



PORTS OF JERSEY

## PMSC AUDIT NOVEMBER 2018



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**MARINE AND RISK CONSULTANTS LTD**

## PORTS OF JERSEY

### PMSC AUDIT NOVEMBER 2018

Prepared for: Ports of Jersey

St Peter

Jersey

JE1 1BY

Author(s): William Heaps

Checked By: David Foster

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Marine and Risk Consultants Ltd

Marico Marine

Bramshaw

Lyndhurst

SO43 7JB

Hampshire

United Kingdom

Tel. + 44 (0) 2380 811133

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## EXECUTIVE SUMMARY

Ports of Jersey (PoJ) invited Marico Marine to undertake an audit of the current Marine Safety Management System as maintained by the Jersey Harbours, from the perspective of PMSC compliance.

PoJ specifically requested a detailed review of Navigational Risk Assessments and training management. All other aspects of PMSC compliance were also reviewed as part of the audit.

The audit was undertaken over 1 ½ days on Monday 12 and Tuesday 13 November 2018 by William Heaps and David Foster of Marico Marine.

Jersey Harbours were found to be operating a comprehensive and appropriate Marine Safety Management System commensurate with the requirements of the Port Marine Safety Code and associated Guidance. Several recommendations have been made to ensure continuing improvement and clarification of current procedures and documentation. The most significant recommendation is to review the manner in which Navigation Risk Assessments are undertaken and documented.

Full details of all recommendations are given in the subsequent sections of this report. The main audit findings were:

- The Navigational Risk Assessment procedures were reviewed in detail and it is recommended that PoJ consider creating an additional detailed navigation risk assessment based on an initial hazard identification process that assesses the differing risks by area and vessels type for collision, contact (allision), grounding, break-out, and foundering (as a minimum); and
- The management of training was also reviewed, and from a detailed investigation of procedures followed by the VTS department it was seen that procedures were compliant with the requirements of the PMSC. However, it was not straightforward to quickly look across the whole department to establish an overall picture of the training status and the future training requirement. It is understood that the PoJ are exploring setting up a common training regime across the business. Because the current system is fully compliant if somewhat awkward to use, it is recommended that, rather than make immediate changes, wait until a decision has been made on the overall training management.

Additionally:

- The PMSC was found to be an appropriate standard, and Jersey Law well suited to the requirements of the Code;
- Reference to Byelaws in the MSMS was confusing and should be removed;

- The MSMS Master Manual would benefit from re-indexing and checking to ensure all policies are fully listed;
- Consideration should be given to additional Duty Holder training, and formally recording initial and refresher training for Harbour Authority members;
- The Designated Person arrangements were found to be appropriate;
- Internal auditing procedures should be reviewed and, if necessary, clarified in the MSMS;
- Consideration should be given to making 3-yearly compliance statements to the responsible Minister within the States of Jersey;
- Consideration should be given to more fully Listing of Harbour Stakeholder groups and their composition, within the MSMS;
- The Marine Safety Plan is due for a refresh (planned). It is recommended that it be moved to a more appropriate location on the public web site;
- The MSMS should continue to be reviewed regularly, and in particular the Master Manual should be regularly checked to ensure it correctly summarises all other MSMS components;
- The relationship between PoJ (Jersey Harbours) and the State Planning and Environment Department should be formalised in the MSMS;
- Charted cables in the Harbour Area should be verified, and if necessary procedures put in place in case of emergency;
- It is recommended that BRM training should continue to be a formal requirement for pilots and that consideration be given to regular refresher training;
- It is recommended that formal procedures are developed to seek confirmation from vessel masters that pilot ladders are correctly rigged and tested before a pilot boards;
- It is recommended that consideration be given to joint training of Pilots and Tug crew on an ongoing basis; and
- It is recommended that the procedures for using Q Pulse for incident recording and investigation are reviewed and updated in the MSMS, and that more use is made of the software's capability to generate summaries and trend reports.

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## INTRODUCTION

Ports of Jersey (PoJ) have stated the intention to operate their port facilities (St Helier and outlying harbours) in compliance with the requirements of the UK Port Marine Safety Code (PMSC). While Jersey is not part of the UK and the ports are therefore not required to comply with the PMSC and Guide to Good Practice (GtGP) by the UK DfT, the Duty Holder for the Harbours has identified the PMSC as the relevant standard for Ports of Jersey to comply with.

There are considerable differences in the legislative framework between the UK and Jersey, but most requirements of the PMSC, and almost all advice within the GtGP, are appropriate to Ports of Jersey. (Please see preamble to **Section 1 - The Legal Background**)

PoJ therefore invited Marico Marine to undertake an audit of the current Marine Safety Management System as maintained by the organisation, from the perspective of PMSC compliance.

Marico Marine last carried out a similar audit on 14 – 15 September 2016, and previously to that in December 2012<sup>1</sup>

For the current (2018) audit, PoJ specifically requested a detailed review of Navigational Risk assessments and training management.

All other aspects of PMSC compliance were also reviewed as part of the audit using the checklist on the following pages.

The audit was undertaken over 1 ½ days on Monday 12 and Tuesday 13 November 2018 by William Heaps and David Foster of Marico Marine.

### **Monday 12<sup>th</sup> November 2018**

Opening Meeting 0900-1000 Du Feu Room Maritime House – during which introductions were made, an overview of the audit objectives was discussed and a timetable for the audit agreed.

Interviews were conducted with the Harbour Master and team members:

- Bill Sadler (Harbour Master)
- Stan Richard-dit- Leschery (HSQE Manager and Pilot)
- Peter Moore (Maritime Standards and Pilot)

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<sup>1</sup> See Marico Reports 16UK1205 issue 01 dated 05 Oct 2016 and 12UK872 issue 01 dated 11 Dec 12.

