Marine Safety Training Standard

Issue 1: 2014
Editorial & approval

RenewableUK 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 RenewableUK Marine Safety Training (MST) Standard Issue 1:2012 approved by RenewableUK.

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 to ensure that all personnel operating in the wind sector are able to demonstrate a common level of basic competency of fire awareness within a wind turbine and associated site infrastructure.

The final editorial and approval of this standard has been made by the RenewableUK Training Group and ratified by the RenewableUK Health and Safety Strategy Group.

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.
# Contents

Summary of significant changes: Issue 1:2014 3  
1. Introduction 4  
2. Marine Safety Training (MST); training programme 7  
3. Marine Safety Training (MST); syllabus 9  
4. Training – delivery & administration 14  
5. Course administration 17  
6. Glossary 18  

Appendix 1: Scope & content of refresher & repeat training 19  
Appendix 2: Additional & advanced marine safety training 24  
Appendix 3: RenewableUK MST UK annex for GWO basic safety training 25  
Appendix 4: RenewableUK MST UK & GWO Basic Safety Sea Survival module 28
Summary of significant changes: Issue 1:2014

This standard encompasses the latest amendment of the RenewableUK Marine Safety Training – Vessel Transit & Transfer & Refresher for Marine Safety Training – Vessel Transit & Transfer Standard (“the standard”). The key changes to the standard and approvals system applicable to this revised version are:

This standard supersedes all previous standards and in particular the RenewableUK Marine Safety Training (MST) Standard Issue 1:2011 approved by RenewableUK.

The significant changes stated in this revision are as follows;

- Removal of the pre-qualification requirement to hold a valid RenewableUK approved Working at Height & Rescue – Wind Turbines or recognised equivalent certificate; (2.2.1)

- New syllabus requirement covering specified access systems, personal protective equipment and methods of ascending/descending ladders and associated system; (3.2.2)

- Amended scope & content of refresher & repeat training

- Amendments taking account revisions to the Global Wind Organisation (GWO) Sea Survival Module; [TBC]

- Additional minor typographical and formatting changes have also been made.

Please note with regards to the above;

Removal of the pre-qualification requirement to hold a valid RenewableUK approved Working at Height & Rescue – Wind Turbines or recognised equivalent certificate; (2.2.1) and,

New syllabus requirement covering specified access systems, personal protective equipment and Methods of ascending/descending ladders and associated system; (3.2.2)

The removal of the prerequisite requirement for RenewableUK approved Working at Height & Rescue Training (2.2.1) and the additional requirements covered in (3.2.2) is solely intended to add greater flexibility to the scheduling of a wider training programme. It should be noted that RenewableUK recommends that any personnel whose role requires exposure to any work at height situations applicable across the lifecycle of wind turbine operations should hold a valid RenewableUK Working at Height & Rescue - Wind Turbines Training certificate. Further duty holders should still conduct the necessary risk assessments and training needs analysis to determine the suitability of the standard to the particular risks of the project and turbine.
1. Introduction

1.1. Overview of the RenewableUK Marine Safety Training standard

The RenewableUK Marine Safety Training (MST) standard outlines the basic safety training and competence required by RenewableUK for all personnel involved in Vessel Transit and Transfer for passengers.

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 are normally undertaken as a requirement;

- Basic training and assessment of knowledge - Normally to be undertaken at a training establishment;
- 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; and
- Refresher training & assessment – To take place on a regular basis to ensure basic skills and knowledge level is maintained.

1.2. 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 (see Appendix 1), 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.

1.3. Additional & advanced marine safety training

The specific need for additional training (see Appendix 2) 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 and from offshore facilities and vessels (including non-emergency helicopter winch access procedures).

1.4. Approval & recognition of the standard

RenewableUK do not recognise or approve any training carried out outside the scope of this standard and the associated approvals protocols.

RenewableUK approval and accreditation to deliver this standard is based on the delivery of the standard as single linear training course only. Should an organisation wish to incorporate the standard within a wider or non-linear training programme which includes course elements recognised or approved by organisations, other than those specified within this standard, then further approval evidence will be required. Further details are set out in the RenewableUK approval and accreditation process.

1.5. 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.

1.6. 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 issue1.

1.7. Recognition of equivalent training

An individual may gain RenewableUK Marine Safety Training certification by the completion of elements; 3.2.1, 3.2.2, 3.2.3, and 3.2.5 of this training standard if they hold valid STCW78II PST certification gained no more than two years prior to date of completion of the above RenewableUK Marine Safety Training standard elements. The individual must also meet all the pre-course requirements of the standard as set out in section 2.2. The resulting RenewableUK certification will valid for two years from the date of original STCW78 PST certification. Please note all other perquisite requirements apply.

