



Emergency Response & Rescue Vessel Survey Guidelines

A Joint Industry Guide

Issue 6
April 2013

Whilst every effort has been made to ensure the accuracy of the information contained in this publication, neither Oil & Gas UK, nor any of its members will assume liability for any use made thereof.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the publishers.

Crown copyright material is reproduced with the permission of the Controller of Her Majesty's Stationery Office.

Copyright © 2013 The UK Oil and Gas Industry Association Limited trading as Oil & Gas UK

ACKNOWLEDGEMENTS

In publishing these guidelines Oil & Gas UK and ERRVA acknowledge the assistance given to their preparation by the Maritime & Coastguard Agency (MCA), the Health & Safety Executive (HSE) and Seacroft Marine Consultants Limited.

ISBN: 1 903 004 00 4

PUBLISHED BY OIL & GAS UK

London Office:

6th Floor East, Portland House, Bressenden Place, London, SW1E 5BH
Tel: 020 7802 2400

Aberdeen Office:

3rd Floor, The Exchange2, 62 Market Street, Aberdeen, AB11 5PJ.
Tel: 01224 577250

Email: info@oilandgasuk.co.uk

Website: www.oilandgasuk.co.uk

CONTENTS

REFERENCES	iv
ACRONYMS	v
DEFINITIONS	v
GUIDELINES STATUS	vii
1 CERTIFICATION PROCESS FOR ERRVS	1
1.1 Fundamental Requirements	1
1.2 Survey Procedure	1
1.3 Display of Certificate	2
1.4 Invalidation of Certificate	2
2 DESIGN AND CONSTRUCTION CRITERIA	3
2.1 ERRV Groups	3
2.2 ERRV Length	3
2.3 Propulsion and Manoeuvrability	3
2.4 Visibility of Operations	4
2.5 Accommodation	4
2.6 Emergency Operation of ERRV	4
2.7 Bridge Windows	4
2.8 Planned Maintenance and Recognition of Other Surveys	5
3 STABILITY	6
3.1 Assessment	6
3.2 Stability Data	6
4 ACCOMMODATION AND FACILITIES FOR SURVIVORS	7
4.1 Accommodation Available for Survivors	7
4.2 Survivors Dedicated Seating	7
4.3 Access to and Means of Escape from Survivor Areas	7
4.4 Showers, WHB and WC	7
4.5 Water for Survivors Use	7
4.6 Survivor Areas	8
4.7 Division of Survivor Spaces	8
4.7.1 Decontamination Area	8
4.7.2 Reception Area	8
4.7.3 Treatment Area	9
4.7.4 Recovery Area	9

4.7.5	Sanitary Area	9
4.7.6	Facilities for Deceased	9
4.8	Survivors Medical Stores and Clothing	9
5	ERRV EQUIPMENT	10
5.1	Equipment Trials	10
5.2	Survivor Rescue and Recovery	10
5.2.1	Freeboard and Rescue Zones	10
5.2.2	Recovery from the Sea by Climbing Aids	11
5.2.3	Power-Assisted Methods of Recovering Survivors	11
5.2.4	Temporary Refuge in the Sea	11
5.2.5	Lifebuoys	11
5.2.6	Survivor Assistance Aids	11
5.3	Fast Rescue Craft	12
5.3.1	Definitions	12
5.3.2	Numbers and Capacities.	12
5.3.3	FRC Launch and Recovery Systems.	12
5.3.4	FRC Crew Lifejackets	13
5.3.5	FRC Crew Protective Clothing	13
5.3.6	FRC Maintenance	13
5.3.7	FRC Fuel Supply and Storage	13
5.3.8	FRC Equipment	13
5.4	Daughter Craft (DC)	14
5.4.1	DC Function	14
5.4.2	DC Loadline Exemption Certification	14
5.4.3	DC Certification	15
5.4.4	DC Miscellaneous Safety Equipment	15
5.4.5	DC First Aid Kit	16
5.4.6	DC Maintenance	16
5.4.7	DC Crew PPE	16
5.4.8	Daughter Craft Communications	16
5.4.9	DC Launch and Recovery	16
5.5	Protective Spray System	16
5.6	Man Overboard Alarms	17
5.7	Navigation Equipment	17
5.8	Lighting	17
5.9	Signalling Equipment	17
5.10	Status Board	17
5.11	Location Aids	17
5.12	Helicopter Winching	18

5.13	Food and Water	18
5.14	Rescue Publications	18
5.15	Station Bills	19
5.16	Crew Identification	19
5.17	Operations with TEMPSC or Liferrafts	19
5.18	Medical Stores and Equipment of Survivor Spaces	19
5.18.1	Stowage Locations	19
5.18.2	Treatment Area Outfitting	19
5.18.3	Recovery Area Preparation	20
5.18.4	Medical Inventory	20
5.18.5	Survivor Showers	20
6	RADIO AND OTHER COMMUNICATIONS	21
6.1	General	21
6.2	FRC Radio Communications	21
6.3	DC Radio Communications	21
6.4	ERRV Internal Communications	22
6.5	Airband Radios and DF Systems	22
6.6	Familiarity with Aeronautical Distress Procedures	23
6.7	Inclusion on Radio Survey	23
	APPENDIX A	24
	APPENDIX B	33

REFERENCES

Code for the Assessment of the Suitability of Standby vessels attending offshore Installations HSE/DoT 1991 (The “Green Code”)

EC Directive 89/686/EEC

Dealing with Offshore Emergencies. HSE handbook available from HSE Books.

Emergency Response & Rescue Vessel Management Guidelines; Oil & Gas UK

Industry Guidelines for the Management of Emergency Response for Offshore Installations – Issue 3; Oil & Gas UK

International Convention for Safety of Life at Sea 1974 (SOLAS) and its protocol of 1978 as amended.

ACRONYMS

ACOP	Approved Code of Practice
BS	British Standard
CAA	Civil Aviation Authority
DF	Direction Finding
DETR	Department of the Environment, Transport and the Regions
DC	Daughter Craft
EC	European Community
ERP	Emergency Response Plan
ERRV	Emergency Response and Rescue Vessel
ERRVA	Emergency Response and Rescue Vessels Association
FRC	Fast Rescue Craft
GPS	Global Positioning System
HSE	Health & Safety Executive
IMO	International Maritime Organisation
LSA	Life Saving Appliances
MSN	Merchant Shipping Notice
MCA	Maritime and Coastguard Agency
OPITO	Offshore Petroleum Industry Training Organisation
PFEER	Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995
SAR	Search And Rescue
ERRV	Emergency Response and Rescue Vessel
SOLAS	Safety Of Life At Sea
UKCS	United Kingdom Continental Shelf

DEFINITIONS

Safety Zone	An area considered to be contained within a 500 metre radius of an Installation and commonly referred to as the “500 metre Zone”.
Survey Body	A body competent to undertake the survey of an ERRV and judge its fitness to meet these Guidelines.
Surveyor	A competent surveyor appointed by a Survey Body
Duty Holder	The offshore installation operator or the owner of a mobile installation, having responsibility under the Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995 – (PFEER)

INTRODUCTION

These Guidelines are issued jointly by Oil & Gas UK and the Emergency Response & Rescue Vessel Association (ERRVA). They provide guidance for marine surveyors, ERRV operators and charterers in assessing the suitability of vessels standing by offshore Installations when they provide the arrangements for effective recovery and response required by offshore health and safety legislation. These vessels are generally referred to in these Guidelines as ERRVs (ERRV).

These Guidelines have been prepared following extensive consultation with the Maritime and Coastguard Agency (MCA), the Health and Safety Executive (HSE), a wide group of individuals and other interested organisations.

These Guidelines describe what is generally regarded in the industry as good practice and set standards to enable a vessel to undertake the fundamental standby functions. They are not mandatory and operators may adopt different standards in a particular situation where to do so would maintain an equivalent or better level of safety.

Compliance with the standards set out in these Guidelines is demonstrated by certification following survey by an independent body competent for the purpose. However different standards may be adopted in a particular situation where to do so would maintain an equivalent or better level of safety, to the satisfaction of the surveyor and to enable a Certificate to be issued.

These Guidelines are a living document and after experience in their application or changes in technology, they may need to be reviewed and amended to ensure that they continue to set out good practice. Therefore Oil & Gas UK and ERRVA welcome, at any time and from any person, comments on their content or working.