- Aaron Gavey (Coastguard and VTS Manager)
- Jamie Dollimore (Marine Operations Manager)
- Also in attendance: Zoltan Pallot (Designated Person)

Between 1340 and 1410 (approx.) the auditors attended the weekly Q-Pulse meeting on Occurrences and Incidents (PoJ Room Du Feu)

During the afternoon, further interviews took place including

- Mike Tait (Maritime Leisure Manager)
- Aaron Gavey (Coastguard and VTS Manager)
- Dan Downey (Coastguard & VTS Specialist Watch Officer (with responsibility for training))

This was followed by a visit to the VTS MOC, and a detailed discussion on Training standards and records (VTS example).

#### **Tuesday 13<sup>th</sup> November 2018**

Interviews continued:

- Stan Richard-dit- Leschery (Pilotage)
- Abby Farahmand / Jamie Dollimore (Towage and Marine Services)

The majority of Tuesday morning (approx. 1000 – 1230) was taken up with a “workshop style” session on PoJ Navigation Risk assessment methodology. PoJ staff explained the rationale and methods behind the current high-level bow tie risk assessments, and how these could be used to demonstrate PMSC compliance. See section 4 of this report for the outcome of this session.

Attendees included:

- David Foster / William Heaps (Marico marine)
- Bill Sadler (Harbour Master)
- Stan Richard-dit- Leschery (HSQE Manager and Pilot)
- Aaron Gavey (Coastguard and VTS Manager)
- (Observing part of discussion) Zoltan Pallot (Designated Person)

The audit concluded with a “hot wash up” session attended by the majority of those staff who had contributed during the two days, during which the Marico auditors summarised the principal audit findings in each of the 13 sections covered by this report.

## 1 THE LEGAL BACKGROUND

***N.B. the legal background pertaining to Jersey Harbours differs to that in the UK and referenced within the PMSC. Therefore, while this document is based upon compliance with UK law and regulation, where appropriate Jersey legislation will be considered. However, the principle of PMSC compliance remains appropriate, and all sections of this audit checklist remain relevant.***

The duties of a harbour authority are of three kinds: statutory duties imposed either in the local legislation for that authority or in general legislation, general common-law and fiduciary duties.

The Code includes a brief general summary of the main duties and powers that are common to many harbour authorities in relation to marine operations. It also contains guidance as to how some of these duties and powers should be exercised consistent with good practice.

There are several general principles:

- A harbour authority has statutory and non-statutory duties;
- These duties include an obligation to conserve and facilitate the safe use of the harbour; and a duty of care against loss caused by the authority's negligence;
- Duties to ensure the safety of marine operations are matched with general and specific powers to enable the authority to discharge these duties; and
- There are procedures for these to be changed where necessary.

Some duties, and each harbour authority's powers, are contained in local Acts and Orders, and, although they have much in common, the detail varies from port to port. Most are established by the incorporation or transposition into local Acts and Orders of model provisions in the Harbours, Docks and Piers Clauses Act 1847. Other duties and powers are in general legislation - for example, the Harbours Act 1964, the Dangerous Vessels Act 1985, the Pilotage Act 1987 and the Merchant Shipping Act 1995.

The duty holder is responsible for ensuring that the organisation complies with the Code. In order to effectively undertake this role they should:

- Be aware of the organisation's powers and duties related to marine safety;
- Ensure that a suitable Marine Safety Management System (MSMS), which employs formal safety assessment techniques, is in place;
- Appoint a suitable designated person to monitor and report the effectiveness of the MSMS and provide independent advice on matters of marine safety;
- Appoint competent people to manage marine safety;



- Ensure that the management of marine safety continuously improves by publishing a marine safety plan and reporting performance against the objectives and targets set; and
- Report compliance with the Code to the MCA every 3 years.

Existing powers should be reviewed on a periodic basis by harbour authorities, to avoid a failure in discharging its duties or risk exceeding its powers.

1	GtGP	PMSC		Y/N	Comment
.1	1.5-1.6	1.3 -1.5	Is the legislation applicable to the harbour authority known and listed?	Y	Set out in section 1 of Enforcement and Regulatory Services Manual. See also comment below
.2	1.3-1.4	3.11	Are the statutory duties and powers of the harbour effective for purpose?	Y	HM believes powers to be well supported and sufficiently wide ranging
.3	1.6.1	3.11	Are the harbour limits of jurisdiction appropriate to the current activity of the port?	Y	Limits of both Helier and the smaller harbours are well defined and appropriate.
.4	5.1.9	E.S. 2-5	Is the Harbour Authority aware of all marine berths, terminals and jetties within the SHA and listed in the SMS?	Y	All assets including outlying harbours are PoJ owned
.5	1.6.2	4.2	Is the Harbour Master familiar with and does he understand the extent of his legal powers?	Y	Comprehensively documented. The HM and staff had good understanding during interview.
.6	1.9.7	4.3 -4.4	Does the harbour have Byelaws?	N	Not appropriate in Jersey – harbour legislation has equivalent effect. See comment below.
.7	1.6.1	2.3-2.6 3.11	Is the legislation reviewed regularly to determine if fit for purpose and adequately covers risks identified?	Y	When required in conjunction with States Maritime Administration
.8	1.8	4.6-4.7	Does the harbour authority have powers of Special Directions?	Y	See comment below
.9	1.9	4.8-4.9	Does the harbour authority have powers of General Direction / Harbour Directions?	Y	See comment below
.10	1.9.4	3.13	Are there grounds for applying for a Harbour Revision Order?	N/A	Not appropriate to Jersey

1	GtGP	PMSC		Y/N	Comment
.11	1.9.11		Does the harbour authority issue licences (e.g. port craft, local watermen or works etc.)?	Y	E.g. charter boat permits, surf school and other concessions. See comment.
.12	1.9.12	2.25	Is a clear enforcement policy in existence, clearly promulgated and adequately resourced?	Y/N	See comment

## 1.1 COMMENTS

1.1 As a general observation, it is noted that Ports of Jersey Limited is the incorporated business that operates the Island's Airport and Harbours. The business plan is to generate and reinvest funds to maintain and improve the Island's transport (marine and aviation) infrastructure. While not a concept under Jersey Law, in effect the harbour is run along very similar principles to a Trust Port in the UK, and therefore The PMSC and Trust Port Guidance are very applicable to the harbour operations.