Global Wind Organisation (GWO)

The RenewableUK Marine Safety Training Standard has been fully aligned to the Global Wind Organisation Basic Safety Training – Sea Survival Module as set out in Appendix 3. However this standard includes specific reference to the particular requirements for delivery of training and the syllabus content within the UK.

---

1 Duty holders are responsible for identifying the suitability and scope of training provided as well as the determining the adequacy and frequency of any refresher training carried out. Further details are set out in supporting health and safety guidance available from www.renewableuk.com. See also the disclaimer on P2.

II STCW78 amended as of 1st of July 2013, from the previous STCW95
RenewableUK recommend recognition of the GWO Basic Safety Training Sea Survival Module certification, where suitable evidence of the governance and quality assurance of the training provider and certification body has been demonstrated and where evidence has been provided to demonstrate any additional requirements set out in the UK Annex (See Appendix 4) have been met.
2. Marine Safety Training (MST); training programme

2.1. 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 energy facilities.

2.2. 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.

2.2.1. Academic & technical

2.2.1.1. Initial training

None

2.2.1.2. Refresher & re-training

Delegates must hold a valid and in date RenewableUK approved Marine Safety Training certificate or recognised equivalent to these standards to participate.

2.2.2. Medical & fitness

All delegates must be required to self-declare that they are capable and sufficiently fit to undergo the training. Training providers must demonstrate the existence of suitable systems that make explicit reference to the capability and medical fitness of the delegate to attend the training:

1) At the time of registration of the delegate onto the course;
2) At the commencement of training prior to any practical exercises being conducted.

At the time of applying for the course, each delegate should receive information on the physical effort required and be asked to complete a self-declaration of fitness.

Where a potential delegate self-declares they are incapable but they still wish to be considered for training, they should be referred to an Occupational Health professional for a clinical assessment. The referral must specify details of the physical aspects of the training.

On the first day of the course, delegates should be required to complete a further self-declaration confirming that no new health issue has arisen which could impair their ability to undertake the training. Those who declare such a problem should not be allowed to proceed with the course but may attend a future course subject to evidence of a self-declaration of fitness.

The training provider should ensure the capability of the delegate to carry on with the training is kept under review throughout the course with particular attention being given to signs or symptoms of physical or psychological stress presenting. In all cases suitable records shall be maintained.

2.3. 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 transit and transfer by vessel to offshore renewable energy industry facilities.
2.3.1. 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, including safe donning and use of common types of PPE and equipment;
- Safe methods of equipment transfer to and from a vessel;
- 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.

2.3.2. 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;

2.4. 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.
3. Marine Safety Training (MST); syllabus

3.1. Safety overview

3.1.1. Industry overview & facility overview

Give a brief overview of:

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

3.1.2. Environment & offshore hazards

Give an explanation of:

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

- Weather (incl. 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.

3.1.3. 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;
- Marine Coordinator
- Safety representatives;
- Marine surveyor.
Working safely offshore including:

- Behavioural safety systems;
- Responsibilities and rights for the individual and others;
- Accident/incident reporting;
- PPE.

Laws, standards & codes:

- Maritime Labour Convention;
- MGN 371;
- MGN 372;
- Offshore emergency response co-operation plans ("ERCOP").

3.1.4. Relevant Legislation

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.

3.2. Offshore operations & emergencies

3.2.1. 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.

3.2.2. Transfer

Give an explanation and demonstration of:

- Types of ladders and associated fall protection systems in & on WTG Transition pieces
- Principles of operation of fall protection systems and equipment including:
  - Harnesses
  - Inertia reels
  - Lanyards & shock absorbers incl. calculation of clearance distances
  - CE markings and applicable EN standards
  - The principle and methods of 100% attachment
  - WAH PPE
- Selection, inspection & use of appropriate PPE to include:
  - Helmet
  - Gloves
  - Footwear
  - Harness
- Correct methods of ascending and descending vertical ladders and use of fall protection system
- Selection, inspection and use of fall arrest equipment

- 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;
  - Use of inertia reel system;
- 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;
  - Communication;
- Safe vessel transfer of personnel from the vessel to vessel (via range of common methods).

3.2.3. 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\(^{III}\)). 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;

3.2.4. Vessel emergencies

Give an overview of:

- Types of emergencies and abnormal conditions;
- Man overboard procedures;
- Alarms and communications (locations, use and procedures and protocols for raising the alarm);
- The importance of suitable personal clothing;
- Use & function of all common personal protective equipment\(^{IV}\);
- 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;

\(^{III}\) 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.