Comments may be sent to either of the following:-

Oil & Gas UK
3rd Floor
The Exchange 2
62 Market Street
Aberdeen
AB11 5PJ
Tel: 01224 577250
Fax: 01224 577251

The Chairman
ERRVA Ltd.
Ardene House
56 Bon Accord Street
Aberdeen
AB11 6EL
Tel: 01224 857970
Fax: 01224 582369
Email: dkenwright@errva.org.uk

GUIDELINES STATUS

These Guidelines have been prepared following extensive consultation with the MCA, HSE and other interested organisations and apply to vessels standing by offshore Installations on the United Kingdom Continental Shelf (UKCS). It is important to be clear on their legal standing, which is as follows that:-

- a) they have no statutory force. They do, however, support the relevant offshore health and safety legislation relating to the recovery and rescue arrangements near Offshore Installations, i.e. Regulation 17 of the Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995 (SI 1995 No.743) (PFEER). Further information on this requirement is given in *Appendix C*.
- b) they do not relate to marine requirements, from which they are quite distinct. To ensure compliance with maritime legislation the relevant maritime safety regulator - MCA in the case of the UK - must carry out the appropriate marine surveys and issue the necessary statutory certification (for international voyage vessels) or ensure compliance with mandatory legislative requirements (for UK non-international voyage vessels). The survey for assessment of compliance with the standards set for standby functions and the issue of a certificate detailed in these Guidelines are additional to the maritime safety regulator's surveys, but may be carried out at the same time. (*Ref. Section 1.4 for further information on the timing of re-certification*). Equipment provided in accordance with these Guidelines may support an application of equivalence to a particular maritime legislation e.g. the provision of a fast rescue craft may support a request for exemption on lifeboat provision. Such matters are for the sole consideration of the maritime safety regulator who will need to be assured that an equivalent or higher level of safety has been provided. Also, in view of the limited use of survivor accommodation, if it is constructed with non-combustible ceilings, linings, bulkheads, doors and decks and where floor coverings, furniture and furnishings, etc. satisfy the requirements of the relevant maritime safety regulator's requirements concerning fire risk in accommodation areas, then this may support an application to be considered for exemption from parts of the cargo ship construction regulations relating to structural fire protection.
- c) In United Kingdom territorial waters adjacent to Northern Ireland, the Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations (Northern Ireland) 1995 (SR 1995 No 345) apply.

These Guidelines relate solely to technical standards for vessels providing emergency response and rescue services. Further guidance should be sought from:-

- Emergency Response & Rescue Vessel Management Guidelines. (*Issued jointly by Oil & Gas UK and ERRVA*)
- OPITO Approved Emergency Response Standards for Emergency Response & Rescue Vessel Crews.

(Details the levels of competence required by ERRV crews and the means by which these are achieved and demonstrated.) Standards under review and will be revised when review complete

1 CERTIFICATION PROCESS FOR ERRVS

1.1 Fundamental Requirements

The fundamental requirements which an ERRV must satisfy are that it should be capable of:-

- Rescuing from the water or recovering persons and providing them with medical aid.
- Acting as a “Place of safety” in accordance with PFEER
- Providing on scene co-ordination, as required, in accordance with relevant Installations’ Emergency Response Plan (ERP) and Oil & Gas UK Guidelines on Management of Emergency Response
- To participate as required by the duty holder in the execution of the Installation collision avoidance strategy e.g. to monitor the Safety Zone, warn approaching vessels and the Installation of the risk of collision and prevent same where possible;
- Acting as a reserve radio station as required by the duty holder

In the event that the ERRV is utilised in an additional role then an assessment should be made of any additional risks involved (including in particular any that could affect its rescue and recovery function) and measures to mitigate the risk put in place. A copy of the details of the risk assessment should be kept on board the ERRV and should be made available to surveyors at their request.

The Guidelines for the safe management of offshore supply and anchor handling operations (North West European Area) applies to all vessels engaged in the carriage of cargo, towing, anchor handling and supply operations relative to offshore operations in the United Kingdom. ERRV crews engaged in these operations should be familiar with and operate to these guidelines, and comply with the following requirements:

- 1.1.1 ERRVs crewed by deck officers with STCW restricted certificates (i.e. converted Fishing Certificates) having obtained a Cargo Handling Certificate are to be allowed to carry up to 400 square metres of containerised deck cargo. They are not permitted to carry slung tubular or pipes.
- 1.1.2 The Certificates of Competency of officers who have a Cargo Handling Certificate shall be endorsed by the MCA Headquarters, stating that the holders are certified to serve on ERRVs that are permitted to carry 400 square metres of containerised deck cargo.
- 1.1.3 Deck cargo must not obstruct or restrict the helicopter winching area on the main deck unless an acceptable alternative winching area is provided in another place aboard the vessel.

1.2 Survey Procedure

Application for the initial and every fifth year survey of an ERRV for compliance with these Guidelines should be made to the MCA. ERRV operators may however select MCA or UK recognised Classification Society to undertake the annual surveys. Classification Societies recognised in the UK for the purposes of these Guidelines are the British Committees of Lloyds Register of Shipping, Det Norske Veritas, Bureau Veritas, Germanischer Lloyd, American Bureau of Shipping, Class NK, and Registro Italiano Navale.

Upon satisfactory completion of the initial survey of the ERRV, including any repairs and additions necessary, the MCA should issue the original Certificate of Survey and a certified copy of the original. The Certificate should state clearly whether the ERRV has met the requirements for a Group A, B or C vessel. A group A vessel may also be dual certified as a group B vessel provided always that it is equipped, manned and operated in accordance with the Management and Survey Guideline requirements for the relevant group. The Certificate signifies compliance with these Guidelines and should be valid for a maximum period of five years subject to annual endorsement by a survey body that certifies continuing compliance.

Annual surveys are required to be performed following the initial survey and certification; these shall be undertaken in accordance with these Guidelines within three months either side of the anniversary date. The renewal survey may be performed up to three months before expiry and be valid from the expiry date.

1.3 Display of Certificate

A copy of the Certificate of Survey should be kept on board the ERRV for examination by surveyors engaged in the issue of new certificates, the relevant Regulator and Duty Holder representatives.

1.4 Invalidation of Certificate

Non-compliance with certification requirements should result in the invalidation of the Certificate of Survey and a new survey for the re-issue of the Certificate of Survey should be required.

2 DESIGN AND CONSTRUCTION CRITERIA

2.1 ERRV Groups

PFEER requires that duty holders make effective arrangements to recover and rescue persons from the sea near the Installation. These arrangements have to take into account the number of persons who may need to be recovered or rescued subject to prevailing weather conditions and condition of the casualties. The duty holder shall determine what this number may be and ensure that the ERRV included in these arrangements is capable of fulfilling this function.

Except as otherwise noted, these Guidelines describe a "Group B" ERRV suitable for acting as ERRV at any Installations not falling within the category requiring a "Group A" ERRV.

A "Group A" ERRV is one acting as an ERRV for an Installation which is manned by particularly large numbers, e.g. significantly over 300, such as during the hook-up and commissioning phases of field development. Group A ERRVs should meet the additional requirements noted in these Guidelines.

A "Group C" ERRV is one acting as an ERRV for an Installation which is manned by very small numbers, e.g. up to about 20. This ERRV Group should meet the requirements of the Guidelines for Group B ERRV in all respects except as otherwise stated in these Guidelines.

Most ERRV fall within Group B. Therefore Group B vessels are considered to be the standard ERRVs and the Groups A and C ERRVs the exceptions.

ERRV operators should notify the Survey Body of the ERRV Group for which the vessel is to be considered. Where no such notification is received prior to the survey, the Survey Body should proceed on the assumption that a Group B ERRV capable of accommodating 300 persons is being presented.

2.2 ERRV Length

All ERRVs should be at least 35m registered length except for Group C ERRVs which should be at least 30m registered length.

2.3 Propulsion and Manoeuvrability

ERRVs should be capable in calm conditions of a speed of at least 10 knots and should, as a minimum, be equipped with one of the following propulsion configurations: -

- a) A 360 degree azimuth bow thruster unit and either single screw propulsion with reversing gearbox or variable pitch control propeller. The bow thruster unit should be capable of producing an ahead speed of 4 knots and should be independent of the main engine for its source of power;
- b) Twin screw propulsion and bow thruster such that the ERRV is capable in calm conditions of 4 knots in the ahead direction with one main propulsion unit out of action;
- c) Equivalent main propulsion and manoeuvring systems providing similar levels of redundancy and manoeuvring capabilities.

The ERRV operator should ensure and the surveyor be satisfied by demonstration, that the ERRV may be readily manoeuvred by one person. To assist in the provision of such

manoeuvrability, all ERRVs should be fitted with a full bridge control system of the main engines and thrusters.

It should be possible to turn the ERRV without headway or sternway and to hold it in a desired position and on a set heading while carrying out rescue operations, with sufficient accuracy to avoid hazard to the ERRV, other units or persons in the water, in all but exceptional weather.

2.4 Visibility of Operations

The navigating bridge deck should be so designed that the person in charge is able to move easily from side to side of the ERRV, have an unobstructed view all round to within approximately 0.3 metre of the ERRV's sides and, in particular, a clear sight of the Rescue Zones at the deck edge, the Winching Area and the areas in which rescue boats are launched and recovered.

The points from which this view is obtained need not be fully enclosed. If it is necessary to move external to the bridge to obtain this viewpoint, care should be taken that the observer is not isolated by reason of lack of visual or verbal contact with the occupants of the bridge interior. Deck lighting should provide adequate illumination of areas in which rescue operations are being undertaken but should be installed to prevent glare on the bridge.

The ergonomic design of new-buildings, or vessels newly converted to the ERRV role should ensure full visibility of all operational areas, when operating in the ERRV role, when manoeuvring the vessel.

