers. The RenewableUK Marine Safety Training – Vessel Transit and Transfer Standard details the process and methods that shall be used in assessing and certifying competence.

Successful achievement of competency requires personnel to demonstrate, to the required level; theoretical understanding and knowledge, and practical application of skills. The following elements of training and assessment must normally be undertaken as a requirement;

- I. Basic training and assessment of knowledge - Normally to be undertaken at a training establishment;
- II. Continuous development and skills enhancement – In order to ensure that the competency standards is maintained and developed, accounting for new and changing health and safety hazards and risks;
- III. Refresher training & assessment – To take place on a regular basis to ensure basic skills and knowledge level is maintained.

3. Scope of the standard

This standard is only intended to address the most significant health and safety training issues as they relate to vessel transit and transfer. It applies to offshore activities subject to the jurisdiction of UK health and safety law. It is intended to ensure a common approach to basic training delivered by an approved training provider under controlled conditions.

Due to the variety of the equipment used in vessel transit and transfer, the variability of offshore renewable energy industry equipment design and the differing operating protocols that may be adopted by organisations, duty holders including employers must regularly review the suitability and adequacy of any training provided. This would typically arise out of the risk assessments performed to address vessel transit and transfer to offshore renewable facilities. Where these identify any new or revised risks that could have a significant impact on the safety of vessel transit and transfer the adequacy of training provision should be formally addressed by the duty holder.

This standard sets out:

- The syllabus and arrangements to deliver basic training and competence assessment for Marine Safety Training – Vessel Transit and Transfer by an approved training provider; and
- The syllabus and arrangements to deliver refresher, repeat training, and competence assessment for Marine Safety Training – Vessel Transit and Transfer by an approved training provider.

The standard is intended to apply to all small work boat vessels (such as, but not limited to, those defined by MGN280) transit and transfer situations applicable across the lifecycle of wind turbine installations. However duty holders should still conduct the necessary risk assessments and training needs analyses to determine the suitability of the standard to the particular risks of the project, structures and turbine.

4. Additional and advanced marine safety training

The specific need for additional training will be dependent on nature of the work and vessel nature involved, that may be performed and the specific design or configuration of a turbine or other offshore renewable energy equipment or facility. In particular this standard does **not** address the specific training and knowledge requirements for:

- Emergency response aboard permanently manned offshore installations (fixed or mobile)
- Routine helicopter transit to offshore facilities and vessels

5. Approval & Recognition of the Standard

RenewableUK recommends that anyone who is required to vessel transit and transfer to renewable energy facilities offshore has received training as a minimum to the syllabus set out in this standard and delivered by a RenewableUK Approved Training Provider.

RenewableUK do not recognise or approve any training carried out outside the scope of this standard and the associated approvals protocols. RenewableUK have provided further details of the suitability and equivalence of other training addressing marine safety for vessel transit and transfer for offshore renewable facilities delivered outside the scope of this standard.

A.5.1. RenewableUK Approved Training Providers

Training providers who have demonstrated they have the competence and management systems to deliver training to the standard will be registered as a Renewable UK Approved Training Provider. They will have been accredited and approved against the scope of this standard.

A.5.2. Trainees

Trainees who have attended and passed the assessment criteria will be awarded a certificate of basic training for marine safety training – vessel transit and transfer. This will be recorded as “RenewableUK approved - Marine Safety Training – Vessel Transit and Transfer”. This will be deemed valid for a period up to but not exceeding 2 years from the date of completion.

6. Recognition of Equivalent Training

Until 31/07/2013 an individual may gain RenewableUK Marine Safety Training certification by the completion of elements; 2.2.1, 2.2.2, 2.2.3, and 2.2.5 of this training standard if they hold valid STCW95 PST certification gained no more than two years prior to date of completion of the above RenewableUK Marine Safety Training standard elements. The resulting RenewableUK certification will valid for two years from the date of original STCW95 PST certification.

Section B

2. Marine Safety Training – Vessel Transit & Transfer (MST); Training Programme

1.1 Target Group

This training standard is designed to meet the basic training and competence requirements for all personnel transiting and transferring to and from offshore renewable facilities.