1.6 Although Jersey does not have byelaws, section 1.2.1 of the Enforcement and Regulatory Services Manual is confusingly titled "Byelaws". Suggest amending to "Regulations and Orders" or similar.

1.8-1.9 The concept of Special and General Directions does not transfer precisely to Jersey. Section 1.2.2 of the Enforcement and Regulatory Services Manual clarifies Harbour Master's directions as defined in The Harbours (Administration) (Jersey) Law 1961 which are equivalent.

1.11 Licences and permits are issued, and requirements clearly promulgated on the web site and in publications such as "Enjoying our Coast Safely" (Code of Practice for Safety in the Water on Jersey's Beaches)

1.12 There is a clear commitment to complying with all aspects of the PMSC at section 1.2 of the PMSC Master (Policy) Manual, though the enforcement statement detailed in the index on p1 does not seem to be present in that document. However, enforcement procedures are clear in the Enforcement and Regulatory Services Manual. As a general observation, indexing of the Master (Policy) Manual seems incomplete.

## 2 ACCOUNTABILITY FOR MARINE SAFETY

This section identifies who is accountable for marine safety and is based on the following general principles:

- The duty holder is accountable for safe and efficient marine operations;
- An organisation has a range of statutory and non-statutory duties;
- The Code represents the national standard against which the policies, procedures and performance of organisations may be measured;
- Organisations should make a clear, published commitment to comply with the standards laid down in the Code;
- Executive and operational responsibilities for marine safety must be clearly assigned, and those entrusted with these responsibilities must be appropriately trained, experienced and qualified to undertake their duties and be answerable for their performance; and
- A designated person must be appointed to provide independent assurance about the operation of an organisation's marine safety management system. The designated person must have direct access to the duty holder.

The key to effective discharge of the functions described in the Code is the development and proper operation of a MSMS for marine operations. That, in turn, depends upon a clear assignment of relevant executive and operational responsibilities to the organisation's staff.

2	GtGP	PMSC		Y/N	Comment
.1	2.1.1	1.6-1.8	Is the duty holder defined and published?	Y	"The Harbour Authority" clearly defined in Master Manual section 2.1
.2	2.2	1.1	Has the organisation published a commitment to comply with standards laid down in the Code?	Y	Section 1.1 explains relevance to Jersey, and commitment to comply
.3	2.2.5	1.1 1.13- 1.17	Are the executive and operational duties stated and assigned?	Y	Section 2 of Master Manual
.4	2.2.19	1.6-1.10	Does the duty holder have an understanding of port marine activities, MSMS and supporting policies and procedures?	Y	See comment below
.5	2.2.22, 2.2.23	1.2	Do new Duty Holders receive PMSC training as part of their induction?	Y/N	See comment below
.6	2.2.20	1.9, 1.14- 1.15	Has a Harbour Master been appointed?	Y	Captain Bill Sadler
.7	2.1.1, 2.2.21 2.2.25- 38	1.11- 1.12	Has a designated person (DP) been appointed?	Y	Mr Zoltan Pallot
.8	2.1.21 2.2.26	1.11	Does the DP have sufficient independence?	Y	See comment below
.9	2.2.25	1.11	Does the DP have direct access to the Duty Holder?	Y	Attends meetings
.10	2.2.26 – 38, 2.2.30	1.11	Does the DP provide an effective level of assurance, through assessment and audit to the Duty Holder?	Y	See comment below
.11		1.8, 2.30, 2.31	Has the Duty Holder sent a letter of Code compliance to the MCA within the last three years?	N	See comment below

## 2.1 COMMENTS

2.4 The Duty Holder (Harbour Authority) members have previously received PMSC training, and currently have a good understanding of their role. However, two key board members will soon be

standing down, and a number of non-executive officers have changed since the last formal training took place. PoJ may therefore consider refreshing PMSC training for all Board members and give thought to documenting a future policy for Board Member training (maximum time in post before initial induction training is required for individuals, period between refresher training for all members).

2.5 Consideration should be given to formally recording Duty Holder training sessions (including induction training for new members, which it is understood does take place).

2.8 The designated person is independent of daily marine operational matters, and the ongoing review and implementation of the MSMS. However, he is sufficiently close to daily Harbours business (through attendance at relevant meetings and receiving reports) to maintain a good overview of PMSC compliance. He is well placed to provide assurance to the Harbour Authority Board.

2.10 As noted above the DP is well placed to provide Board assurance. The MSMS (Master Manual section 5.4.2) refers to “continuous internal review” being used provide assurance and also refers to annual internal audit and external review / audit every three years. This section of the Master Manual should be reviewed to ensure that this is the true intent, and that evidence can be shown that all aspects of section 5.4.2 are being complied with. (It is noted that internal audit procedures are already under review – for example using airport staff to review marine and vice-a-versa).

2.11 There is no requirement for PoJ to confirm compliance with the Code to the UK DfT, but in the spirit of full compliance, consideration should be given to formally confirming to the responsible Minister within the States of Jersey that the Harbours are compliant with the Code and publishing the confirmation of compliance (e.g. on the website).

