



INFORMATION BULLETIN No. 115

SAFE MANNING REQUIREMENTS

Guidance and Instructions for Bahamas Recognised Organisations, Bahamas Approved Nautical Inspectors, Ship Owners, Managers and Masters

1. Purpose

- 1.1 The Bahamas Merchant Shipping Act 1976 Section 67, Regulation V/14.1 of the International Convention for the Safety of Life at Sea 1974, as amended, (SOLAS) and Regulation 2.7 of Maritime Labour Convention 2006 (MLC 2006) requires every ship to be manned sufficiently and efficiently. SOLAS Regulation V/14.2 and Merchant Shipping (Training, Certification and Manning) Regulations 2012 requires every ship to which the regulations applies be provided with a Minimum Safe Manning Document (MSMD).
- 1.2 This Bulletin outlines the Bahamas requirements and guidelines in relation to the minimum manning levels on Bahamian ships.
- 1.3 This Bulletin shall be read in conjunction with BMA Information Bulletin No. 70, 81, 86, 103, 104, 105, 106, 108, 118, 121, 122, 127, 129, 130, 133, 135, 137, 138, 139, 140, 142, 144, 145, 146, 147, 148 and IMO Resolutions A. 893(21), A. 999 (25), A. 1047 (27) and A. 1079(28).
- 1.4 The International Maritime Organisation (IMO) Maritime Safety Committee (MSC) has completed a comprehensive review of the safe manning principles. This review and the implementation of MLC 2006 (as amended) and 2010 amendments to the International Convention on Standards of Training, Certification and Watch-keeping for Seafarers 1978(STCW) will have a major impact on safe manning of vessels and the training and certification of seafarers.

2. Application

- a. The Bahamas Maritime Authority (BMA) applies these requirements to:
 - all ships engaged in international voyages;
 - other ships of 500gt and over;
 - offshore units whether mobile or stationary;
 - all yachts of 24 metres in length and over
- b. All ships over 500 gross tonnage must have onboard a valid SMD and all other ships units may apply for a SMD on a voluntary basis.

3. Responsibilities of the Company¹ and Master

- 3.1 In accordance with Regulation 1/14 of the STCW Convention, the Company is responsible for ensuring that the ship is manned in compliance with the SMD by properly qualified, certificated and medically fit seafarers. Similar requirements are also laid down in paragraph 6 of the International Safety Management (ISM) Code. In line with these requirements, the BMA requires the Company to apply for a SMD proposing the appropriate level of manning that they consider the vessel will require taking into consideration the international guidelines.
- 3.2 The Company must verify the validity and authenticity of all seafarers' sea service, certificates and documents before applying for Bahamas certification. This responsibility remains irrespective of the Company using a recruitment and placement service (RPS), manning or crewing agents to submit seafarers' documents. Companies utilising RPS shall ensure that RPS has authorization issued by the Government of the country in which they are located, verifying compliance with the requirements of MLC 2006 Standard A1.4. If the RPS is located in a country that has not ratified the MLC 2006 or the RPS does not have a valid MLC 2006 compliant document, the Company should assess the RPS taking into consideration the MLC 2006 requirements, guidelines and BMA Information Bulletin No. 147.
- 3.3 The Company and the master shall ensure that all persons joining a ship or unit are immediately given appropriate familiarization training with respect to the ship for emergency, safety and if applicable security in addition to their respective duties and functions.
- 3.4 The Company and the master of a vessel shall ensure that watch standards and arrangements as outlined in STCW Convention Chapter VIII are maintained at all times.

¹ Company is the entity responsible for the management of the ship in accordance with the ISM Code. For ships that are not required to comply with the ISM, Company is the entity as defined in STCW Convention Regulation 1/1.23)

- 3.5.1 The Company and the master shall meet the relevant requirements of MLC 2006 and STCW Convention Chapter VIII with respect to periods of rest and prevention of alcohol abuse for any person assigned or performing designated safety, prevention of pollution and security duties
- 3.5.2 The watch schedules and records of daily hours of rest for all seafarers shall be posted or maintained to be easily accessible and capable of being verified. Any exceptions or suspension of the periods of rest shall be recorded in the Official Log Book.
- 3.5.3 The Company and master shall be guided by BMA Information Bulletin no. 144 in relation to hours of rest. For the prevention of alcohol abuse, the BMA has established a limit of not greater than 0.05 % blood alcohol level (BAC) or 0.25 mg/l alcohol in the breath or a quantity of alcohol leading to such alcohol concentration.