1.2 Pre-course requirements

It is required that the training provider should be able to verify to the pre-requisites of the trainees as requested by RenewableUK auditors.

1.1.1. Academic & Technical

A current RenewableUK Working at Height & Rescue – Wind Turbines certificate^{IV}

1.1.2. Aptitude and Capability

None.

1.1.3. Medical & Fitness

All delegates must be able to provide evidence of their capability and medical fitness to undergo the training.

Training providers will be required to demonstrate how this will be carried out (e.g. provision of a suitable questionnaire / self declaration of fitness.) Specific procedures must be in place and recorded to address candidates who have notified the training provider of any relevant health condition.

1.3 Training Outcomes

Delegates successfully completing the RenewableUK Marine Safety Training – Vessel Transit and Transfer training will be deemed to have demonstrated the basic knowledge and competence to Vessel Transit and Transfer to offshore renewable energy industry facilities.

1.3.1 Basic technical knowledge

On successful completion of training the delegate will be deemed to have demonstrated basic knowledge and understanding of:

- General health and safety duties of employers to provide training and ensure competence of employees
- Personal responsibilities of employees and the self employed
- Overview of legislation relevant to offshore operations
- Offshore hazards
- Role of IMO MCA HSE & MAIB
- General standards of conduct for vessel operations
- PPE requirements for vessel transit & transfer
- Procedure for reporting incidents, accidents and near misses for offshore operations
- Housekeeping risks relevant to vessel operations
- Safe methods of personnel transfer to and from a vessel
- Safe methods of equipment transfer to and from a vessel

^{IV} An in date certificate of the of the BWEA Work at Height Training standard (revised to RenewableUK Working at Height & Rescue Training – Wind Turbines as of October 2010) will be acceptable until 31/12/2012

- Appreciate relevance of different turbine designs (size/layout) to transfer methods
- Appreciate relevance of different company/site specific H&S procedures and rules
- Recognition of the signs symptoms, and understanding of first responder actions to hypothermia and ingestion of water.
- Procedures for vessel emergencies
- Procedures for facility emergencies
- Procedures for rescue and recovery at sea
- SAR helicopter passenger safety and emergency actions
- Basic first aid actions and common equipment in the marine environment.

1.3.2 Basic practical skills

On successful completion of training the delegate will be deemed to have demonstrated individually, basic practical skills and the competence in:

- Donning a survival/ immersion suit and lifejacket for transfer
- Transferring to and from a vessel by means of a ladder (by means of simulated exercise)
- Donning of a survival/ immersion suit prior to use in an emergency
- Donning of permanent buoyancy lifejacket prior to use in an emergency
- Righting a marine life raft
- Actions when evacuating from a vessel or wind turbine generator and boarding a marine life raft
- Group and individual in water survival techniques
- Use of common personnel recovery equipment
- Fitting of a helicopter strop and correct body posture during winching for high line transfer
- Fitting of a helicopter strop and correct body posture during winching without winch man direction

1.4 Training Programme

The training programme is designed to provide a balance of the knowledge and skills necessary to achieve the level of competence set out in the standard. This will be achieved by a combination of explanation, demonstration and participation of the relevant course element.

Examples include:

- Giving a simple, clear and accurate verbal or written explanation of a key topic (e.g. providing a simple description of PPE used to enable safe transfer from a vessel to a wind turbine);
- Demonstrating a relevant safety technique or method (e.g. the correct selection, fitting and use of PPE to enable safe transfer from a vessel to a wind turbine)
- Practical participation in a relevant technique or safe method of work (e.g. carrying out a vessel to wind turbine transfer by means of simulation.)