\(^{IV}\) Please refer to Section D element 4.3.5 Equipment
• Independent action (including launching a marine life raft by both mechanical and manual methods).

3.2.5. Facility emergencies

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.

3.3. Marine survival

3.3.1. Evacuation & recovery (theory)

Give an overview of:

• Emergency actions and equipment for a marine life raft;
• Correct use of location aids including:
  o EPIRB;
  o SART;
  o PLB
  o 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:
  o Crew control and the winch man;
  o Methods of lift (hi-line transfer);
  o Double strop lift;
• Helicopter passenger safety including:
  o Following crew instructions;
  o Aviation lifejackets;
  o Common helicopter safety harnesses (operation and release);
  o Common helicopter emergency brace positions;
  o Helicopter evacuation;
  o Deployment, operation, initial and secondary actions of aviation life rafts;

3.3.2. Evacuation & 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 an 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;

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.

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.
• 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 a poolside from a minimum of 1m, but not exceeding a maximum of 3m from the surface of the water);
• In-water procedures, including individual and group survival techniques including;
  o Heat escape lessening posture;
  o Protecting and maintaining the airway (both with and without a spray visor);
  o Swimming (whilst wearing an immersion suit and life jacket);
  o Formation and maintenance of a survival circle (or other suitable group survival formation);
  o Group swimming techniques;
  o Towing a casualty;
• Recognised rescue and recovery methods available offshore including;
  o Survivor recovery systems (such as a scramble net or Jason's cradle);
  o Throw line / Quoit and line;
  o Life ring;
• The fitting of a helicopter lifting strop, subsequent lifting and (simulated) entry into a rescue helicopter (without winch man assistance);

3.3.3. Marine survival first aid\textsuperscript{vii}

Give an explanation and demonstration of;

• Basic first aid actions and common equipment in the marine environment including;
  o CPR;
  o CPR for suspected drowning;
  o Hypothermia;
  o Category C first aid pack\textsuperscript{viii};
  o Secondary drowning;

\textsuperscript{vii} 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.

\textsuperscript{viii} A Category-C First Aid Kit provides the necessary medical equipment and stores required under the SOLAS Life Saving Appliances Code (LSA).
4. Training – delivery & administration

4.1. 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 & administrative arrangements
- Delivery & assessment of training

4.2. Specific arrangements

4.2.1. Duration of training

The recommended contact time for this training and assessment is seen as 16 hours.

Total contact time per day shall not exceed 8 hours and the total training day shall not exceed 10 hours.

4.2.2. 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.

Note: 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.

4.2.3. Scope & frequency of refresher training

It is recommended that training is regularly reviewed based on the particular capabilities and experience of each individual.

The period for this training shall not normally exceed the following intervals:

- Full re-training against the latest version of the full standard shall be conducted at least every 2 years.

4.3. Training providers – facilities & resources

4.3.1. 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. This shall include suitable facilities and arrangements to satisfy applicable health & safety, welfare and equality obligations.
4.3.2. Personnel

All training providers must ensure that training supervisors and trainers can demonstrate evidence of their competence and experience to meet the requirements set out in accordance with the terms and conditions of the RenewableUK approvals and accreditation system.

All supervisors and trainers must participate in ongoing staff training programmes to maintain and update skills and knowledge.

4.3.3. 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 competent staff including at least one instructor at any one time during each activity. IX

4.3.3.1. Theory

The maximum ratio for theory subjects is: 1: 12

4.3.3.2. Practical participation & assessment

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

4.3.4. Training facilities, apparatus & equipment

4.3.4.1. Theory training area(s)

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

4.3.4.2. 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
- 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.

4.3.4.3. Equipment

IX Training providers must carry out specific risk assessments to justify a specific ratio for a particular group of delegates and/or task performed. For example lower ratios may be appropriate when delegates are being supervised for particular exercises in or above water. The above ratios shall not be exceeded.
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 including 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.

4.3.5. Administration arrangements

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

4.3.6. On-site training

This is not applicable for this standard.
5. Course administration

5.1. 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.