2.5 Accommodation

The ERRV should be provided with the survivor accommodation noted in *Section 4*.

2.6 Emergency Operation of ERRV

The ERRV should be capable of simultaneous operation of all electrical equipment which may be required during an emergency situation and should have adequate emergency power to allow rescue services to continue in the event of a main power failure. As a minimum, during the loss of main power, the ERRV should be capable of continuing to launch and recover one FRC, the operation of emergency lighting providing coverage as described in *Section 5.8* and the operation of external communications equipment. The emergency power supply to FRC/DC davits should be sufficient to permit recovery of the FRC/DC fully laden from the water to the stowed position within 5 minutes or less.

It is not expected that emergency power sources for rescue and survivor purposes should provide the same level of illumination as main power sources but they should be demonstrated as sufficient to permit rescue and recovery and survivor treatment activities to continue on a restricted basis for at least 30 minutes.

2.7 Bridge Windows

A record should be kept on board covering the origin, type and dimensions of all bridge window glass fitted. Glass shall be secured in a metal frame with a compressible gasket and special attention should be given to internally fitted windows secured by internal flanges and screws. The arrangements should be checked to ensure that they are adequate, of sound construction and working correctly. Windows shall be weather tight in way of the internal flange and polarised or tinted windows must not be fitted.

Bridge windows should receive special consideration in respect of their vulnerability to damage from heavy seas. If the ERRV operator considers that a significant risk of damage exists then windows should be provided with the means of being blanked by internally or externally mounted shutters which should be stowed in an accessible position and readily mounted. However the use of shutters should take into account the possible implications of reduced visibility as well as increased crew protection. ERRV operators should be able to demonstrate that they have considered both the risk of glass breakage by wave action and the restrictions upon visibility imposed by shutters and have taken appropriate steps to manage the risks. ***(Bridge window glass of ERRVs previously accepted as meeting the requirements of the “Green Code” should be considered as meeting these Guidelines also. Replacement glass or frames fitted to ERRVs previously accepted under the “Green Code” should comply with the appropriate ISO standard or equivalent for windows and glass, from the time of fitment.)***

New-buildings or vessels newly-converted to the standby role should meet the appropriate ISO standard or equivalent for windows and glass, from their entry into service.

2.8 Planned Maintenance and Recognition of Other Surveys

Those items of machinery, electrical and other equipment which directly affect the ability of the ERRV to carry out its intended role should be in an efficient and operative condition. This should be demonstrated to the satisfaction of the Surveyor by functional tests if required. The Surveyor should also be satisfied that an effective planned maintenance scheme is in place. However, the Surveyor should be cognisant of any Flag Administration and Ship Classification Society's certificate or documentation and not seek to duplicate such surveys. Evidence of neglect or poor maintenance may require a more extensive survey.

3 STABILITY

3.1 Assessment

All ERRVs should hold valid Load Line Certificates appropriate to the areas and times of year in which they operate and take into account the number of persons who may need to be taken on board.

An assessment of stability should have been carried out on vessels being considered for conversion to ensure that the additional emergency role criteria can be met. This will need to be confirmed and approved by the relevant maritime safety regulator before the vessel enters standby service. A similar assessment is necessary for new build ERRVs.

3.2 Stability Data

Every ERRV should be provided with adequate stability data in accordance with the load line requirements. Data from the assessment noted in Section 3.1 should be included to demonstrate the ERRV's stability in the full range of emergency response and routine operational conditions likely to be encountered and should consider:-

- a) Departure from port to assigned Installation;
- b) Mid-period on duty;
- c) Arrival back in port on completion of maximum standby duty; **and**
- d) Emergency response conditions as for b) and c) with survivors on board. This condition should also take into account the launch and recovery of FRC/DC and the deployment and operation of recovery devices noted in Sections 5.2.2, 5.2.3 and 5.2.4 under worst case conditions. These worst case conditions should be taken to be those under which all practical survivor recovery and rescue devices are deployed on one side of the ERRV with none on the opposite side. Under such conditions the angle of heel should not exceed 7 degrees.

ERRVs capable of undertaking other duties (where these do not conflict with the standby role) should also take worst-case loading conditions into account when calculating d), and consider the effect of both deck and bulk cargo (where applicable) on stability.

The stability data should calculate d) with the freeboard applicable during the rescue of survivors as noted in *Section 5.2.1*.

The stability data should indicate the amount and location of any permanent ballast.

4 ACCOMMODATION AND FACILITIES FOR SURVIVORS

4.1 Accommodation Available for Survivors

All survivors should be accommodated in spaces which afford protection from the elements and are adequately furnished with heating, lighting, ventilation and general conditions satisfactory for the survivors' comfort.

In an emergency survivors may be accommodated in crew accommodation except for sanitary accommodation, galley, berths for the master and two crew members, the radio room (where provided), the wheelhouse and main access passageways, which should be kept clear.

4.2 Survivors Dedicated Seating

There should be a minimum of 50 seats, including those in the Reception Area, available for survivors use and additional to those provided in crew accommodation, with as many persons as possible provided with seating.

In Group A ERRVs survivor seating should be increased to a minimum of 66.

In Group C ERRVs survivor seating may be reduced to a minimum of 20.

4.3 Access to and Means of Escape from Survivor Areas

All spaces intended for survivors should be provided with safe access and means of escape.

4.4 Showers, WHB and WC

In addition to the crew accommodation facilities, there should be available a minimum of:-

- a) 10 wash hand basins;
- b) 10 showers and
- c) 10 WCs (of which 3 may be chemical).

These facilities should be readily accessible from spaces which may accommodate survivors.

In Group A ERRVs these facilities should each be increased to 13

In Group C ERRVs these facilities may each be reduced from 10 to 4.

ERRVs previously certificated under the Green Code may continue to include under the above totals, those crew facilities which are provided in excess of the statutory minimum.

ERRVs previously certificated under the Green Code which operate with more than three chemical toilets may continue to do so.

4.5 Water for Survivors Use

There should be a minimum of 5 tonnes of water for washing and showers plus a minimum of 4 tonnes of water for survivors' consumption. Where this water is separate from the crew supplies it should be changed at least every 6 months. The water heating arrangements should provide for a constant thermostatically controlled supply of 160

litres/hour of water of at least 40 deg. Celsius for 2 hours to each shower. In determining the heating input required to maintain the supply the amount of preheated water in any calorifier provided may be taken into account. In Group A ERRVs the figures of 5 and 4 tonnes should each be increased to 6 tonnes.

In Group C ERRVs the figures of 5 and 4 tonnes may each be reduced to 2 tonnes.

4.6 Survivor Areas

The Survivor Areas should be situated out with the crew accommodation and positioned to provide ready and easy access to/from the Rescue Zones and Winching Area. These areas should be arranged to provide an easy flow of survivors including survivors on stretchers. The necessity for vertical transfer should be avoided wherever it is reasonably practicable. The Treatment Room, Reception Area and at least 12 of the Recovery Area berths (including the 2 single berths) should be located on the same deck as the Rescue Zones unless special arrangements for casualty transfer are accepted by the Survey Body.

On new ERRVs and on existing vessels undergoing modification, where vertical transfer is required either for helicopter winching or moving to recovery area, etc., there should be practical means of transfer for stretcher cases between recovery area level and heli-winching level.

The Treatment Area and Recovery Area should be segregated from other areas by bulkheads and/or curtains to ensure that survivors undergoing medical treatment or requiring rest and quiet are not unduly disturbed by the passage of other personnel.

Existing ERRVs with survivor areas previously accepted as meeting the Green Code should continue to be acceptable under these Guidelines.

4.7 Division of Survivor Spaces

The Survivor Areas should consist of the following and be designed to allow an easy flow of survivors. The spaces, clearly marked for the guidance and ease of distribution of survivors, shall consist of:

- a) Decontamination Area
- b) Reception Area
- c) Treatment Area
- d) Recovery Area
- e) Sanitary Area

4.7.1 Decontamination Area

The Decontamination Area should be equipped with a shower system suitable for cleaning of survivors and crew members before they proceed into the Reception Area. The arrangement of the Decontamination Area should provide protection of the occupants from the weather but full enclosure is not required. The means of protection from the weather of the shower occupants need not be permanently installed.

4.7.2 Reception Area

The Reception Area should consist of a well lit and heated space equipped with a desk and seat, filing and locker arrangements suitable for documenting survivors and additional seats for a minimum of 5 survivors. Arrangements should be made for separating those needing treatment from able bodied survivors and providing the latter

with changing facilities and access to the accommodation. Where possible, the changing facilities should be contained within the Reception Area but, if lack of suitable space prevents this, alternative arrangements within reasonable proximity, e.g. within the seating area, should be accepted.

4.7.3 Treatment Area

The Treatment Area should have a deck area of not less than 15m² and provided with scuppers. Access and exits should allow for easy transportation of stretchers. It should be well lit, heated and ventilated and comply with the requirements set out in *Section 5.18.2*.

4.7.4 Recovery Area

The Recovery Area, which should be separated from but near to the Treatment Area to assist monitoring of the injured, should provide a well lit and heated space to accommodate 20 survivor berths. At least 2 of the berths should be single tier. All survivor berths should have lee boards, and upper bunks should be equipped with bunk ladders, all berths should be accessible by stretcher.