2 Marine Safety Training – Vessel Transfer & Transit Syllabus

2.1. Safety Overview

2.1.1. Industry Overview and Facility Overview

Give a brief overview of:

- Offshore wind farms locations in the UK
- Offshore wind farms locations in the EU

2.1.2 Environment and Offshore Hazards

Give an explanation of:

Offshore operations & marine environment hazards, their comparative risk levels including means of protection and mitigation such as;

- Weather (inc ice, and fog)
- Sea state
- Significant wave height for transfer
- Current
- Tide
- Sea temperature
- Wind chill
- Temperature differentials
- Sea sickness
- Dehydration
- Sun burn, Glare, and wind burn
- Marine growth on access ladders
- Biological hazards
- Operations in low & poor visibility conditions

2.1.3 Organisation for Safety

Give an overview of:

Responsibilities during offshore operations in the offshore wind industry of:

- Employer/employee
- Company
- Contractors
- Master of vessel
- Supervisors
- Safety advisers
- Safety representatives

Working safely offshore including:

- Behavioral safety systems
- Responsibilities and rights for the individual and others
- Accident/incident reporting
- PPE

2.1.4 Law and Enforcement

Give a brief overview of:

- The role of the IMO, SOLAS and their significance to the offshore wind industry
- The role of the HSE, MCA, and MAIB

2.2 Offshore Operations and Emergencies

2.2.1 Transit

Give an overview of the procedures for:

- Pre-boarding including a brief overview of vessel operations
- Safe boarding including arrival time, suitable personal clothing, documentation, and security
- Transit and suit/lifejacket checks and donning
- Common types of vessel access points
- Common transit vessels and their main functions and features
- Conduct of passengers on vessels

2.2.2 Transfer

Give an explanation and demonstration of;

- Safe vessel transfer of personnel from the vessel to an offshore wind turbine & vice versa (a range of common designs) including: fixed bow transfer, minimum movement bow transfer, common safe step over distances, crew instructions, Significant wave height for transfer, personal risk assessment, use of lanyards for climbing, use of inertia reel system for climbing.
- Safe vessel transfer of common work equipment from the vessel to an offshore wind turbine & vice versa (a range of common designs) including: Safety slinging and rigging, manual handling techniques, and communication.

2.2.3 Transfer Practical

Give an explanation and demonstration of, and delegates to demonstrate practical competence in:

- Transfer from vessel to ladder and return, above water (by means of simulation in benign and safe conditions^V). Exercise to conform to the following criteria;
 - Exercise to be undertaken using PPE to include; Immersion suit, Life jacket, Harness, Head protection, Gloves, Fall arrest system
 - Fixed bow position, over water
 - Stepping distance of no less than 400mm, and no greater than 500mm
 - Step clear of bow on instruction (using common industry practice)
 - Climb no less than 1m and no greater than 2m using inertia reel or lanyard system
 - Return to bow on instruction only

2.2.4 Vessel Emergencies

Give an overview of:

- Types of emergencies and abnormal conditions
- Man overboard procedures
- Alarms and communications (locations, use and appropriate response)
- The importance of suitable personal clothing
- Use & function of all common personal protective equipment^{VI}
- The actions to take in an emergency including;
 - Informing the crew
 - Muster
 - Following the skipper/crew instructions
 - Don survival suit and lifejacket
- Layout of vessels including;

^V Benign and safe conditions which is a confined or open water site that offers training-pool-similar conditions with respect to calmness, predictability of motion, and can be assured to be free of entanglement hazards. Confined water refers to either a training pool or confined open water site.

^{VI} Please refer to Section D element 4.3.5 Equipment

- Evacuation and escape routes
- Location emergency equipment
- Independent action (including launching a marine life raft by both mechanical and manual methods)

2.2.5 Facility Emergencies^{VII}

Give an overview of:

- The actions to be taken prior to, during and after evacuation or escape from an offshore wind facilities
- Evacuation routes and methods
- Evacuation into water with constant rate decent

2.3 Marine Survival

2.3.1 Evacuation and Recovery (Theory)

Give an overview of:

- Emergency actions and equipment for a marine life raft
- Correct use of location aids including:
 - EPIRB
 - SART
 - PLB
 - Safe use and handling of marine pyrotechnics
- The SAR organisation and means of rescue from the sea and survival craft
- Preparation for helicopter rescue from all locations
- Helicopter rescue including:
 - Crew control and the winch man
 - Methods of lift (hi-line transfer)
 - Double strop lift
- Helicopter passenger safety including^{VIII}:
 - Following crew instructions
 - Aviation lifejackets
 - Common helicopter safety harnesses (operation and release)
 - Common helicopter emergency brace positions
 - Helicopter evacuation
 - Deployment, operation, Initial and secondary actions of aviation life rafts