5.2. 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
- The certificate is valid for 2 years
## 6. Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPR</td>
<td>Cardiopulmonary resuscitation</td>
</tr>
<tr>
<td>EPIRB</td>
<td>Emergency Position Indicator Radio Beacon</td>
</tr>
<tr>
<td>GWO</td>
<td>Global Wind Organisation</td>
</tr>
<tr>
<td>HSE</td>
<td>Health &amp; Safety Executive</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organisation</td>
</tr>
<tr>
<td>MAIB</td>
<td>Maritime Accident Investigation Branch</td>
</tr>
<tr>
<td>MCA</td>
<td>Maritime Coastguard Agency</td>
</tr>
<tr>
<td>MGN 280</td>
<td>Marine Guidance Notice 280</td>
</tr>
<tr>
<td>MGN 371</td>
<td>Marine Guidance Notice 371</td>
</tr>
<tr>
<td>MGN 372</td>
<td>Marine Guidance Notice 372</td>
</tr>
<tr>
<td>MST</td>
<td>Marine Safety Training</td>
</tr>
<tr>
<td>PLB</td>
<td>Personal Locator Beacon</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>PST</td>
<td>Personal Survival Techniques</td>
</tr>
<tr>
<td>SAR</td>
<td>Search and Rescue</td>
</tr>
<tr>
<td>SART</td>
<td>Search &amp; Rescue Transponder</td>
</tr>
<tr>
<td>SOLAS</td>
<td>Safety of Life at Sea Convention</td>
</tr>
<tr>
<td>STCW</td>
<td>Standards of Training, Certification &amp; Watchkeeping</td>
</tr>
</tbody>
</table>
Appendix 1: Scope & content of refresher & repeat training

1. Refresher training for marine safety training

RenewableUK strongly advise that formal refresher training in the marine safety as set out in this standard is carried out at least every 24 months.

1.1. 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 Marine Survival Training – Vessel Transit & Transfer certificate or a current RenewableUK Refresher for Marine Survival Training – Vessel Transit & Transfer certificate.\(^x\)

1.1.2. Aptitude & capability

None.

1.1.3. Medical & fitness

All delegates must be required to self-declare that they are capable and sufficiently fit to undergo the training. Training providers must demonstrate the existence of suitable systems that make explicit reference to the capability and medical fitness of the delegate to attend the training:

1) At the time of registration of the delegate onto the course;
2) At the commencement of training prior to any practical exercises being conducted.

At the time of applying for the course, each delegate should receive information on the physical effort required and be asked to complete a self-declaration of fitness.

Where a potential delegate self-declares they are incapable but they still wish to be considered for training, they should be referred to an Occupational Health professional for a clinical assessment. The referral must specify details of the physical aspects of the training.

On the first day of the course, delegates should be required to complete a further self-declaration confirming that no new health issue has arisen which could impair their ability to undertake the training. Those who declare such a problem should not be allowed to proceed with the course but may attend a future course subject to evidence of a self-declaration of fitness.

The training provider should ensure the capability of the delegate to carry on with the training is kept under review throughout the course with particular attention being given to signs or symptoms of physical or psychological stress presenting. In all cases suitable records shall be maintained.

\(^x\) A current certificate of the previous version of this standard will be acceptable until 01/06/2013
1.2. 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.

1.2.1. 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
- Basic first aid actions and common equipment in the marine environment.

1.2.2. 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

1.3. 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.)

1.4. Syllabus

1.4.1. Offshore operations & emergencies
1.4.1.1. 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 and safe conditions). 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

1.4.1.2. 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 suitable 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)

1.4.1.3. Facility emergencies

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

1.4.2. Marine survival

---

\[X\] Benign and safe conditions which in 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.

\[XI\] Please refer to Section D element 4.3.5 Equipment

\[XII\] 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.
1.4.2.1. Evacuation & 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:\n  - 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

Evacuation 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 an 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 a poolside from a minimum of 1m, but not exceeding a maximum of 3m from the surface of the water)
- 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.

\[XIV\] 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 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.
- Recognised rescue and recovery methods available offshore including:
  - Survivor recovery systems (such as a scramble net or Jason’s 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)

**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

**1.5. Duration of training**

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

---

**XV** 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.

**XVI** A Category-C First Aid Kit provides the necessary medical equipment and stores required under the SOLAS Life Saving Appliances Code (LSA).
Appendix 2: Additional & advanced Marine Safety Training

This standard does not address the specific training requirements for undertaking additional or advanced training such as those for specific emergency response roles and function beyond those of the non-specialist. Duty holders (e.g. employers, contractors etc.) are however strongly advised to conduct the necessary risk assessments and training needs analyses to address the particular hazards and risks of the project, site or arrangements for the relevant work place taking account of the variety of designs and layouts that exist.

RenewableUK may provide additional guidance on the nature and scope of any training specification or syllabus requirements in the future. In the absence of this guidance training providers and clients including employers are recommended to adopt the following approach:

- No delegate/trainee shall receive any additional or advanced training unless they have a valid RenewableUK Marine Safety Training, or recognised equivalent training as set out elsewhere in this document.