### 3 CONSULTATION AND COMMUNICATION

Harbour authorities should consult, as appropriate, those likely to be involved in or affected by the MSMS adopted. This opportunity should be taken to develop a consensus about safe navigation in the harbour.

Consultation takes various forms. There are some specific statutory obligations which should form the basis for general consultation with users and other interests. There should also be established formal procedures for consulting employees – including, in the case of Marine Operations, any person not directly employed, but who offers their contractual services, either directly to the port, or indirectly through the ship-owner or their local representative.

3	GtGP	PMSC		Y/N	Comment
.1	3.1.2, 3.2.1-5	2.17, 2.29	Does the organisation consult appropriate stakeholders involved with or affected by the MSMS?	Y	See comment below
.2	3.2.2, 3.2.3	3.13, 4.9	Does the harbour have any outstanding consultations for statutory procedures (HRO or Byelaw updates)?	N	Though other consultations have taken place, or are current.
.3	3.2.6 3.2.7	2.17, 4.8-4.9	Have users been consulted on any new General, Harbour or Pilotage Directions?	N/A	
.4	3.2.10-11		Has the organisation established stakeholder advisory or consultative committees?	Y	See comment 3.1 below
.5	3.2.12	2.17	Are plans, reports, information and/or advice affected by or affecting harbour users communicated effectively to them?	Y	Effective. See comment below
.6	5.1.1, 5.1.12	2.26- 2.28	Does the organisation have a Marine Safety Management Plan and routinely publish an assessment of their performance against the plan?	Y	PoJ Marine Safety Plan. See comment below

3	GtGP	PMSC		Y/N	Comment
.7	3.1.4, 5.1.6	2.17	Does a communication channel exist with employees / contractors affected by the MSMS?	Y	Monthly MSMS meeting Weekly staff meetings Operational user group meetings
.8	3.2.12	2.28	Does the organisation utilise web sites to publish marine procedures and reports?	Y	Good content generally easily found, even if not most modern appearance

### 3.1 COMMENTS

3.1 There was evidence of excellent stakeholder communication with specific user groups, though a general port-wide “user meeting” has fallen into abeyance due to poor attendance. Liaison with the Boat Owner Associations established in the majority of the outlying harbours was considered particularly effective. It is recommended that currently extant meetings are formally listed in the MSMS, with details of membership and meeting schedules.

3.5 The following methods of communicating with harbour users are effective:

- Stakeholder Groups
- Boat owner Associations (Outlying harbours)
- PoJ Website
- Mail2U push email system
- Notices to Mariners
- Notices to port users (e.g. leisure)
- Publications (e.g. “Enjoying our Coast Safely”)
- Social media (Large numbers of followers on FaceBook / Twitter)

3.6 The Marine Safety plan is a good example, though it is now due for a refresh (planned) to review and record progress made and set new objectives. While published on website, it is difficult to find. (Under commercial port, but regulation and guidance would seem to be a more natural home).

## 4 RISK ASSESSMENT

The risks associated with marine operations need to be assessed and a means of controlling them needs to be deployed. The aim of this process is to eliminate the risk or, failing that, to reduce risks as low as reasonably practicable. Formal risk assessments should be used to:

- Identify hazards and analyse risks;
- Assess those risks against an appropriate standard of acceptability; and
- Where appropriate, consider a cost-benefit assessment of risk-reduction measures.

The process of assessment is continuous so that both new hazards to navigation and marine operations and changed risks are properly identified and addressed. Where appropriate, organisations should publish details of their risk assessments. Risk assessments should be reviewed on a planned periodic basis.

4	GtGP	PMSC		Y/N	Comment
.1	4.1.1	2.7-2.11	Has a formal navigation risk assessment (NRA) been carried out for the organisation?	Y	Please see detailed comment below for a discussion of Risk Assessment overall
.2	4.2	2.1, 2.7	Does the NRA address all marine hazards? Hazards should include; collision, contact, grounding, and foundering within the port area, identifying key vessel types?	-	
.3	4.2.23	2.7, 2.12	Have risk controls been properly applied?	-	
.3	4.2.28	2.8	Has the NRA been carried out by suitably qualified people?	-	
.4	4.1.5	2.11	Have stakeholders been consulted on existing or new risk assessments?	-	
.5	4.2.5	2.9-2.11	Is the NRA routinely and regularly reviewed so that new hazards and "changed risks" are identified and addressed?	-	
.6	4.3	2.9	Does the NRA process allow for special circumstances (e.g. "Dynamic RA" for an unusual operation or event)?	-	



4	GtGP	PMSC		Y/N	Comment
.7	4.2.6	2.10, 2.21	Is any review process of the NRA inclusive of input from accident/incident investigations either internal or external (e.g. MAIB)?	-	
.8	4.1.6	2.9	Is the NRA available to those they affect?	-	
.9	3.3.		Are other port user risk assessments (e.g. towage and line handling etc.) taken into account?	-	
.10	4.2.7	2.7-2.11	Does the NRA output rank hazards by risk score?	-	
	4.2.7		Is the Duty Holder aware of the top risks?	-	

#### 4.1 COMMENTS

4.1 – 4.10 The PoJ employ the “bow-tie” methodology to assess risk across the both Jersey Airport and Jersey Harbours.

Since the previous audit the former circa 80 marine hazards have been distilled into three “Loss of Navigational Control” hazards covering either the harbour, VTS TOS or VTS INS areas.

Each “Loss of Navigation Control” bow-tie has been meticulously constructed identifying the threats, preventative and recovery barriers and consequences and then scored at a strategic level. The output provides an excellent overall safety system analysis and feeds clearly into the corporate risk register.