2.3.2 Evacuation and Recovery (Practical)

Give an explanation and demonstration of, and delegates to demonstrate practical competence in:

- The correct donning of a lifejacket
- The correct donning of a immersion suit
- The various types of marine life raft and their function, methods of launch
- Entering a marine life raft from a vessel

^{VII} Note that the method of decent from an offshore wind turbine will be covered as part of RenewableUK Working at Height & Rescue – Wind Turbine Standard, and as such this overview will focus only on the marine environment specific elements of escape such as cold water immersion and its physiological effects.

^{VIII} Note that any personnel using Helicopter transfer as a form of transit (for any reason other than as a subject of emergency rescue and recovery) must hold an in date suitable Helicopter Underwater Escape Training and emergency breathing system certification that takes into account the specific equipment to be used during helicopter transfer.

- Righting a marine life raft
- Entering a marine life raft from the water
- Marine life raft Initial and secondary actions, emergency equipment and supplies, and passenger duties
- The fitting of a helicopter lifting strop, subsequent lifting and (simulated) entry into a rescue helicopter (by means of high line transfer)
- Evacuation to sea - water entry and the precautions when entering from a height (stepping off poolside minimum 1 meter fall max 3m)
- In-water procedures, including individual and group survival techniques including;
 - Heat escape lessening posture
 - Protecting and maintaining the airway (both with and without a spray visor)
 - Swimming (whilst wearing an immersion suit and life jacket)
 - Formation and maintenance of a survival circle (or other suitable group survival formation)
 - Group swimming techniques
 - Towing a casualty.
- Recognised rescue and recovery methods available offshore including;
 - Survivor recovery systems (such as a scramble net or Jasons cradle)
 - Throw line / Quoit and line
 - Life ring
- The fitting of a helicopter lifting strop, subsequent lifting and (simulated) entry into a rescue helicopter (without winch man assistance)

2.3.3 Marine Survival First Aid^{IX}

Give an explanation and demonstration of;

- Basic first aid actions and common equipment in the marine environment including;
 - CPR
 - CPR for suspected drowning
 - Hypothermia
 - Category C first aid pack
 - Secondary drowning

^{IX} The content of Marine Survival First Aid element is intended for information and general guidance only; it is not exhaustive and does not indicate any specific course of action. It does not constitute or replace a formal first aid qualification. Detailed professional advice should be obtained before taking any action in relation to any medical treatment or assessment of an injured party.

Section C

1 Refresher for Marine Safety Training – Vessel Transit & Transfer (RMST); Training Programme

1.1 Target Group

This training standard is designed to maintain the basic training and competence requirements for all personnel transiting and transferring to and from offshore renewable facilities.

1.2 Pre-course requirements

It is required that the training provider should be able to verify to the pre-requisites of the trainees as requested by RenewableUK auditors.

1.2.1 Academic & Technical

A current RenewableUK Working at Height & Rescue – Wind Turbines certificate^x

A current RenewableUK Marine Survival Training – Vessel Transit & Transfer certificate or a current RenewableUK Refresher for Marine Survival Training – Vessel Transit & Transfer certificate.^{xi}

1.2.2 Aptitude and Capability

None.

1.2.3 Medical & Fitness

All delegates must be able to provide evidence of their capability and medical fitness to undergo the training.

Training providers will be required to demonstrate how this will be carried out (e.g. provision of a suitable questionnaire / self declaration of fitness.) Specific procedures must be in place and recorded to address candidates who have notified the training provider of any relevant health condition.

1.3 Training Outcomes

Delegates successfully completing the RenewableUK Refresher for Marine Safety Training – Vessel Transit and Transfer training will be deemed to have demonstrated the basic knowledge and competence to Vessel Transit and Transfer to offshore renewable energy industry facilities.