In Group A ERRVs the figure of 20 survivor berths should be increased to 26, at least 2 of which should be single tier.

In Group C ERRVs the figure of 20 survivor berths may be reduced to 10, at least 2 of which should be single tier.

4.7.5 Sanitary Area

4 showers, 4 WCs and 4 wash hand basins should be provided in the Recovery Area. These should be included in the total stipulated in *Section 4.4*.

In Group A ERRVs the minimum number of showers, WCs and wash hand basins in the Recovery Area should be increased to 5.

In Group C ERRVs the minimum number of showers, WCs and wash hand basins in the Recovery Area may be reduced to 2.

4.7.6 Facilities for Deceased

Facilities to store 10 corpses in a cool, ventilated and illuminated space, with shelving and the means of securing corpses thereon, should be provided. The location of the facilities should permit safe access by stretcher and be screened from survivors.

In Group A ERRVs the figure of 10 should be increased to 13.

In Group C ERRVs the figure of 10 may be decreased to 4.

4.8 Survivors Medical Stores and Clothing

Details of survivor's medical equipment and clothing to be carried are contained in Appendix A. These are carried in conjunction with the Merchant Shipping Medical Stores requirements and duplication of stocks is not required provided that the crew may obtain access at any time. Where this proviso cannot be met then separate carriage of medical stores is required.

5 ERRV EQUIPMENT

This section gives details of survivor rescue and recovery and other ERRV-specific equipment for vessels standing by Offshore Installations.

5.1 Equipment Trials

The ERRV operator should ensure and the surveyor be satisfied that the rescue and recovery facilities of the ERRV as specified in these Guidelines are in good working order by witnessing their operation.

Trials of rescue and recovery equipment should normally be performed within a harbour where this permits a reasonable assessment of the efficiency of equipment.

If the manoeuvrability of the ERRV is in question, trials away from the quay may be carried out.

5.2 Survivor Rescue and Recovery

5.2.1 Freeboard and Rescue Zones

Rescue Zones should be located clear of the effects of the propellers and thrusters and any fendering systems which might impede survivor recovery from the sea or rescue craft. They should be created on each side of the ERRV for a total minimum length of 5.0 metres and clearly indicated by highly visible markings.

A low freeboard at the Rescue Zones facilitates the boarding of survivors to an ERRV either directly or from rescue craft. However, for vessels also engaged in duties other than standby or stationed at particularly exposed locations, the noted advantages of a low freeboard for the rescue and recovery role should be balanced against the increased risks to crew members working on deck. Historically 1.75 metres has been accepted as a satisfactory maximum freeboard at the Rescue Zones. If this limit introduces additional unacceptable hazards to the crew, it may be modified providing always that the vessel operator can demonstrate that the recovery of survivors directly from the sea is not prejudiced. The use of powered mechanical recovery devices for this purpose may be considered.

When it is proposed to build or convert a vessel for standby service with a freeboard in excess of 1.75 metres but less than a maximum permissible freeboard of 2.25 metres, the MCA should be consulted in advance with details of the construction or conversion. For those vessels with a freeboard in excess of 2.25 metres and certified at the time of issue of these Guidelines; they shall continue to be considered to be compliant by the regulatory authorities.

Side recesses for Rescue Zones which are enclosed at top and sides except for access, introduce particular hazards to deck crews and should only be acceptable if proper measures are taken to protect the crew. Such measures should include ensuring that nothing located within the recesses offers undue risk of injury to crew or survivors.

Deck crew working in the Rescue Zone should be provided with safety harnesses and suitable attachment points. The length of the harness safety line should be suitable to permit working at the deck edge with least hindrance to the wearer's mobility and survivor recovery

All ERRVs should normally be expected to meet the above criteria but an exception may be made in respect of some ERRVs previously certificated under the Green Code. Those ERRVs whose design prevents the installation of a power-assisted

method of recovery (Ref. Section 5.2.3) at the manufacturer's recommended height together with the inclusion of two Rescue Zones should be subject to special consideration. In such cases a power-assisted method of recovery on one side of the ERRV and a Rescue Zone on the other should be acceptable.

5.2.2 Recovery from the Sea by Climbing Aids

Every ERRV should be provided with a system to aid personnel climbing the ship's side from the sea or from rescue craft alongside. This system should provide a more rigid, non-slip climbing and grip surface than is provided by traditional rope scramble nets and be constructed from materials which are resistant to the marine environment. The system should be designed to avoid injury to survivors and be secured to the ERRV in such a way that it hangs clear of the ship's side by at least 0.25m when deployed.

5.2.3 Power-Assisted Methods of Recovering Survivors

Every ERRV should be provided with at least one power-assisted method of recovering both able and disabled persons from the sea. Where this is fitted in the Rescue Zone, this may be used in place of the system described in Section 5.2.2 on either or both sides of the vessel, provided it is capable of achieving the same objective and be out rigged by 0.25 metres. Cranes used for deployment of such devices are to be operated from a safe and protected location, situated at a level not lower than the rescue boat davit deck, with good visibility of the overside area of deployment, but are not required to be supplied from an emergency power source but are required to be certificated in accordance with the Code of Safe Working Practices for Merchant Seamen. A 2.2 SWL static test as applied to LSA is not required.

These cranes should be capable of hoisting either the full weight of the device or 0.5 of the total weight of the device and at least 6 survivors whichever is the greater.

Vessels previously certificated under the Green Code with a power assisted method of recovery installed below the manufacturer's recommended height should continue to be acceptable unless or until demonstration reveals that they cannot achieve their intended standard.

5.2.4 Temporary Refuge in the Sea

Temporary refuge for survivors should be supplied by a rescue basket fitted with retro reflective tape visible from the sides and above, and be provided with powered recovery arrangements. The powered recovery arrangements need not be dedicated to the rescue basket.

5.2.5 Lifebuoys

Vessels of all ERRV Groups should carry at least twelve lifebuoys.

Two of the twelve lifebuoys should be fitted with self-igniting electric lights and smoke signals and two with self-igniting electric lights. The remaining eight should be provided with 30m buoyant lines and conveniently situated for easy access by the crew engaged in recovery of survivors.

5.2.6 Survivor Assistance Aids

All ERRVs should be equipped with two devices, which may be of the same type and should be capable of deploying a lifeline to survivors at distances of up to 30 metres from the ERRVs' side. Equipment provided for this purpose should not form part of the statutory requirement for Life Saving Appliances and should be certified by its manufacturers as providing the required range in still air.

Besides the above, vessels of all ERRV Groups should be equipped with at least two devices in addition to the lifebuoys referred to in *Section 5.2.5* to assist survivors who are close to or alongside the ERRV to reach a position from which they may be recovered on board using the equipment referred to in *Sections 5.2.2 or 5.2.3*. Extended hooks offering no hazard to survivors, e.g. "Dutch Hooks" or similar devices providing an extended reach from the ERRV's side and capable of arresting and guiding the movement of a survivor, should satisfy this requirement.

5.3 Fast Rescue Craft

5.3.1 Definitions

SOLAS Rescue Boat: *A rescue boat certificated as complying with Section 5.1 of the International Life Saving Appliance (LSA) Code adopted by Res. MSC 48 (66). These are sometimes referred to as FRB.*

Fast Rescue Craft: *A specialised Fast Rescue Craft, whether open (FRC) or enclosed (Daughter Craft, or DC) meeting the criteria of these Guidelines. These craft may also meet the requirements of SOLAS Rescue Boats.*

Irrespective of the number of DC's or FRC's fitted aboard an ERRV, there must be at least one FRC/FRB with its own launching and recovery arrangements that comply with the SOLAS and MED requirements of a Rescue Boat, and is not to be of a length exceeding 8.5 metres.

5.3.2 Numbers and Capacities.

Every Group 'B' ERRV should be equipped with a minimum of two Fast Rescue Craft, both of which should be capable of carrying 15 persons.

Every Group 'A' ERRV should be equipped with at least three Fast Rescue Craft, each capable of carrying 15 persons.

Every Group 'C' ERRV should carry at least two Fast Rescue Craft. The second craft may be of a lesser capacity, capable of carrying only nine persons.

5.3.3 FRC Launch and Recovery Systems.

Each FRC should be capable of being launched while the ERRV is making way and provided with its own launching system of a standard acceptable to the MCA. Fast Rescue Craft, Daughter Craft and the davits, cranes and winches used to deploy these craft should be regarded as lifesaving appliances for load test purposes. Unless expressly requested by the ERRV owner, the weight of persons used for load tests shall be 75 kg. for vessels built or converted before 1st January 2011, and be 82.5 kg. for vessels built or converted subsequent to that date. Where the lower figure is used in the load test, such limitation is to be clearly marked on the davit; "Limited to a lift of 9 persons".