However, the above system does not lend itself to the analysis of individual marine risks (e.g. a collision between a commercial vessel and a yacht inside the Harbour) in sufficient detail to produce a dynamic ranked marine hazard list (as recommended in the Guide to Good Practice), to assist in incident investigation and identify future preventative actions, or to act as a tool to decide on safety of navigation priorities.

It is recommended that PoJ consider creating an additional detailed navigation risk assessment based on an initial hazard identification process that assesses the differing risks by area and vessel types for collision, contact (allision), grounding, break-out, and foundering (as a minimum).

## 5 MARINE SAFETY MANAGEMENT SYSTEM

The Code relies upon the principle that all harbour authorities will base their policies, and procedures relating to marine operations, on a formal assessment of hazards and risks to marine operations. They should maintain a formal navigational MSMS developed from that risk assessment and any subsequent supporting risk assessments deemed necessary as the MSMS develops and evolves over time and as a result of changing trade and port usage.

The aim of a MSMS is to minimise risks. Risk assessment methods are used to decide on priorities and to set objectives for eliminating hazards and reducing risks. Wherever possible, risks are eliminated through selection and design of facilities, equipment and procedures. If risks cannot be eliminated, they are minimised by physical controls, or as a last resort, through systems of work. Performance standards are established and used for measuring achievement. Specific actions to promote a positive safety culture are identified.

The formal risk assessment of the port's marine activities (routine and non-routine) is a documented, structured and systematic process comprising:

- The identification and analysis of hazards;
- An assessment of these hazards against an appropriate standard of acceptability; and

A cost-benefit assessment of risk reducing measures where appropriate.

5	GtGP	PMSC		Y/N	Comment
.1	5	2.12	Is there a documented MSMS?	Y	Overview (Master) manual references 9 sub manuals, and other supporting documents (Master Manual section 5.4.2, and elsewhere)
.2	5.1.10	1.2, 2.12-2.18	Does the MSMS contain or refer to procedures to cover the major aspects of marine safety within the port? -	-	
	5.1.5, 5.1.6		Policy statements: Code compliance, Navigation, Pilotage, Marine Conservancy, Environmental, Enforcement and Prosecution.	Y	In general, yes but see comment 1.12
	Annex A		National and local legislation;	Y	Enforcement and regulatory manual

5	GtGP	PMSC		Y/N	Comment
	5.1.11		Control of ship movements;	Y	Various (including MOC, Port Ops, Marine Leisure manuals)
	5.1.11		Environmental impact;	N	Responsibility of State environment dept. Needs clarifying in MSMS
	2.2.9		Prevent acts or omissions that may cause personal injury to employees or others;	Y	Port Ops manual, contractor management, signage and liaison with associations at outlying harbours
	5.1.9		Roles and responsibilities of key personnel;	Y	Master Manual
	5.1.11		Marine safety procedures;	Y	Various manuals
	5.1.12		Incident and near miss recording and analysis;	Y	RA and Safety management
	6.1.1		Emergency plans;	Y	Major incident manual
	12.2.1, 12.11		Qualifications, recruitment and training;	Y	In each manual as appropriate
.3	5.1.12	2.14	Does the MSMS contain a procedure for measuring performance including a database to record incidents and near misses?	Y	In master manual, makes use of QPulse. No other KPIs regularly used.
.4	5.1.13	2.14	Does the MSMS include processes for effective (annual) internal audit, review of procedures and external audit?	Y	See comment 2.10
.5	4.2.5	2.10	Does the MSMS review process include risk assessment review and are lessons learnt applied to relevant procedures?	N	See comments on risk assessment (section 4)
.6	5		Is the MSMS user friendly?	Y	See comment

## 5.1 COMMENTS

5.6 The MSMS is available on line (Intranet) and tends to be used digitally. Staff interviewed agreed the MSMS and associated manuals were user friendly and fit for purpose. All MSMS documents are “works in progress” and should be continually reviewed. There was evidence that this was the case. The auditors would suggest that the Master Manual be checked to ensure it is current, and that it would benefit from re-indexing once all individual headings have been checked.

## 6 EMERGENCY PREPAREDNESS AND RESPONSE

The Code states that a MSMS should refer to emergency plans - and these should be developed as far as practicable, based on the formal risk assessment. Emergency plans need to be published and exercised.

Factors to be considered can range from designating emergency anchorages and potential beaching points for vessels to considering the effects of a lock gate failure or impounding pump breakdown. The emergency might be a fishing vessel suffering from a flooding engine room to a yacht catching fire. Whatever the situation, by taking a planned approach, evaluating the effectiveness of such a plan and modifying the plan when necessary, you will not only reduce the impact of potential problems, you will also be cost effective.

6	GtGP	PMSC		Y/N	Comment
.1			Does the organisation have emergency plans for:		
	6		Marine operations;	Y	Major Incident Response Plan
	6.4	2.14,3.9	Pollution (MCA);	Y	MCA approval not required, but externally audited every 5 years. SoJ provide own Tier 2 response.
	6.2.5		Explosives (HSE).	Y	To comply with requirements of Jersey law.
.2	5	2.14	Are emergency plans included in or referred to in the SMS?	Y	Section 6 (Master Manual refers)
.3	6.1.2	3.9	Is the organisation included in larger national or regional plans?	Y	Directly linked to States of Jersey Emergency planning
.4	6.8.13		Does the organisation have a published exercise programme and carried out exercises?	Y	Co-ordinated across all Island emergency functions.
.5	6.2 6.3		Does the SMS address the handling of dangerous or polluting cargoes/substances?	Y	But evidence not sighted

### 6.1 COMMENTS

Jersey Harbours and Coastguard are co-located (and essentially same staff) and have a very close relationship with all Island emergency services. Emergency plans and procedures well documented.