1.3.1 Basic technical knowledge

On successful completion of training the delegate will be deemed to have demonstrated basic knowledge and understanding of:

- Recognition of the signs symptoms, and understanding of first responder actions to hypothermia and ingestion of water.
- Procedures for vessel emergencies
- Procedures for facility emergencies
- Procedures for rescue and recovery at sea
- SAR helicopter passenger safety and emergency actions

^x A current certificate of the previous version of this standard will be acceptable until 01/06/2013

^{xi} A current certificate of the previous version of this standard will be acceptable until 01/06/2013

- Basic first aid actions and common equipment in the marine environment.

1.3.2 Basic practical skills

On successful completion of training the delegate will be deemed to have demonstrated individually, basic practical skills and the competence in:

- Transferring to and from a vessel by means of a ladder (by means of simulated exercise)
- Donning of a survival/ immersion suit prior to use in an emergency
- Donning of permanent buoyancy lifejacket prior to use in an emergency
- Righting a marine life raft
- Actions when evacuating from a vessel or wind turbine generator and boarding a marine life raft
- Group and individual in water survival techniques
- Use of common personnel recovery equipment
- Fitting of a helicopter strop and correct body posture during winching for high line transfer
- Fitting of a helicopter strop and correct body posture during winching without winch man direction

1.4 Training Programme

The training programme is designed to provide a balance of the knowledge and skills necessary to achieve the level of competence set out in the standard. This will be achieved by a combination of explanation, demonstration and participation of the relevant course element.

Examples include:

- Giving a simple, clear and accurate verbal or written explanation of a key topic (e.g. providing a simple description of PPE used to enable safe transfer from a vessel to a wind turbine);
- Demonstrating a relevant safety technique or method (e.g. the correct selection, fitting and use of PPE to enable safe transfer from a vessel to a wind turbine)
- Practical participation in a relevant technique or safe method of work (e.g. carrying out a vessel to wind turbine transfer by means of simulation.)

2 Marine Safety Training – Vessel Transfer & Transit Refresher (RMST) Syllabus

2.1 Offshore Operations and Emergencies

2.1.1 Transfer Practical

Give an explanation and demonstration of, and delegates to demonstrate practical competence in:

- Transfer from vessel to ladder and return, above water (by means of simulation in benign conditions^{XII}). Exercise to conform to the following criteria;
 - Exercise to be undertaken using PPE to include; Immersion suit, Life jacket, Harness, Head protection, Gloves, Fall arrest system
 - Fixed bow position, over water
 - Stepping distance of no less than 400mm, and no greater than 500mm
 - Step clear of bow on instruction
 - Climb no less than 1m and no greater than 2m using inertia reel or lanyard system

^{XII} Benign and safe conditions which is a confined or open water site that offers training-pool-similar conditions with respect to calmness, predictability of motion, and can be assured to be free of entanglement hazards. Confined water refers to either a training pool or confined open water site.

- Return to bow on instruction only

2.1.2 Vessel Emergencies

Give an overview of:

- Types of emergencies and abnormal conditions
- Man overboard procedures
- Alarms and communications (locations, use and appropriate response)
- The importance of correct personal clothing
- Use & function of all common personal protective equipment
- The actions to take in an emergency including;
 - Informing the crew
 - Muster
 - Following the skipper/crew instructions
 - Don survival suit and lifejacket
- Layout of vessels including;
 - Evacuation and escape routes
 - Location emergency equipment
- Independent action (including launching a marine life raft by both mechanical and manual methods)

2.1.3 Facility Emergencies^{XIII}

Give an overview of:

- The actions to be taken prior to, during and after evacuation or escape from an offshore wind turbine
- Evacuation routes and methods
- Evacuation into water with constant rate decent

2.2 Marine Survival

2.2.1 Evacuation and Recovery (Theory)

Give an overview of:

- Emergency actions and equipment for a marine life raft
- Correct use of location aids including;
 - EPIRB
 - SART
 - PLB
 - Safe use and handling of marine pyrotechnics
- The SAR organisation and means of rescue from the sea and survival craft
- Preparation for helicopter rescue from all locations
- Helicopter rescue including;
 - Crew control and the winch man
 - Methods of lift (hi-line transfer)
 - Double strop lift
- Helicopter passenger safety including^{XIV}:
 - Following crew instructions

^{XIII} Note that the method of decent from an offshore wind turbine will be covered as part of RenewableUK Working at Height & Rescue – Wind Turbine Standard, and as such this overview will focus only on the marine environment specific elements of escape such as cold water immersion and its physiological effects.