Fall wires should be considered as LSA, have a factor of safety of six and be made from rotation-resistant and corrosion-resistant steel wire rope. The lowering speed should be between 0.3 and 1.0m/sec and the hoisting speed of a fully loaded FRC not less than 0.3m/sec under normal power conditions, or 0.8m/sec for vessels entering the industry after 31st December 2002 and operating in the UKCS. The height of the suspension point of any FRC launched from a standard davit should not in general exceed a height of 7.5m from the water in still water conditions and precautions should be taken to prevent swinging. The lowering or raising of FRC should not be impeded by side fenders or should be accomplished well clear of the ship's side when using davit systems designed to control the FRC's movement.

FRC davits should be installed such that the withdrawal of any one davit from service does not affect the continued, unrestricted, availability of the other(s).

In the case of hydraulic powered FRC launch and recovery systems, two hydraulic pumps should be provided and the means of isolating hydraulic circuits arranged such that loss of supply to any one davit should not affect the continued operation of the other(s). Where one of the two sources is an emergency back-up system, this does not require to be of the same capacity as the main source as long as it can achieve safe recovery of the fully laden FRC in an acceptable time (see Section 2.6). Hydraulic pumps may share the same hydraulic oil reservoir and pipe work up to the point of separate davit supply.

Electrically powered launch and recovery systems should have their electrical supply arranged such that failure of the motor(s) for any one davit or electrical supply to any one davit, should not affect the continued operation of any of the other davits. Common cable runs from generators and switchboard to the point of electrical isolation of individual davits are acceptable.

For FRC launch and recovery arrangements under emergency power conditions refer to Section 2.6. While observing the above, care should be taken that when the ERRV is of such a size that FRC are carried in lieu of lifeboats under equivalence clauses, that LSA legislative requirements continue to be observed.

5.3.4 FRC Crew Lifejackets

For each FRC, four lifejackets complying with EN 399 standard or equivalent should be provided. Inflatable lifejackets should give 275 Newtons of buoyancy and be designed to assure self-righting of the wearer when properly worn.

5.3.5 FRC Crew Protective Clothing

Protective clothing appropriate to the working environment, including the possibility of capsizing, should be provided for all FRC crew. For vessels operating in extreme environmental conditions, consideration should be given to the provision of Solas Standard submersible, dry insulated suits. Clothing should be compatible with the lifejackets provided (see Oil & Gas UK Guidelines for the Management of Emergency Response for Offshore Installations – Issue 3).

Head protection should be provided for all FRC crew meeting BS EN397: 1995 or BS 6658:85 or equivalent standard.

5.3.6 FRC Maintenance

Tools and spare parts as recommended by the manufacturer should be provided to enable FRC and their engines to be maintained whilst the vessel is on standby duty. FRC engines should be provided with the facility for running with the FRC in the inboard position and, where practical, should be started and run daily to ensure constant readiness. Each FRC fitted with petrol outboard engines should have available in the near vicinity a spare engine of the same horsepower for each FRC. Lifting aids should be provided to enable the crew to exchange FRC outboard engines in safety.

5.3.7 FRC Fuel Supply and Storage

Adequate supplies of FRC fuel should be readily available in suitable safe storage.

5.3.8 FRC Equipment

The following equipment should be provided for each FRC, and properly secured:

- a) An efficient radar reflector.

- b) VHF radio equipment as set out in *Section 6.2*
- c) A portable searchlight.
- d) A compass.
- e) A net or cradle system for recovery of persons from the water. The system should be designed to recover the person in a horizontal position with least effort by the crew.
- f) A first-aid kit (*Ref. Appendix A, Part 6*)

5.4 Daughter Craft (DC)

5.4.1 DC Function

Daughter Craft are carried aboard some ERRV's for the purposes of supporting offshore operations under controlled conditions.

5.4.2 DC Loadline Exemption Certification

To permit them to operate independently from their ERRV, DC's require a Loadline Exemption Certificate issued by the Maritime and Coastguard Agency. The Loadline Exemption details the conditions under which the DC may operate. A typical Loadline Exemption may include:

- a) Maximum wind/sea state for normal operation, e.g. 30 knots or 3.5m SWH;
- b) Maximum distance of operation from the mother ERRV during normal operations, e.g. 10 nautical miles;
- c) Maximum continuous working hours for the DC crew, e.g. 4 hours, davit to davit.

In the event that it is intended to apply for a loadline exemption exceeding 10 nautical miles, then the following assessment procedure must be applied prior to any application to MCA.

Daughter Craft Extended Range Assessment

Extending the range of daughter craft may be considered by the duty holder and ERRV Operator on a case by case basis, provided that the evaluation of the appropriateness of the proposition is undertaken in a uniform manner and considers the following points:

- I. Existing conventional daughter craft are not considered to be a place of safety, and therefore the extent to which the range may be extended must take cognisance of the Emergency Response and Rescue Vessel Management Guidelines, Appendix G – Baseline Standards for Rescue and Recovery
- II. The suitability of the existing daughter craft and associated davits for the proposed service, along with the requirement for any additional safety equipment and what additional training / certification of the crews may be required for MGN 280 compliance, and how that may be facilitated and maintained
- III. The number of daughter craft and associated crews required to provide the proposed service, taking into account the limitation of 4 hours davit to davit and 3.5 metre seas
- IV. That radar coverage and VHF communications with the daughter craft must be maintained at all times
- V. That the marine crew and offshore workers should be consulted as part of the evaluation process

Once the duty holder and ERRV operator have resolved all of the above issues and are satisfied with the feasibility of the range extension, consultation with the offshore workforce and the ERRV marine crew must be undertaken prior to approaching the MCA and HSE with a Safety Case revision detailing the proposed new arrangements.

5.4.3 DC Certification

Daughter Craft must be accepted for use by MCA/Class as Offshore Rescue Daughter Craft constructed in accordance with the MCA Harmonised Small Commercial Vessel Code. They shall have undertaken full drop, capsize and water tightness tests in addition to routine physical inspections during construction. They will also have been subjected to a structural overload test and performance trials.

5.4.4 DC Miscellaneous Safety Equipment

The exact listing of equipment will be set by the MCA or other Flag State authority which awards the Loadline Exemption (primarily to reflect the area of operation) but, as a general guide, should include all equipment listed in *Section 5.3.8.* supplemented by the following:

- a) 4 Lifebuoys (1 with light and 1 with line and 2 as flotation equipment)
- b) 2 red rocket parachute flares
- c) 2 red hand-held flares
- d) 2 buoyant smoke signals
- e) 2 portable dry powder fire extinguishers, each of at least 2kg in size
- f) 1 fire blanket
- g) 1 metal fire bucket
- h) 1 sea anchor
- i) 1 fixed searchlight, operable from the coxswain's position
- j) 1 manual bilge pump
- k) 1 first aid kit (minimum contents set out below)
- l) 30 hypothermia blankets of the foil type or similar
- m) 1 radar
- n) 1 GPS unit
- o) 1 towrope
- p) 1 compass
- q) Appropriate navigational charts and instruments
- r) Navigation lights
- s) Sound signalling equipment
- t) Loudhailer (battery operated with 1 set of spare batteries renewed in accordance with the ERRV's PMS system)
- u) Fire extinguishing system for machinery spaces
- v) A net/cradle system for recovery of persons from the water. The system should be designed to recover the person in a horizontal position with least effort by the crew

- w) Plans of evacuation/escape routes etc. for Installations being attended
- x) Air-band radio (where this is identified within the ERP by the Duty Holder as necessary equipment).

5.4.5 DC First Aid Kit

The First Aid Kit should be as described in MSN 1707 (M+F) for Category A and B ERRVs, containing the following:

- a) 4 triangular bandages, 90 cms x 127 cms
- b) 6 x standard dressings No. 8 or 13 BPC
- c) 2 standard dressings No. 9 or 14 BPC
- d) 2 extra large sterile unmedicated dressings, 28 cms x 17.5 cms
- e) 6 medium size safety pins, rustles
- f) 20 assorted elastic adhesive dressings medicated BPC
- g) 2 sterile eye pads with attachment
- h) 2 packages containing 15 gram's sterile cotton wool
- i) 5 pairs large size disposable surgical gloves
- j) 1 each surgical collars in sizes no-neck, small, medium and large (or 4 adjustable collars providing the same range)
- k) 1 airway complete with flexible junction between casualty's mouth and person providing resuscitation, e.g. Canada Mask and Tube

5.4.6 DC Maintenance

Planned maintenance schedules which are auditable by third parties, covering Daughter Craft and their associated launch and recovery systems should be included in the ERRV planned maintenance systems. These should take full account of the possible frequency of usage of the craft.

ERRV operators should ensure that proper resources (materials, spares and engineering capability) are provided to undertake the necessary maintenance and repairs.

5.4.7 DC Crew PPE

DC crew requirements for clothing, lifejackets and head protection should meet the standards described in *Sections 5.3.4 and 5.3.5*

5.4.8 Daughter Craft Communications

Refer to Section 6.3

5.4.9 DC Launch and Recovery

Systems for DC launch and recovery should generally follow those described for FRC in *Section 5.3.3*.

5.5 Protective Spray System

Arrangements should be provided to protect from heat and fire those engaged on rescue operations on exposed deck areas, the boundaries of control stations and accommodation areas, by a water spraying system. The capacity of the system should be such as to ensure overall wetting of the noted areas.