4 Employing Officers and Ratings with Alternative Certification

- 4.1 A Company may find it prudent to have officers or ratings certificated under the STCW Convention Chapter VII as this would enable flexibility for the Company to employ the affected officers or ratings on ships depending on the manning requirement for officers. However, an officer may only be employed in one identified capacity onboard at any one time. It must be borne in mind that employment of such officers on a ship must not reduce the number of crew or lower the integrity of the profession nor should the legal position and authority of the master be adversely affected.
- 4.2 Under no circumstances may a single officer be assigned the combined duties of the engine and navigation watch-keeping officer.

5 Clarification of Certain Capacities

5.1 Trainee

- The terms Cadet, Apprentice, Assistant Engineer or Trainee Rating will include persons undergoing training but not yet qualified for a capacity identified in the SMD.
- None of the above will be included in the SMD as a requirement, but the company, as per their internal policy may carry them.

All of the above persons must complete Basic Training (four elements of the STCW Code A-VI/1) prior to joining a ship.

5.2 Ship's Cook

- 5.2.1 In all cases where the total manning consists of more than 10 persons, there shall be a dedicated certified cook. If the SMD does not show a requirement of more than 10 persons then the company should have one person designated as the Cook. If the person so appointed does not have a ship's cook certificate then the company shall ensure that he/she has the necessary skills, experience and training or instruction in food hygiene, personal hygiene, and handling and storage of food onboard ship.
- 5.2.2 Additional guidance relating to the ship cook is outlined in BMA Information Bulletin No. 146.

5.3 Doctor or Person Providing Medical Care

- 5.3.1 The ship shall carry a qualified medical doctor when there are 100 or more persons onboard. Where the ship is engaged on voyages during which the ship is no more than 36 hours steaming distance from a port with qualified medical care and medical facilities, the vessel may apply for an exemption.
- 5.3.2 Offshore units with 100 or more persons may be exempted from the requirement of a doctor if it is linked by a helicopter service that has access to a qualified medical care and medical facilities. An application for exemption should be submitted to the BMA.
- 5.3.3 Where there is no doctor on board, there shall be at least one person, who maybe the master, designated to provide medical care. The master should seek additional medical assistance when so required.
- 5.3.4 The designated person shall always available to provide medical care to seafarers in compliance with onboard Safety Management System (SMS).
- 5.3.5 The designated person should be trained in medical care in accordance with the STCW Regulation VI/4.
- 5.3.4 The Doctor or person designated to provide medical care shall undergo refresher training at period not exceeding 5 years and shall be capable of communicating in the English language.
- 5.3.6 Additional guidance on the provision of medical care onboard is outlined in BMA Information Bulletin No. 148.

5.4 **Ship Security Officer (SSO)**

5.4.1 All persons, onboard ships to which the International Code for the Security of Ships and Port Facilities (ISPS Code) applies, shall have received security training in accordance with STCW Convention Regulation VI/6. One appropriately trained person shall be designated as the Ship Security Officer (SSO) as required under the (ISPS Code).

5.4.2 The SSO maybe the master or any other person designated by the Company. The officer so designated shall meet the training requirement in accordance with the provisions of STCW Regulation VI/5 and shall be directly responsible to the master (if the SSO is not the master) and the Company Security Officer (CSO) in compliance with ship's SMS.

5.4.3 The Company shall ensure that one of the capacities proposed to be included on the SMD is also able to carry out the duties of the SSO.

5.4.4 Additional guidance pertaining to the SSO is provided in BMA's Information Bulletin No. 118.

5.5 **Persons Assigned Electronic and Electrical Duties**

5.5.1 The ship may carry persons who are specifically assigned the specific duties, tasks and responsibilities relating to electrical and electronic tasks. If required to be carried, these persons should be certified as Electro-Technical Officers or Electro-Technical Ratings and satisfy the requirements of STCW Regulations III/6 or III/7 respectively.

5.5.2 The SMD need only include these persons if they are additional to the Engineering Officers and they have been assigned shipboard duties to satisfy the requirements of the maintenance of a safe engineering watch, emergency as specified in the Muster List or operation and maintenance of the ship's electrical, electronic and control systems.