^{XIV} Note that any personnel using Helicopter transfer as a form of transit (for any reason other than as a subject of emergency rescue and recovery) must hold a in date suitable Helicopter Underwater Escape Training and emergency breathing system certification that takes into account the specific equipment to be used during helicopter transfer.

- Aviation lifejackets
- Common helicopter safety harnesses (operation and release)
- Common helicopter emergency brace positions
- Helicopter evacuation
- Deployment, operation, Initial and secondary actions of aviation life rafts

2.2.2 Evacuation and Recovery (Practical)

Give an explanation and demonstration of, and delegates to demonstrate practical competence in:

- The correct donning of a lifejacket
- The correct donning of a immersion suit
- The various types of marine life raft and their function, methods of launch,
- Entering a marine life raft from a vessel
- Righting a marine life raft
- Entering a marine life raft from the water
- Marine life raft Initial and secondary actions, emergency equipment and supplies, and passenger duties
- The fitting of a helicopter lifting strop, subsequent lifting and (simulated) entry into a rescue helicopter (by means of high line transfer)
- Evacuation to sea - water entry and the precautions when entering from a height (stepping off poolside minimum 1 meter fall max 3m)
- In-water procedures, including individual and group survival techniques including;
 - Heat escape lessening posture
 - Protecting and maintaining the airway (both with and without a spray visor)
 - Swimming (whilst wearing an immersion suit and life jacket)
 - Formation and maintenance of a survival circle (or other suitable group survival formation)
 - Group swimming techniques
 - Towing a casualty.
- Recognised rescue and recovery methods available offshore including;
 - Survivor recovery systems (such as a scramble net or Jasons cradle)
 - Throw line / Quoit and line
 - Life ring
- The fitting of a helicopter lifting strop, subsequent lifting and (simulated) entry into a rescue helicopter (without winch man assistance)

2.2.3 Marine Survival First Aid

Give an explanation and demonstration of;

- Basic first aid actions and common equipment in the marine environment including;
 - CPR
 - CPR for suspected drowning
 - Hypothermia
 - Category C first aid pack
 - Secondary drowning

Section D

1. Training – Delivery & Administration

1.1 General arrangements

All training must be delivered in accordance with the terms and conditions of the RenewableUK approvals and accreditation system. This includes arrangements covering:

- Management of the training
- Personnel
- Facilities, apparatus & equipment
- First aid
- Course arrangements
- Delivery of training

1.2 Specific arrangements

1.2.1 Duration of Training

- Marine Safety Training – Vessel Transfer & Transit (MST)
The optimum contact time for this training and assessment is seen as 16 hours
- Refresher For Marine Safety Training – Vessel Transfer & Transit (RMST)
The optimum contact time for this training and assessment is seen as 8 hours.
- Total contact time per day shall not exceed 8 hours and the total training day shall not exceed 10 hours.

1.2.2 Performance Assessment

- Delegates will be assessed against the learning outcomes using direct observation, oral and/or written questions as appropriate.
- Training providers must have a policy and procedure in place for dealing with persons not meeting the stated learning outcomes.
- Training providers must have suitable procedures in place to assist delegates with learning or physical disabilities. In addition arrangements shall also be provided for delegates where English is not their first language.

1.2.3 Frequency of refresher training

The period for this training shall not normally exceed the following interval

- Full re-training against the latest version of the full standard shall be conducted at least every **2 years**.
- It is strongly recommended that all personal receive briefing on core emergency protocols for the specific vessel they are aboard at the start of each offshore trip.

1.3 Training Providers – Facilities and Resources

1.3.1 General Requirements

All training providers must ensure the requirements set out in all training must be delivered in accordance with the terms and conditions of the RenewableUK approvals and accreditation system.