## 7 CONSERVANCY

A harbour authority has a duty to conserve the harbour so that it is fit for use as a port. The harbour authority also has a duty of reasonable care to see that the harbour is in a fit condition for a vessel to be able to use it safely.

Harbour authorities should provide users of the harbour with enough information about conditions in the harbour such as depths of water, local Notices to Mariners, etc.

Harbour authorities have duties and powers as local lighthouse authorities (or providers of local aids to navigation); and specific powers in relation to wrecks.

The duties described above cover specific requirements as detailed below:

- To survey as regularly as necessary and find the best navigable channels;
- To place and maintain navigation marks where they will be of the best use to navigations;
- To keep a 'vigilant watch' for any changes in the sea or river bed affecting the channel or channels and move or renew navigation marks as appropriate;
- To keep proper hydrographic and hydrological records;
- To ensure that hydrographic information is published in a timely manner; and
- To provide regular returns and other information about the authorities' local aids to navigation as the General Lighthouse Authority may require.

7	GtGP	PMSC		Y/N	Comment
.1	7.1.1	3.6	Does the harbour authority understand its conservancy duties?	Y	Conservancy and Marine Services Manual
.2	7.2	3.6-3.7	Does the harbour authority: Carry out regular hydrographic surveys;	Y	Own modern MBES equipment, detailed survey schedule
	7.2.15		Maintain navigation marks in optimum position;	Y	Within Harbour area, but also in all territorial waters.
	7.2.17		Monitor changes in the sea or river bed;	Y	Principally through survey, also low water observation, reports from pilots etc.
	7.3		Keep proper hydrographic and hydrological records.	Y	VTS / MOC

7	GtGP	PMSC		Y/N	Comment
.3	7.3.3	3.6-3.7	Does the harbour authority take action on, and promulgate the results of surveys (including to the UKHO)?	Y	SOP includes transmission of data to UKHO
.4	7.1A, 7.1.1	3.6	Does the Harbour Authority have procedures for ensuring NAABSA berths are safe?	N	No commercial NAABSA berths
.5	(7.3.3, 7.3.4), 3.2.13	3.6, 4.23, 4.24	Is communication regularly maintained with and information and returns supplied, when required to the appropriate GLA?	Y	But effectively both LLA and GLA
.6	7.5.1, 7.5.5	4.21 – 4.24	Is the Harbour Authority the LLA?	Y	
.7	7.5	4.21- 4.24	Are Aids to Navigation maintained by the harbour authority in accordance with the availability criteria laid down by the GLA?	Y	See above, however requests external audit from THLS and maintains aids to THLS availability criteria
.8	7.4.1		Does the Harbour Authority have the statutory powers to dredge in their local legislation?	N	Requires Planning and Environment Dept. approvals. See Conservancy and Marine Services Manual section 2.1.9
.9	7.4.5, 7.4.6, 7.4.7	3.4	Does the Harbour Authority understand the consent process for capital and maintenance dredging and disposal plus monitor adherence to the consent conditions?	Y	As detailed above
.10	7.6	4.26	Does the harbour authority have appropriate powers and a defined policy on wreck removal and salvage?	Y	Local powers. See Conservancy and Marine Services Manual section 2.1.7
.11	7.7	3.4	Do the MSMS and works consent process address the possibility of interaction between works/ development/degeneration in or near the harbour and conservancy?	Y	See Conservancy and Marine Services Manual section 2.1.8

7	GtGP	PMSC		Y/N	Comment
.12	7.4	3.8	Does the Harbour Authority exercise its general duties with regard to nature conservation and other related environmental considerations?	Y/N	See comment below
			Are there any nature conservation areas in the vicinity of the SHA?	Y	RAMSAR sites immediately adjacent. Marine Conservation Zones not currently under consideration for Jersey

## 7.1 COMMENTS

7.12 The Harbour authority does not specifically have general duties with regard to nature conservation as is common for UK SHAs. However, a very close partnership exists with the States Planning and Environment Department. Consideration should be given to documenting this relationship in the MSMS Master Manual.

## 8 MANAGEMENT OF NAVIGATION

This section relates to measures organisations can use to manage navigation in their waters.

Management of a harbour begins in determining which activity is safe and where it can take place, having regard to the physical constraints and the variety of activities being undertaken.

Every harbour is different, and the requirement to manage navigation varies from one to another. A formal assessment of navigational risk (see **Section 4**), as required by the Code, will determine what management of navigation is required, and to what degree; monitoring, controlling or managing traffic needs to be taken in mitigating risk.

8	GtGP	PMSC		Y/N	Comment
.1	8.4	2.13	Does the harbour authority maintain any form of traffic monitoring?	Y	VTS
.2	8.4.3, 8.4.9		Has the need for LPS or VTS been formally assessed?	N	No formal documentation
.3	8.4.12, 8.4.3-17		Is the current level of service (LPS/INS/TOS/NAS) appropriate?	Y	TOS for St Hellier Harbour and approaches, INS for offshore (South and West Coasts, and as far East as Gorey)
.4	8.75	3.3	Does the Harbour Authority have LPS / VTS procedures?	Y	VTS and Coastguard Manuals
.5	8.7.15-17		Does the Harbour Authority enforce the requirement for a Port Passage Plan for visiting vessels?	Y	All Piloted vessels, recommended for PECs, guidance given to leisure vessels
	8.7.21		Does the Harbour Authority provide abort procedures?	Y	Part of Pilotage training, and specific note on MPX record / passage plan
.6	7.5, 8.4	3.6, 4.21-4.24	Have the conservancy provisions (e.g. navigation aids) been assessed in relation to effective management of navigation?	Y	Evidence of reviews to light characteristics, sound signals etc.
.7	8.2.1	3.5	Have the needs of all harbour users (including recreation) i.e. "Open port duty" been fully considered in the management of navigation?	Y	Especially leisure. Seaplane consultation.