5.6 **Person Designated for Safety**

All ships shall have a person, who may be the Master, who has responsibility for implementation of and compliance with the ship's occupational safety and health policy and programme.

6 **Manning During Hours of Darkness and Restricted Visibility**

Companies shall ensure that the ships have sufficient trained navigational watch-keeping personnel to ensure that the navigation control room/bridge is manned by at least 2 watch-keeper during hours of darkness and conditions of restricted visibility. One of these watch keepers shall be a Navigational Officer.

7. Manning Onboard Specific Ship

7.1 Vessels with propulsion power of less than 750 kW

Ships with propulsion power of less than 750 kW will not be required to have an engineer certificated in accordance with STCW. However, such ships must have at least one person, other than the master, who is trained and certified to operate the machinery onboard the vessel. If the training is not in accordance with STCW then the person should have documentary evidence of his training and capability to perform the assigned tasks.

7.2 Vessels with Unattended Machinery Space (UMS)

7.2.1 The UMS notation assigned by Classification Society (Class) shall be taken into account when determining whether the machinery space can be unattended.

7.2.2 If the manning of a vessel with propulsion power of more than 3000kW is based on UMS notation then the ship shall carry an additional watch-keeping engineer officer if the UMS systems are inoperative for more than seven days. The Company shall notify affected Class and the BMA of the related equipment failure affecting the UMS notation.

7.3 Passenger Ships, including RO-RO Passenger ships

7.3.1 A Company operating a passenger ship may employ additional hotel staff and other non-marine crew such as shop-keepers, barbers, laundrymen etc. All such persons must be given STCW familiarization training and if they are assigned either safety, security or environmental protection duties, then the persons should have the basic STCW training.

7.3.2 The SMD should include all persons who are required to be assigned shipboard duties in order to satisfy the requirements of the Emergency Muster List for guidance of passengers to assembly points, muster stations and survival crafts and any other associated emergency duties. Such persons should be trained in accordance with the relevant requirements of STCW Regulation V/2. The vessel should consider the number of such persons taking into consideration the number of passengers.

7.3.3 The SMD should include all persons who are required to be assigned either security or environmental protection shipboard duties. Such persons should be trained in accordance with the relevant requirements of STCW Regulation V/2.

7.3.4 One designated person holding a STCW Regulation IV/2 (GMDSS Certificate of Competency) shall remain in charge of communication duties for the entire duration of an emergency until the master gives the order for evacuation of the ship.

7.3.5 All survival craft must be manned by duly qualified persons in accordance with STCW and as required under SOLAS 1974, as amended.

7.4 Offshore Units

7.4.1 A Company operating an offshore unit may employ additional persons, who must be given familiarization and basic training as applicable.

7.4.2 [All persons should be trained in accordance with either the STCW or alternatively the provisions of IMO Resolution A. 1079\(28\). The Company should take into](#)

consideration the Bahamas guidance as outlined in BMA Information Bulletin no. 105.

7.4.3 The SMD should include all persons who are required to be assigned watch-keeping, safety, security, environmental protection, safety and other shipboard duties taking into consideration the international guidelines.

7.5 Tankers

7.5.1 A Company operating tankers shall ensure that all officers, ratings and persons involved in cargo operation hold a basic training in accordance with the provisions of STCW requirements relating to the type of tanker on which the person is serving. The Company should take into consideration the Bahamas guidance as outlined in BMA Information Bulletin No. 106.

7.5.2 In addition to 7.5.1 above, a Company operating tankers, shall ensure that all officers, ratings and persons with immediate responsibility for cargo or cargo related operations hold advanced training in accordance with the provisions of STCW requirements relating to the type of tanker on which the person is serving. For the purpose of this requirement, the person deemed to have immediate responsibility is not limited to persons at management level but may include person assigned designated cargo related responsibilities dependent on the vessel's operational requirements.

7.6 High Speed Crafts

A Company operating high speed crafts shall ensure that all officers and crew specified on the manning of the Permit to Operate are trained in accordance with the provisions of the High Speed Craft Code.

7.7 Yachts

A Company operating yachts shall be guided by the BMA Information Bulletin No.s 102 and 133 for the purpose of manning of the yacht.