1.3.2 Personnel

In addition to the requirements set out in the RenewableUK approvals and accreditation system, the training provider must demonstrate evidence that training supervisors and trainers can demonstrate evidence of their competence and experience in the following areas:

- Working offshore and associated emergency situations
- A current RenewableUK Working at Height & Rescue – Wind Turbines Certificate
- Practical experience of accessing offshore Wind Turbines'
- Practical experience of vessel operations
- Instructional and lecture techniques
- Relevant competence assessment techniques
- A range of marine emergency equipment that may be used in the industry
- All supervisors and trainers must participate in ongoing staff training programmes to maintain and update skills and knowledge

1.3.3 Trainer/Delegate Ratio

The ratio shown for theory sessions indicates the maximum number of delegates attending the course. Other ratios indicate the maximum number of delegates to be supervised by an Instructor at any one time during each activity.^{xv}

1.3.3.1 Theory

The maximum ratio for theory subjects is: 1: 12

1.3.3.2 Demonstration & Practice

- The maximum ratio for demonstrating or practicing any technique is: 1 : 4

1.3.4 Facilities, Apparatus & Equipment

1.3.4.1 Training facilities

Different facilities may be required and it is important to make sure that these are available:

1.3.4.2 Administration Arrangements

Appropriate for enrolment and certification of delegates and all aspects of the delivery of training in accordance with this standard.

1.3.4.3 Theory Training Area(s)

Designed to enable each delegate to view, hear and participate fully in the subject matter being taught.

1.3.4.4 Practical Training Area(s)

Designed to enable each delegate, to individually or as part of a team view, hear and practice the following:

- Donning of a survival suit and lifejacket
- Simulated transfer from vessel deck to a fixed ladder and vice versa, over water (benign conditions). This can be simulated using a pool.
- Righting and boarding a marine life raft
- Inflation of a life raft

^{xv} Training providers must carryout specific risk assessments to justify a specific ratio for a particular group of delegates and/or task performed. For example low ratios may be appropriate when delegates are being supervised for particular exercises in or above water. The above ratios shall not be exceeded.

- The use of a helicopter lifting strop and winching to a simulated rescue aircraft
- In-water procedures, including individual and group survival technique, followed by rescue by one of the recognised methods available offshore

All facilities must be maintained and where appropriate, inspected and tested in accordance with current standards/legislation and manufacturers guidelines.

1.3.5 Equipment

Equipment, of a type and designation used in the wind energy industry, is required to meet the needs of the training programmed.

- Lifejackets
- Survival suits c/w hoods & gloves
- Marine life raft and ancillary equipment
- Personal locator beacons (dummy unit) for explanation and demonstration purposes
- Helicopter lifting strop
- Harnesses and lanyards

All equipment must be maintained and where appropriate, inspected and tested in accordance with current standards, legislation and manufacturers guidelines. A copy of all relevant inspection and test records must be produced for verification.

Section E

1 Course administration

1.1 General Requirements

All training providers must ensure the requirements set out in all training must be delivered in accordance with the terms and conditions of the RenewableUK approvals and accreditation system.

This standard does not recognise the delivery of any training outsourced to a 3rd party.

1.2 Certification

Upon successful completion of the course the candidate will be eligible for a certificate. This shall record:

- The name, address and registered number of the training provider
- Full Course Title:
- Delegate's Name
- Course Dates
- Unique Certificate Number
- Establishment Signatory
- Reference RenewableUK approval and contact details for verifications purposes

2 Glossary

BWEA – British Wind Energy Association

IMO – International Maritime Organisation

MCA – Maritime & Coastguard Agency

HSE – Health & Safety Executive

MAIB – Marine Accident Investigation Branch

SAR – Search & Rescue

PPE – Personal Protective Equipment

SOLAS – International Convention for the Safety of Life at Sea

EPIRB – Emergency Position Indicating Radio Beacons
SART – Search & Rescue Transponder
PLB – Personal Locator Beacon
CPR – Cardiopulmonary Resuscitation
MGN280 – Marine Guidance Note 280

End