8	GtGP	PMSC		Y/N	Comment
.8	9.4.	4.11, 4.12	Has the organisation identified the needs for pilotage through risk assessment?	Y	No specific assessment, but part of overall assessment as a control measure
.9	8.9		Does the harbour authority operate harbour patrols?	N	Not routine, but may be used for specific special events
.10	8.10.1-11		Does the harbour authority have to accommodate operations or events outside normal commercial activity?	Y	Frequent, e.g. Boat show, air show, dragon boat racing, large yacht races, long distance swims, etc. Well-developed event co-ordination procedures.
.11	8.11		Are there subsea pipelines and/or power cable in the SHA? If so, is their protection contained in the MSMS?	Y/N	Cables are shown charted, but no procedures exist. Not clear if cables are still active. See comment
.12	8.10.22-26		If applicable is there effective liaison between organisation and marina(s)?	Y	See comment

## 8.1 COMMENTS

8.11 It is suggested that it is verified that all charted cables in SHA area are no longer “live”, and that this is noted in MSMS. If any are found to be still live, procedures should be included in MSMS (e.g. details of owners / operators to be contacted in case of emergency, snagging etc).

8.12 All of the marinas in the Harbour are owned and managed by PoJ as a discreet department (see website). However, there is an extremely close relationship with Harbours, with the Marina Manager attending all relevant harbours meetings, and the leisure manual forming part of the Harbours MSMS. There is also effective liaison with the Boat Owners Associations, who work closely with the Ports of Jersey Outlying Harbours Manager to effectively manage their respective outlying harbours on a day to day basis.

## 9 PILOTAGE

The Code refers, amongst other things, to the main powers and duties which harbour authorities (as a CHA under the provisions of the Pilotage Act 1987) has a duty to assess what, if any, pilotage services are required to secure the safety of ships, and to provide such services as it has been deemed necessary. The use of these powers should follow these general principles:

- Harbour authorities are accountable for the duty to provide a pilotage service; and for keeping the need for pilotage and the service provided under constant and formal review;
- Harbour authorities should therefore exercise control over the provision of the service, including the use of pilotage directions, and the recruitment, authorisation, examination, employment status, and training of pilots;
- Pilotage should be fully integrated with other port safety services under harbour authority control; and
- Authorised pilots are accountable to their authorising authority for the use they make of their authorisations: harbour authorities should have contracts with authorised pilots, regulating the conditions under which they work - including procedures for resolving disputes.

A CHA must issue pilotage directions if it decides, based on its assessment of the risks, that pilotage should be made compulsory. The directions must specify how and to which vessels they apply. Ship owners and any other interested parties who use the port on a regular basis, must be consulted before the directions are implemented.

9	GtGP	PMSC		Y/N	Comment
.1	9	4.11	Does the harbour authority provide pilotage?	Y	3 full time pilots, plus Harbour Master and one relief available. All direct employees.
.2	9.4.14-17	4.12	Has the harbour authority issued pilotage directions?	Y	Comprehensive based on UK template. Dated 21/10/2016.
.3	9.4.1	4.11	Is the pilotage provision continuously updated through risk assessment?	Y/N	The pilotage provision is kept under review by the Harbour Master and Pilotage Board, but not directly linked to NRA process.

9	GtGP	PMSC		Y/N	Comment
.4	9.3		Is there a suitable Master/Pilot exchange including a Pilotage Passage Plan and are records maintained?	Y	Clear standard document completed for every voyage. Pilot / Master both sign to confirm MPX. Kept on paper file for 3 months, then archived.
.5	9.5	4.15, 4.16	Does the harbour authority issue Pilotage Exemption Certificates (PEC)?	Y	Approx. 23 current at date of audit (mainly ferries)
.6		4.15	Does the harbour authority maintain:		
	9.5.6, 9.5.18		PEC syllabus.	Y	In Pilotage Text book
	9.5.16		PEC tripping records.	Y	VTS / MOC function (digitally logged)
	9.5.6		PEC qualification and revalidation records.	Y	Clear annual re-validation process (section 5.2 of Pilotage Manual)
.7	9.4.31	4.14	Is there a formal training scheme for pilots as per the international recommendations contained in IMO resolution A960?	Y	See comment
	9.4.31		Are pilots trained in Bridge Team Management?	Y	See comment
.8	9.4.31, 9.5.6	4.13	Does the harbour authority regularly monitor the competence and fitness of pilots and PEC holders?	Y	Through re-validation process
.9	9.4.45	4.13, 4.16	Are pilots and PEC holders subject to a disciplinary procedure?	Y	Part of pilotage regulations. Very clear.
.10	9.4.11		Does the harbour authority sub-contract pilotage?	N	
.11	9.4.30	4.13-4.14	Does the harbour authority have formal agreements with pilots and pilotage sub-contractors regarding training, revalidation, competence and discipline?	N/A	

9	GtGP	PMSC		Y/N	Comment
.12	9.1.1A	4.11	Are pilotage resources kept under review against requirements?	Y	Pilotage Board function
.13	9.4.18, 9.4.19	4.14	Are pilot boarding and landing arrangements subject to formal risk assessment and specific operational procedures?	Y	Pilotage manual section 4 and Pilot boat procedures. Procedures revised following incidents (e.g. PLA incident)
.14	9.4.20	4.11	Does the LPS/VTs require confirmation that the vessel complies with the pilot boarding arrangements?	N	See comment

## 9.1 COMMENTS

9.7(i) The Pilotage text book is a training manual which supports the Pilotage Manual. This is a very clear and comprehensive training aid for Pilots, PEC candidates and small boat operators who require Local Knowledge Endorsement. The text book is supported by a set of well-developed Power Point training presentations to assist candidates in training.