7.8 Vessels Which are Required to Comply with the International Ship and Port Facility Security Code (ISPS Code)

7.8.1 A Company operating ships, which have to comply with the ISPS Code, shall ensure that all persons specified on the SMD are trained in accordance with the provisions of STCW requirements

7.8.2 The Master shall ensure that all persons receive security related familiarization training before being assigned to shipboard duties. The security related training familiarization training shall be conducted by the Ship Security Officer or an equally qualified person.

7.9 Vessels Fitted with Dynamic Position Systems

The Company should ensure that all persons specified on the SMD and engaged in operating a dynamic position system have the relevant training and experience prior to be assigned their shipboard duties. For this purpose, dynamic positioning is defined as the system whereby a self propelled vessel's position and heading is automatically controlled by using its own propulsion units.

7.10 Vessels Operating in Polar Waters

The Company should ensure that prior to be assigned shipboard duties, the master and Officers specified on the SMD are duly trained and have the relevant experience relating to operation in polar waters.

7.11 Vessels Fitted with ECDIS

7.11.1 The Company should ensure that if the ship is fitted with ECDIS, the master and navigating officers have appropriate ECDIS training.

7.11.2 The Master shall ensure that all affected officers have documentary evidence ECDIS training prior to be assigned their shipboard navigational duties.

7.11.3 The Company and Master should take into consideration the Bahamas guidance as outlined in BMA Information Bulletin No. 138

7.12 Vessels with Five or More Seafarers

Ships with five or more seafarers must establish a safety committee comprising of persons who are either appointed or elected as safety representatives to participate in the meetings of the committee.

8. Employment of Additional Seafarers by the Company.

8.1 A Company may decide to employ more seafarers than stipulated in the SMD. These seafarers shall be trained to a level appropriate to their duties in addition to having the minimum basic training for emergency, safety and survival. The statutory certificates will detail the maximum number of persons on board and there must be sufficient accommodation satisfying the MLC 2006 (as amended) standards for that number.

8.2 There are a number of capacities that are not identified in STCW and accordingly the SMD may not refer to them. The Company should decide on their qualification or experience in accordance with the objectives of their Safety Management System but if the persons are employed and assigned shipboard safety, security, environmental protection, cargo operations or watch-keeping duties, the person must complete STCW basic training before joining the ship and receive shipboard familiarization training before being assigned their shipboard tasks/duties.

9 Vessel(s) Not Engaged in Normal Trades.

9.1 The manning level for a vessel in laid up condition should take into consideration the guidelines in paragraph 5 of BMA Information Bulletin No. 122 and the operational requirements of the vessel at any given time. Any reduction of normal manning should be considered with the full approval of the local authority.

9.2 The BMA recommends that a master or other suitably qualified person remains in charge and sufficient numbers of trained persons to meet any emergency situation or operational circumstance, depending upon the machinery and systems that are operational remain on board at any given time. In such circumstances, communication must be maintained with the local authority so that further assistance may be obtained immediately when required.

- 9.3 Offshore Units that operate for prolonged periods on one location may be issued with a SMD that reflects the static status of that Unit. Additional guidelines are outlined in BMA Information Bulletin No. 122.

10 Exceptional Circumstances (Exemption)

- 10.1 In exceptional circumstances where the manning level falls below that of the SMD e.g. due to crew illness, unexpected repatriation on compassionate grounds etc., the vessel may as a measure of force-majeure, sail with one person less than that stipulated in the SMD. This also applies to vessel which are required to carry a Doctor as specified in Section 5.3.1
- 10.2 In all such cases the master, in consultation with the chief engineer where the shortage relates to an engineer officer, should ensure that there is continuity of watches by duly qualified persons without affecting the statutory minimum period of rest.
- 10.3 The above provision to sail a person short of that stated on the SMD do not apply to the capacities of master and chief engineer on the basis that one person must be designated as master and one person designated as chief engineer. If the designated person does not hold a STCW certificate that allows them to serve in the capacity of a master or chief engineer, then the Company shall apply for a dispensation taking into consideration the provisions of Section 11 of this Bulletin.
- 10.4 The BMA must be notified and provided with the following information in writing, which must also be duly recorded in the Official Log Book (OLB):
- a. Rank of the affected officer(s)
 - b. Name of ship
 - c. No. of crew onboard, excluding affected officer
 - d. Intended voyage
 - e. Date of departure
 - f. Reason for exemption
 - g. Time of notification to BMA
- 10.5 The shortage must be filled at the earliest opportunity and in any case not later than fourteen (14) days or at the next port, if the intended voyage is more than fourteen (14) days.