5.6 Man Overboard Alarms

A bridge operated "Man Overboard" alarm should be installed which is clearly audible throughout the ERRV and is separate and distinct from all other alarms. In areas of high ambient noise levels, audible alarms may be supplemented by visual alarms.

5.7 Navigation Equipment

Navigation equipment to be provided on the bridge should include:

- a) Two compass stabilised radars, of which at least one should be ARPA-type radar for vessels entering the industry after 31st December 2002.
- b) High definition position finding equipment of a standard equivalent to (or greater than) GPS.

5.8 Lighting

Electric lighting should be provided in the following areas from both a main and emergency source of power:-

- a) To illuminate FRC/DC stowage and launching areas and survivor Reception, Treatment and Recovery Areas;
- b) To provide floodlighting of the sea in way of the Rescue Zone and the FRC launch and recovery area;
- c) To illuminate the helicopter winching deck area and access routes leading to and from the reception area.

In providing any flood lighting system, including emergency systems, the "run up" time from switch on to achieving adequate lighting levels should be taken into account and, wherever possible, minimised.

For further information on the operation of emergency lighting *Ref. Section 2.6.*

5.9 Signalling Equipment

A daylight signalling lamp, mains and/or battery powered, plus a portable battery-operated loud hailer should be provided on the bridge.

5.10 Status Board

A Status Board for the display of information useful to the Master during the progress of an emergency should be mounted or readily available for mounting, on the bridge. The Status Board should act as an aide mémoire and is neither a substitute for nor to be considered as an incident log.

5.11 Location Aids

At least two directional searchlights should be provided that together provide a capability of illuminating any area of the sea over a 360 degree arc and for a distance of at least 75m. Such lights should be capable of remote operation from within the bridge and be designed to illuminate as large an area of the sea as possible.

5.12 Helicopter Winching

All ERRVs should have an illuminated, designated emergency Winching Area for the use of helicopters transferring personnel. The intention is to establish a safe emergency operating site offering the least possible hazard. Thus, as far as is practicable, it should be free of obstructions, which may cause injury during winching operations or the entanglement of winch wires. The surface should be non-slip. The lighting noted in *Section 5.8* should be installed such that it does not dazzle the helicopter crew.

Unobstructed stretcher access to the winching area should be available. Operators should demonstrate that the personnel available for moving casualties can move the likely number of loaded stretchers from the treatment/recovery area to the helicopter winching area.

5.13 Food and Water

Instant soup or stew and concentrated fruit cordials should be provided together with sufficient suitable containers or insulated plastic cups. Instant soup or stew should be supplied on the basis of portions of 400, 300 and 20 for Group A, B and C ERRVs respectively. Fruit cordial should be supplied on the basis of 25 litres, 20 litres and 2 litres of concentrate for Group A, B and C ERRVs respectively.

A continuous supply of boiling fresh water for survivors' use with a total capacity of 75 litres should be provided.

The provision of food and water referred to above and in *Section 4.5* should be retained throughout the period of normal standby duty and be available on board on the ERRV's return to port.

5.14 Rescue Publications

In addition to the normal publications and procedures manuals required by ships at sea (see 1998 SI 2647), an ERRV should hold copies of the:-

- a) Oil & Gas UK Emergency Response & Rescue Vessel Survey Guidelines. (this document);
- b) Oil & Gas UK Emergency Response & Rescue Vessel Management Guidelines.
- c) Oil & Gas Guidelines for Emergency Response for Offshore Installations
- d) Data Cards for the Installation being covered (either Installation Data Card or ERRV Data Card or both, as required);
- e) Documented procedures for sharing of ERRVs (if applicable);
- f) Documented procedures for Daughter Craft operations (if applicable);
- g) Documented procedures for PLB system operations (if applicable);
- h) Relevant ERP extracts where not included in 5.14 c). (*Further details of these may be found in Oil & Gas UK Emergency Response & Rescue Vessel Management Guidelines Section 1.5*);
- i) Oil & Gas UK Guidelines for Ship/Installation Collision Avoidance
- j) Oil & Gas UK Emergency Locator Beacon & PPE Grab Handle Guidelines for Rescue Crews

5.15 Station Bills

Station bills indicating crew stations under defined emergency conditions should be posted in public rooms, the bridge, engine room and crew alleyways.

5.16 Crew Identification

All crew should be provided with high visibility armbands, waistcoats or other means for use in emergencies, which clearly identify them as ERRV crew members.

5.17 Operations with TEMPSC or Life Rafts

All ERRV's should have documented procedures for and the means of:-

- a) directly towing life rafts and TEMPSC;
- b) securing such craft alongside and
- c) transferring people both injured and uninjured from life rafts and TEMPSC.

5.18 Medical Stores and Equipment of Survivor Spaces

5.18.1 Stowage Locations

The medical stores noted in Appendix A should be stowed, clearly marked, in the locations noted.

Oxygen bottles should have suitable secure means of stowage both in the Treatment Room and Recovery Area.

5.18.2 Treatment Area Outfitting

The Treatment Area should be equipped with:-

- a) High luminance illumination with especial note taken of lighting directly above the treatment table;
- b) Wash hand basin provided with hot and cold water supplied via elbow-operated taps;
- c) Treatment table accessible from both sides and the foot;
- d) Portable shower head provided with a thermostatically regulated water supply via an extended hose capable of reaching both ends of the treatment table;
- e) Fixed frame(s) for holding two stretchers and their occupants securely;
- f) Moveable instrument table capable of being secured to the treatment table;
- g) Waste bin for soiled clothing and/or dressings;
- h) Cupboards enabling the stowage of medical stores in a systematic and readily available format;
- i) Desk with file drawers for the stowage of medical documents;
- j) Hands free radio equipment capable of direct communications with medical advisors onshore and offshore.
- k) A bulkhead-mounted clock with sweep second hand

5.18.3 Recovery Area Preparation

The Recovery Area should be equipped such that is ready to receive survivors with the minimum of preparation. Hooks should be located at bunks for the suspension of intravenous fluid bags.

5.18.4 Medical Inventory

An inventory of all medical equipment should be maintained on board in a format that permits rapid confirmation of current stock levels and expiry dates (where appropriate). The inventory should be made available for examination by surveyors engaged in the issue of new certificates, the relevant Regulator and Duty Holder representatives.

5.18.5 Survivor Showers

Each shower should be provided with soap, also large size dispensers, containing skin degreasing fluid. Degreasing dispensers may be shared between users on the basis of one dispenser to each two showers depending upon the shower arrangements. The total amount of skin degreasing fluid on board should be 75 litres.

Group A ERRVs should increase the quantity of degreaser to 100 litres.

Group C ERRVs may decrease the quantity of degreaser to 35 litres

6 RADIO AND OTHER COMMUNICATIONS

6.1 General

Effective arrangements should be made for radio communications, on appropriate frequencies, to be possible at all times between the ERRV and the Installation which it serves and between the ERRV and the appropriate coast station. This may include MF, HF, VHF and Satellite Systems. There should be provided alternative means of communication between the Installation(s) and the ERRV for use in the event of radio or power failure.

Vessels new to the industry after 31st December 2002 should be equipped with a voice/fax/data Satcom, UHF telephone patch and a mobile phone.

Radio communication equipment used by rescue craft is subject to particularly adverse operating conditions. Its construction and protection should reflect the environment in which it operates.

The radio equipment noted in the following sections is additional to that required by Flag State, Global Maritime Distress and Safety System (GMDSS), and SOLAS Regulations.

6.2 FRC Radio Communications

FRC radio communication should be provided for by either:-

- a) A permanently installed VHF radio with hand-microphone and waterproof loudspeaker for use by the coxswain plus a radio helmet complete with headphones, microphone and a portable VHF radio in a weather tight housing for one crewman
- or
- b) Two radio helmets, fit for purpose, equipped with earphones and microphone connected to a waterproof radio or one housed in a waterproof container.
- or
- d) Alternative arrangements which can be demonstrated to provide means of radio communication between the coxswain and other craft, vessels or Installations, without hazarding his control of the FRC and also providing back-up in the case of the failure of the coxswain's radio. At least two VHF should be used in the FRC to achieve this purpose and the arrangements should minimise the effect of interference from external noise upon communication with the FRC.

6.3 DC Radio Communications

Daughter Craft should carry one permanently installed VHF radio permitting communication with the ERRV at its planned maximum operating range. In addition it should be equipped with one of the following:-

- a) A second fixed VHF Radio
- or
- b) A radio helmet equipped with earphones and microphone connecting to a waterproof VHF radio or one housed in a weather tight container
- or

- c) A portable waterproof VHF radio or one housed in a weather tight container as emergency back-up

6.4 ERRV Internal Communications

Internal communications on the ERRV should be sufficient to provide communication between the bridge, survivor Reception and Treatment areas, the Master's cabin, those spaces occupied by crew members on immediate call and the Winching Area. Where the survivor Recovery Area is not immediately adjacent to the Treatment Area, this should also be added to the internal communication system and for this purpose inclusion in a talk-back or telephone system or the provision of a dedicated portable radio and charger are acceptable. In addition, a fixed, talk-back intercommunication system should be provided between the bridge, the rescue zone and the FRC launching stations.