- Any training programmes delivered should be assessed as relevant and thoroughly quality assured by an appropriate body.
Appendix 3: RenewableUK MST UK annex for GWO basic safety training sea survival

Scope

This appendix is only intended to address the suitability of the GWO Basic Safety Training Sea Survival Module certification. It applies to individual presenting GWO Basic Safety Training Sea Survival Module certification for work activity subject to the jurisdiction of UK health and safety law. It is intended to ensure a common approach to basic training.

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 appendix sets out:

- The syllabus elements and arrangements forming the RenewableUK MST UK Annex for GWO Basic Safety Training Sea Survival and,

- Accepted evidence of competent completion of syllabus elements forming the RenewableUK MST UK Annex for GWO Basic Safety Training Sea Survival.

RenewableUK MST UK Annex for GWO Basic Safety Training Sea Survival

The following elements of the RenewableUK Marine Safety Training Standard form the RenewableUK MST UK annex. The resulting RenewableUK certification will be valid for two years from the date of original GWO Basic Safety Training Sea Survival Module certification.

Element;

Industry overview & facility overview

Give a brief overview of:

- Offshore wind farms locations in the UK

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:

- Responsibilities and rights for the individual and others
• Accident/incident reporting

Law & 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

Evacuation & recovery (theory)

Give an overview of:
- Helicopter passenger safety including XVII:
  - 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

Accepted evidence;

The following are considered as fulfilling the evidence requirements for the UK and the additional requirements cited by GWO where “national legislation sets higher requirements for the training…” These are as follows;

Industry overview & facility overview

The following are accepted as evidence:
• An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed by RenewableUK Approved training Provider for Working at Height & Rescue Training;
• An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed company induction programmes or site briefings.

Organisation for safety

The following are accepted as evidence:
• An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed by RenewableUK Approved training Provider for Working at Height & Rescue Training;
• An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed company induction programmes or site briefings.

Law & enforcement

The following are accepted as evidence:
• An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed by RenewableUK Approved training Provider for Marine Safety Training;

XVII 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.
An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed company induction programmes or site briefings.

Evacuation & recovery (theory)

The following are accepted as evidence:
- An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed by RenewableUK Approved training Provider for Working at Height & Rescue Training;
- An overview of relevant accidents and applicable legislative requirements applicable to the UK as specified by 4.2.1 delivered and assessed company induction programmes or site briefings.
- Evidence of a valid OPITO approved BOSIET, FOET, HUET EBS certification or equivalent as recognized by the Mutual acceptance of basic safety and emergency preparedness training memorandum of agreement between NOGEPA, Danish Operators, OLF, Oil and Gas UK (Revised 25/01/2011).
Appendix 4: RenewableUK MST UK & GWO Basic Safety Sea Survival module

Scope

This appendix clarifies the equivalence of the RenewableUK MST and GWO Basic Safety Training Sea Survival Module. It is intended as an indicative guide to the applicable syllabus elements contained in each standard aligned to the relevant clauses concerned.

<table>
<thead>
<tr>
<th>RenewableUK MST Syllabus element</th>
<th>GWO BST Sea Survival Syllabus element</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Safety Overview</td>
<td>ELEMENT 2.1 Global Legislation</td>
</tr>
<tr>
<td></td>
<td>ELEMENT 2.2 National legislation</td>
</tr>
<tr>
<td></td>
<td>ELEMENT 4.1 Personal LSA and PPE</td>
</tr>
<tr>
<td>3.2 Offshore operations &amp; emergencies</td>
<td>ELEMENT 5.1 – 5.6 Safe transfer</td>
</tr>
<tr>
<td></td>
<td>ELEMENT 6.1 Installations, vessels</td>
</tr>
<tr>
<td></td>
<td>and WTG</td>
</tr>
<tr>
<td></td>
<td>ELEMENT 10.1 – 10.4 Transfer practical</td>
</tr>
<tr>
<td>3.3 Marine Survival</td>
<td>ELEMENT 7.1 Man Over Board</td>
</tr>
<tr>
<td></td>
<td>ELEMENT 8.1 SAR</td>
</tr>
<tr>
<td></td>
<td>ELEMENT 9.1 – 9.6 Sea survival practical</td>
</tr>
</tbody>
</table>

End
Our vision is for renewable energy to play a leading role in powering the UK.

RenewableUK is the UK’s leading renewable energy trade association, specialising in onshore wind, offshore wind, and wave & tidal energy. Formed in 1978, we have a large established corporate membership, ranging from small independent companies to large international corporations and manufacturers.

Acting as a central point of information and a united, representative voice for our membership, we conduct research, find solutions, organise events, facilitate business development, advocate and promote wind and marine renewables to government, industry, the media and the public.