11 Exceptional Circumstances (Dispensation)

- 11.1 Where, in exceptional circumstances, a Company is unable to achieve the minimum manning due to the lack of a duly certificated Officer for a specific capacity, a dispensation under STCW Article VIII maybe considered in respect of an Officer who does not hold a certificate for the relevant capacity. A dispensation for a Master or Chief Engineer will only be granted in circumstances of *force majeure* for the shortest possible time as determined by the BMA.
- 11.1.2 The Company must apply to the BMA for such a dispensation and provide the following:
- a. Full details of the officer, including his or her national certificate and Flag State Endorsement (FSE)
 - b. Total seagoing service since qualification as an Officer
 - c. Name of ship
 - d. No. of crew onboard
 - e. Intended voyage

- f. Date of departure
- g. Reason for dispensation
- h. Dispensation fee (See BMA Information Bulletin No. 81)

11.2.1 Where, in exceptional circumstances, a Company is unable to achieve the minimum manning due to the lack of a duly certificated Cook, a dispensation maybe considered in respect of a person who does not hold a Cook's certificate. A dispensation for a Cook may be granted for the shortest possible time as determined by the BMA.

11.2.2 The Company must apply to the BMA for such a dispensation and provide the following:

- a. Full details of the person
- b. Total seagoing service and confirmation that the person has been trained or instructed in food hygiene, personal hygiene, and handling and storage of food onboard ship.
- c. Name of ship
- d. No. of crew onboard
- e. Intended voyage
- f. Date of departure
- g. Reason for dispensation
- h. Dispensation fee (See BMA Information Bulletin No. 81)

11.3 The BMA will assess the submitted information and where applicable this assessment may include consultation with the Administration that issued the national Certificate which was endorsed. If the assessment is satisfactory, the BMA will issue a dispensation document and invoice the Company accordingly.

12 Exceptions: Hours of Rest

Notwithstanding the provisions of STCW A-VIII/1.9, if there is a need for regular exceptions from the weekly rest period, the Company shall undertake an assessment of the manning level in order to determine if the manning level onboard is sufficient in order to comply with the hours of rest requirements taking into consideration 13.1 of this Bulletin and BMA Information Bulletin No. 144. The outcome of this assessment shall be documented with a copy maintained onboard and if the assessment is negative, the necessary application shall be submitted to the BMA to review the safe manning level.

13 Application for SMD

13.1 The Company shall make an application for a safe manning document following an assessment that take into consideration, the guidelines in this Bulletin and IMO Resolutions A. 893(21), A. 999 (25), A. 1047 (27) and A. 1079(28) as applicable which are contained in the Appendix. The proposed minimum manning level is not limited to the watch-keeping personnel but should now include any additional persons deemed necessary for the safe operation of the vessel taking into consideration the international guidelines and the following:

13.1.1 **Principles**

the capability to:

- .1 maintain safe navigational, port, engineering and radio watches in accordance with regulation VIII/2 of the 1978 STCW Convention, as amended, and also maintain general surveillance of the ship;
- .2 moor and unmoor the ship safely;
- .3 manage the safety functions of the ship when employed in a stationary or near-stationary mode at sea;
- .4 perform operations, as appropriate, for the prevention of damage to the marine environment;
- .5 maintain the safety arrangements and the cleanliness of all accessible spaces to minimize the risk of fire;
- .6 provide for medical care on board ship;
- .7 ensure safe carriage of cargo during transit;
- .8 inspect and maintain, as appropriate, the structural integrity of the ship;
- .9 operate in accordance with the approved Ship's Security Plan; and

13.1.2 **The Ability to:**

- .1 operate all watertight closing arrangements and maintain them in effective condition and also deploy a competent damage control party;
- .2 operate all onboard fire-fighting and emergency equipment and life-saving appliances, carry out such maintenance of this equipment as is required to be done at sea, and muster and disembark all persons on board; and
- .3 operate the main propulsion and auxiliary machinery including pollution prevention equipment and maintain them in a safe condition to enable the ship to overcome the foreseeable perils of the voyage.