6.5 Air-band Radios and DF Systems

The Civil Aviation Authority (CAA) has agreed that vessels appointed as ERRVs in accordance with Regulation 17 of PFEER may, after application, be authorised to fit certain aeronautical radio facilities for the following specified aeronautical purposes only, viz.:-

- a) A Direction Finding (DF), receive only, facility on the distress frequency 121.5 MHz to assist the ERRV to locate a ditched helicopter by homing on to the emergency locator beacon. The use of 121.5 MHz will only be approved as part of a DF facility. The equipment should also be capable of receiving on the test frequency 121.65 MHz to enable drills and exercises to be undertaken with training / test beacons as per OGUK Guidelines.
- b) Transmit and Receive capability on 123.10 MHz to be used for the following purposes only: -
 - I. Search and Rescue communications concerned with aeronautical emergencies.
 - II. ERRV/helicopter communications concerning the safety of life.
- c) Transmit and Receive facilities on the aeronautical frequency assigned to the particular offshore location with which the ERRV is associated, to enable a guard to be maintained on the appropriate aeronautical frequency in order that the ERRV may quickly react to a Distress call from a helicopter.

ERRV's provided with an aeronautical station to maintain communication with helicopters must have a Wireless Telegraphy Act Licence and Air Navigation Order Approval issued by the Civil Aviation Authority.

Application forms for aeronautical (ground) stations can be found on the CAA website, together with additional information on aeronautical radio licensing at http://www.caa.co.uk/dap/radio_licensing/default.asp together with the Radio Licensing Section contact details which are also given below:

Radio Licensing Section
Directorate of Airspace Policy
CAA House
K6G6
45 - 59 Kingsway
London
WC2B 6TE

Telephone: 0207 453 6555 (9am to 5pm Mon-Fri excluding public holidays)
Fax: 0207 453 6556
E mail: radio.licensing@dap.caa.co.uk

6.6 Familiarity with Aeronautical Distress Procedures

All deck watch keeping officers should be familiar with aeronautical distress procedures. The Master and at least one other watch keeping officer should be certificated by the CAA for the operation of radio equipment within the permitted aeronautical frequency bands. (Ref. Section 6.5)

6.7 Inclusion on Radio Survey

The annual Radio Survey should, in addition to radio equipment required by Flag States and SOLAS Regulations, include the equipment and Installations set out in Sections 6.2, 6.3, 6.5 and 6.6.

APPENDIX A

SPECIAL MEDICAL EQUIPMENT AND STORES CARRIED BY ALL ERRV GROUPS*

PART 1 - MEDICINES ETC.

ITEM / LOCATION	Reception Area	Treatment Area	Recovery Area	Total
Buprenorphine ** <ul style="list-style-type: none"> 0.2mg tablets Injection 0.3 mg, (as hydrochloride) per ml, 1ml ampoule. 		300(50) 60(10)		300(50) 60(10)
Hyoscine Hydrobromide <ul style="list-style-type: none"> 0.3mg tablets Injection, 0.6 mg in 1 ml 	600(60)	60(6)		600(60) 60(6)
Liquid Paraffin Eyedrops <ul style="list-style-type: none"> 5ml dropper bottle or sterile plastic sachets. (Castor Oil single dose sachets with dropper acceptable in lieu.) 		10(2)		10(2)
Modified Gelatine Infusion Solution <ul style="list-style-type: none"> 500ml container, for plasma substitution 		40(5)		40(5)
Paracetamol Tablets		100		100
Sterile Eye Irrigation Fluid <ul style="list-style-type: none"> 500ml 		4(2)		4(2)

* Group C ERRV may operate with a reduced medical equipment inventory. In such cases, where the quantities of equipment required differ from other ERRVs, these are indicated throughout Appendix A in parentheses. However, care should be taken to ensure that reduction of the inventory does not result in any statutory provision being reduced.

** Buprenorphine is a controlled drug. Therefore the ERRV operator shall ensure that appropriate arrangements are in place to satisfy the legal requirements for securing, controlling and administering it.

PART 2 - INSTRUMENTS, APPLIANCES AND MEASURING EQUIPMENT

ITEM / LOCATION	Reception Area	Treatment Area	Recovery Area	Total
Airways				
• Laerdal Pocket Mask Model 82 00 11	3(1)	2(1)	1	6(3)
• Laryngeal Mask Airway Size 4		2(1)		2(1)
• Laryngeal Mask Airway Size 5 (only to be used under medical supervision)		2(1)		2(1)
• Nasopharyngeal Airway Size 6		2(1)		2(1)
• Nasopharyngeal Airway Size 7		2(1)		2(1)
• Disposable syringe 50ml capacity for LMA inflation		2(1)		2(1)
Back-board				
• Spinal board complete with head blocks and speed clip restraints	1	1		2
Defibrillator				
• Automated external defibrillator approved by the supplier for use by personnel with minimum CPR and basic resuscitation skills in an ERRV at sea, to be supplied with three sets of pads and one set for training, plus one spare battery, if unit not rechargeable.		1		1
Fluid Giving Sets				
• Intravenous entry set for fluids (only to be used under medical supervision)		20(3)		20(3)
Manual Resuscitator:				
• Hand operated manual adult bag resuscitator (bag to be of silicone rubber) complete with oxygen reservoir of 2600ml capacity and face mask Size 5		1		
Oxygen/Nitrous Oxide Set				
• O ₂ /N ₂ O, Analgesic apparatus consisting of regulator, long hose, demand valve, standard size face mask and fully charged portable cylinder with key plus spare fully charged portable cylinder.		1	1	2
Oxygen-Giving Equipment				
• Oxygen cylinders size F (or smaller size providing equivalent capacity in total).		1	4(2)	5(3)
• Oxygen cylinders, size D and multi-flow regulator			2	2
• Pressure regulators for oxygen cylinders with adjustable flowmeter.		1	3(2)	4(3)
• 2m lengths oxygen tubing		1	3(2)	4(3)
• Cylinder keys		1	2	3
• Oxygen disposable face masks				
• 35%		1	5(2)	6(3)
• 45 or 50%		1	5(2)	6(3)
• non-rebreather		3	3	6

PART 2 - INSTRUMENTS, APPLIANCES AND MEASURING EQUIPMENT – Contd.

ITEM / LOCATION	Reception Area	Treatment Area	Recovery Area	Total
Scissors/Shears <ul style="list-style-type: none"> Stainless steel scissors, BS 3646 Tough-cut shears for cutting clothing 		2 2		2 2
Sphygmomanometer <ul style="list-style-type: none"> Fully automatic, battery operated type operating on oscillometric principle with automatic inflation and deflation providing digital read-out. Complete with spare sets of batteries. 		1		1
Splints <ul style="list-style-type: none"> Listons thigh splint, 140cm Inflatable, set of 4 comprising half-leg, full-leg, half-arm and full-arm. Set of Box Splints Set of Vacuum Splints Set of Traction Splints Set of common splints (fracstraps acceptable in lieu) 		6(2) 3(1) 6(2) optional 1(1) 6(1)		6(2) 3(1) 6(2) - 1(1) 6(1)
Stethoscope		2(1)		2(1)
Suction Pumps <ul style="list-style-type: none"> Electric Suction Pump complete with 6 Yankauer suction catheters and 6 flexible catheters size FG14. Manual suction pump 		1 1	1	2 1
Surgical Collars <ul style="list-style-type: none"> Stifneck pattern or equivalent <ul style="list-style-type: none"> no-neck short regular tall <p>NB: Adjustable collars able to achieve all four sizes should be accepted in lieu but the total of 20 (12) should still be met.</p>		5(3) 5(3) 5(3) 5(3)		5(3) 5(3) 5(3) 5(3)
Syringes <ul style="list-style-type: none"> Disposable syringe and needle in sterile sealed pack to BS 5081. Capacity 2ml with 21g, 4cm needle. 		60(20)		60(20)
Thermometers <ul style="list-style-type: none"> Normal range (35° - 43° C) digital, battery operated, 3 digit display. Complete with spare battery and plastic sleeve with pocket clip. Sub-normal range, low body temperature, BS691 in durable case marked with contents. 		4(3) 4(2)		4(3) 4(2)

PART 3 - BANDAGES AND DRESSINGS

ITEM / LOCATION	Reception Area	Treatment Area	Recovery Area	Total
Bandages				
• Elastic, adhesive, 7.5cm x 4m		5(2)		5(2)
• Triangular calico, BP, with sides approx. 90cm and 127cm.		100(10)		100(10)
• Tubular gauze bandage, finger dressing, 20m, with applicator.		12(2)		12(2)
• Conforming, BP, individually wrapped.				
• 5cm x 3m		50(10)		50(10)
• 7.5cm x 3m		55(10)		55(10)
• Asherman-type Chest Seal		5		5
Cotton Wool				
• Hospital quality, 500gm packs		13(2)		13(2)
Dressings				
• Clingfilm, rolls, approx. 30cm x 5m		15(2)		15(2)
• porous paper type adhesive tape, rolls 2.5cm x 5m		20(2)		20(2)
• Elastic adhesive medicated dressings, mixed sizes.		450(50)		450(50)
• Wound dressings, standard BPC.				
• medium plain, 14 BPC		100(20)		100(20)
• large plain, 15 BPC		100(20)		100(20)
• extra large, 28cm x 17cm		100(20)		100(20)
Gauze Swabs				
• Gauze cotton, absorbent, BP, type 13, 8 ply, 7.5cm x 7.5cm, sterile packets of 100		6(1)		6(1)
Zinc Oxide Tape				
• 2.5cm x 5m spools		8(2)		8(2)