13.1.3 **Onboard Functions:**

- .1 ongoing training requirements for all personnel, including the operation and use of fire-fighting and emergency equipment, life-saving appliances and watertight closing arrangements;
- .2 specialized training requirements for particular types of ships and in instances where crew members are engaged in shipboard tasks that cross departmental boundaries;
- .3 provision of proper food and drinking water;
- .4 need to undertake emergency duties and responsibilities; and
- .5 need to provide training opportunities for entrant seafarers to allow them to gain the training and experience needed.

13.1.4 **Other Relevant Factors** including;

- .1 performance of functions at the appropriate levels of responsibility;
- .2 cargo handling;
- .3 operation of the ship and care for persons on board;
- .4 marine engineering, including the tasks, duties and responsibilities involved with ship's propulsion;
- .5 electrical, electronic and control engineering requirements;
- .6 radiocommunications;
- .7 the management of safety, security and protection of the marine environment;
- .8 the number of qualified and other personnel required to meet peak workloads situations

- 13.2 A specimen of the Bahamas Safe Manning Application application form (R. 106) is attached and available for download on the BMA website. The BMA will also accept a written application provided it has all the necessary information, including the details of the ship, its equipment and the intended area of operation.
- 13.3 The applying Company may be required to provide additional supporting information such as the Muster List, manning for mooring operations, hours of rest schedule, in order to clarify the proposed manning levels which should enable all such operations.
- If additional information/clarification is required, the BMA may issue a conditional SMD during this process
- 13.4 The "Other" category on Form R.106 allows the applicant to make their assessment of the shipboard operations and propose persons that are allocated additional tasks. These persons maybe those non watchkeepers that are required or are allocated emergency duties, mooring operation, crowd control (on a passenger ship), safe cargo operation (on tanker), etc.
- 13.5 Passenger ships, offshore units or any other vessel that may have different manning levels dependent on the vessel's operational status (e.g. FPSO re-positioning, passenger ship with different passenger complement) should reference this information and propose a manning scale linked to the relevant condition. As an example, a passenger ship may have a different manning level with full passenger complement onboard as opposed to a re-positioning voyage without any passengers and likewise an FPSO manning level maybe different when underway compared to when on station.
- 13.6 The Company may conduct a generic assessment for sister ships which will be engaged on similar trading voyages and/or operations.

14 Issue of SMD

- 14.1 The BMA will consider all international requirements and guidance in drafting a SMD in order to be satisfied that the manning shall meet the intended goals.
- 14.2 In this respect the BMA may increase the scale of manning from that proposed by the Company. The BMA will not normally reduce the manning level from that proposed by the Company unless it considers certain references in the SMD application proposed by the Company are unnecessary or inconsistent with standard practices.
- 14.3 Notwithstanding the manning prescribed in the SMD, if the Company subsequently determines that it is difficult to provide minimum periods of rest after meeting all the essential duties and functions then the Company shall increase the manning levels and notify the BMA accordingly.
- 14.4 No vessel shall proceed to sea or undertake a voyage unless it is manned, at the minimum, in compliance with the SMD.

15. Validity of SMD

- 15.1 A SMD issued to a ship shall have a validity of five years from the date of issue.
- 15.2 A new SMD is also required to be issued when:
- .1 there is a change of vessel's name, or
 - .2 there is a change of trading area as documented on the SMD, or
 - .3 change of Managers; or
 - .4 any other changes/alterations to the ship, its crew, construction, machinery, equipment, operation, maintenance, or management that affects the manning level required to continue safe operations compliant with the Conventions and this Bulletin.
- 15.3 Notwithstanding the provisions of STCW A-VIII/1.9, if there is a need for regular exceptions from the weekly rest period, the Company shall undertake an assessment of the manning level in order to determine if the manning level onboard is sufficient in order to comply with the hours of rest requirements taking into consideration the guidelines of this Bulletin. The outcome of this assessment shall be documented with a copy maintained onboard and if the assessment is negative, the necessary application shall be submitted to the BMA to review the safe manning level.

16 Fees

Fees for the above will be as noted in the **BMA Information Bulletin No. 81**.

17 Revision History

- | | |
|--|--|
| Rev. 4 (14 th November 2019). | Inclusion of IMO Resolution A. 1079(28) and removal of reference to A. 891(21) sections 15.4 & 15.5. New text in blue. |
| Rev. 3 (31 st August 2012). | Third issue. |