PART 4 – SUNDRIES

ITEM / LOCATION	Reception Area	Treatment Area	Recovery Area	Total
Apron <ul style="list-style-type: none">Plastic, disposable.		50(10)		50(10)
Bed-Pan <ul style="list-style-type: none">Disposable typeShells for above		3(1) 1(1)	6(2) 2(2)	9(3) 3(3)
Blankets <ul style="list-style-type: none">Wool, single size.			20(3)	20(3)
Body Bags <ul style="list-style-type: none">7ft, opaque, plastic with zip closure	30(2)		30(2)	60(4)
Instrument Trolley		1		1
Lubricating Jelly <ul style="list-style-type: none">For endotracheal intubation, 42g tubes		1		1
Pens <ul style="list-style-type: none">Fine point with water-resistant ink for survivor record.	3(2)	2(1)		5(3)
Pillows <ul style="list-style-type: none">With plastic covers			20(10)	20(10)
Resuscitation Manikin <ul style="list-style-type: none">Suitable for cardio-pulmonary resuscitation and peripheral IV access practice. Complete with two sets each of replacement pads for hand and arm IV access practice.Ring cutter		1 1		1 1
Safety Pins <ul style="list-style-type: none">5cm, rustless.		144(40)		144(40)
Sharps Disposal Box <ul style="list-style-type: none">BS7320, capacity 5 litre		2(1)	1(1)	3(2)
Sleeping Bags <ul style="list-style-type: none">acrylic filled, washable, zip closure			20(10)	20(10)
Stretchers <ul style="list-style-type: none">Basket type with patient straps and certificated webbing lifting strops or an approved equivalent.	15(2)			15(2)
Surgical Gloves <ul style="list-style-type: none">Latex, disposable, box of 100.Medium sizeLarge size		1 1		1 1
Survivor Packs <ul style="list-style-type: none">Plastic carrier bag containing blanket (single size), disposable boiler suit, woollen socks and bath towel.	50(5)		250(15)	300(20)
Swabs <ul style="list-style-type: none">Medical spirit type packed in foil sachets, box of 100		2(1)		2(1)
Transfer Bags <ul style="list-style-type: none">Insulated, for personnel transfer to helicopter or ship.			15(2)	15(2)

PART 4 - SUNDRIES Contd.

ITEM / LOCATION	Reception Area	Treatment Area	Recovery Area	Total
Triage Priority Cards <ul style="list-style-type: none"> Cruciform, National Standard, triage card in waterproof plastic bag. 	50(5)	50(15)		100(20)
Urine Bottles <ul style="list-style-type: none"> Disposable 		12(3)	18(3)	30(6)
Vomit Bags	300(60)			300(60)
Waste Disposal Bags <ul style="list-style-type: none"> For the disposal of clinical waste, S.A.F.A. or equivalent, size Large 		12(2)		12(2)
Wound Cleansing Fluid <ul style="list-style-type: none"> Sterile solution of Cetrimide 0.15% and Chlorhexidine Gluconate 0.015% in 25ml sachets. 		800(50)		800(50)
Wristbands <ul style="list-style-type: none"> Durable plastic survivor identification 	300(20)			300(20)

PART 5 - READY-USE PACKS

a) Resuscitation/IV Pack - Quantity 20 (Group C, 2)

b) Airway Management Pack - Quantity 2 (Group C, 1)

These packs are designed to contain the essential requirements for each noted task and located immediately to hand within the Treatment Room.

The wrapping or container for each pack is to be transparent and re-sealable such that the contents may be verified without removal.

Each pack is to be clearly labelled with its purpose and contents. (See over)

NB. Equipment and supplies noted in Part 5 are additional to those noted in Parts 1 - 4.

RESUSCITATION/IV PACK (Qty. 20) (Qty. 2 for Group C)	
Item	No./pack
Bandages	
• Elastic, adhesive, 7.5cm x 4m	1
• Conforming, BP, individually wrapped, 7.5cm x 3m	1
Fluid giving sets	
• Intravenous entry set for fluids	1
Guedal Airway, BS292	
• size 3	1
• size 4	1
Intravenous infusion canula	
• With Luer-lok injection port in sterile pack (Venflon)	
• size 14g	2
• size 16g	2
• size 18g	2
Pens	
• Fine point with water resistant ink for survivor record	1
Plain Blood Tube	
• Size 10ml	1
Scissors/Shears	
• Stainless steel scissors, BS 3646	1
• Tough-cut shears for cutting clothing	1
Sodium Chloride	
• For intravenous infusion, 0.9% in 500ml container	2
Tourniquets	
• Velcro, for setting up intravenous drips	1
Triage Priority Cards	
• Cruciform, National Standard, triage card in waterproof plastic bag	1
Wound Cleansing Fluid	
• Sterile solution of Cetrimide 0.15% and Chlorhexidine 0.015% in 25ml sachets.	10
Zinc oxide tape	
• 1.25cm x 5m	1

PART 5 - READY-USE PACKS Contd.

AIRWAY MANAGEMENT PACK (Qty. 2) (Qty. 1 for Group C)	
Item	No./pack
Bandage	
• Gauze ribbon, BP, 2.5cm x 10m	1
Catheter Mount	
• Flexible type with 22M/15F connectors and 22F fixed elbow mount	1
Endotracheal Flexible Introducer	1
Endotracheal Tube	
• cuffed, disposable size 7	1
• cuffed, disposable size 8	1
• cuffed, disposable size 9	1
Gauze Swabs	
• Gauze cotton, absorbent BP, type 13, 8 ply, 7.5cm x 7.5cm, sterile packets of 100.	1
Guedal Airway	
• size 3	1
• size 4	1
Laryngoscope	
• Macintosh type with adult blade, 4 sets long-life batteries and spare bulb.	1
Lubricating Jelly	
• For endotracheal intubation, 42g tubes	1
Magills Forceps	1
Pens	
• Fine point with water resistant ink for survivor record	1
Syringe	
• Disposable, 10ml.	1
Triage Priority Cards	
• Cruciform, National Standard, triage card in waterproof plastic bag	1
Zinc Oxide Tape	
• 1.25cm x 5m spool	1
• 2.5cm x 5m spool	1

PART 6 - FRC MEDICAL EQUIPMENT

The equipment noted should be kept in watertight containers and placed in each FRC prior to launch. ***It is additional to that contained in Parts 1 - 5.***

Item	Qty/FRC
Airway <ul style="list-style-type: none"> Complete with flexible junction between casualty's mouth and person providing resuscitation, e.g. Canada Mask and Tube 	1
First Aid Box <ul style="list-style-type: none"> As per MSN 1725 (M+F) 	1
Hypothermia Blankets <ul style="list-style-type: none"> Lightweight foil pattern 	20
Surgical Collar <ul style="list-style-type: none"> Stifneck pattern or equivalent in no-neck short, regular and tall sizes 	1 each
<i>NB: Adjustable types able to achieve all sizes should be accepted but the total of four should still be met</i>	

APPENDIX B

RELEVANT LEGAL REQUIREMENTS

Regulations

The Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995 (SI 1995 No.743) (PFEER) is the principal legislation governing offshore emergency response, including the provision of appropriate measures to achieve it. Regulation 17 of PFEER states that:

“The duty holder shall ensure that effective arrangements are made, which include such arrangements with suitable persons beyond the Installation, for:

- a) recovery of persons following their evacuation or escape from the Installation; and*
- b) rescue of persons near the Installation; and*
- c) taking such persons to a place of safety*

and for the purposes of this regulation arrangements shall be regarded as being effective if they secure a good prospect of those persons being recovered, rescued and taken to a place of safety.”

Approved Code of Practice (ACOP)

The ACoP accompanying the Regulations states in paragraph 173 that:

“There are many circumstances for which only a suitable vessel standing by will provide effective arrangements and in these circumstances such a vessel will need to be provided.

and in paragraph 174 that:

“Where a vessel is provided it shall be maintained, so far as is reasonable, in a position from which it can be best used for the recovery and rescue functions required of it, taking account of the nature and time of day of work activities - such as overside working - being carried out. Such vessels may be shared between Installations provided that this does not compromise the object of securing a good prospect of recovery and rescue.”

The ACOP also sets out a list of criteria which reflect those recommended by the Cullen Report for any vessels acting as ERRVs.

In United Kingdom territorial waters adjacent to Northern Ireland, the Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations (Northern Ireland) 1995 (SR 1995 No 345) apply.