9.7(ii) While all pilots have received BRM training, this has tended to be because of training in previous posts. It is recommended that BRM training should continue to be a formal requirement for pilots and that consideration be given to regular refresher training which should be recorded in the Pilot training matrix.

9.14 It is recommended that a formal procedure is developed to seek confirmation from vessel masters that pilot ladders are correctly rigged and tested before a pilot boards. It is recognised that this may only apply to small number of occasional visiting vessels (not regular “runners”), but the procedure is seen as good industry practice in the UK, with some evidence that it has resulted in a reduction of pilot ladder incidents at ports where it is used.

## 10 SHIP TOWAGE OPERATIONS

While any contract for the use of tugs is formally for the master of a vessel, the use of harbour tugs is one of the principal and most direct means open to a harbour authority to control risk.

Harbour authorities should determine, through risk assessment, appropriate guidance on the use of tugs in harbour areas. Recommendations should include the type of tugs and method of tow (where applicable) in addition to the number of tugs also where appropriate. Interested parties, including towage providers, users and pilots should be consulted in the preparation of such guidance. The guidance should be reflected in towage directions.

There should be procedures for special directions to be used, if necessary, where a master or pilot proposes that the guidelines should not be applied in some respect.

Directions should be reviewed regularly in the light of experience, changes in legislation, tug technology and the operating environment.

10	GtGP	PMSC		Y/N	Comment
.1	10		Does the harbour use tugs?	Y	Harbour authority provides tugs, mainly (but not exclusively) used in unconnected push mode
.2	10.2		Does the risk assessment include the use of tugs as a mitigation measure?	Y	As a control
			Does the harbour authority have access to the towage providers' risk assessments and operational procedures?	Y	Own vessels and procedures (Port Ops manual, towage CoP)
.3	10.2		Have towage services been fully assessed for suitability to the needs of vessels using the harbour?	Y	In consultation with main customer (for tugs) - Condor
.4	10.3		Are the tug resources adequate for harbour needs?	Y	Main resource is Duke of Normandy, but when she is unavailable an alternative vessel is chartered in "Bare Boat" (Currently "Handfast" from Jenkins Marine)
.5	10.2.3		Are tugs used in restricted visibility?	Y	Defined in CoP

10	GtGP	PMSC		Y/N	Comment
.6	10.2.3		Are any special guidelines in use for restricted visibility?	Y	Defined in CoP
.7	10.2.8, 10.5		Are there formal liaison arrangements between Harbour Master, tug masters and pilots, including training?	N	See comment below
.8	10.3.10		Do the towage operators have formal procedures that are referred to in the MSMS?	Y	Own procedures (CoP)
.9	10.3.10		Has the harbour authority agreed with the tug operators a policy on correct gear and procedures for towing?	Y	CoP, but moving towards ISO9001 and ISM Code compliance procedures
.10	10.2		Have tugs, their gear and procedures been fully integrated into the risk assessment as a risk control?	Y	As control measure in High level RA
.11	10.2	4.6	Do Harbour Masters' procedures include the facility to use special directions if masters and/or pilots propose departure from guidelines?	Y	E.g. Permanent NTM 10 for tanker berth
.12	10.3.8-13		Does the harbour authority: put in place: <ul style="list-style-type: none"> <li>• Risk assessment;</li> <li>• Method statement; and</li> <li>• Passage plan.</li> </ul> with regards to dead tows etc.	Y	Not frequent, but fully assessed on case by case basis
	10.3.11		give written approval for such moves.	Y	Following assessment
	10.3.13		train pilots in dead-ship towage.	N	

## 10.1 COMMENTS

10.7 Although tripping on tugs etc is part of initial pilot training, there is no requirement for formal joint training after qualification. It is recommended that consideration be given to joint training on an ongoing basis (Pilots regularly witnessing towage, tug crew witnessing pilotage). Ideally consideration should be given to joint simulator training.

## 11 MARINE SERVICES

“Marine Services” means the support activities carried out by the organisation to maintain safety of navigation and the hydrographic regime. Marine services may be provided by the harbour authority itself or by commercial organisations operating on-site.

There are a number of general principles when operating marine services:

- An authority’s safety management system should cover the use of harbour craft and the provision of moorings;
- The formal safety assessment should be used to identify the need for, and potential benefits for safety management of harbour craft;
- The authority should ensure that harbour vessels or craft which are used in the harbour are fit for purpose and that crew are appropriately trained and qualified for the tasks they are likely to perform; and
- Byelaws and the power to give directions are available for these purposes.

Harbour authorities have powers in byelaws and directions to regulate the mooring of vessels in the harbour. The SMS should govern the use of these powers.

11	GtGP	PMSC		Y/N	Comment
.1	11.2		Does the harbour authority exercise any powers of regulation over port craft?	Y	Permits and requirement for Local Knowledge Endorsement
.2	11.2.2		Where port craft do not have to comply with national legislation does the harbour authority impose any form of inspection and licensing?	Y	As above. Jersey / Harbour legislation effectively the same
.3	11.2.2	2.18	Does the harbour authority possess the competencies to carry out inspections on port craft?	Y	Two Port State surveyors in harbours team, plus a States Marine Surveyor available.
.4	11.2.2, 11.2.3		Does the harbour use outside contractors to carry out inspections of port craft on its behalf?	Y	E.g. MECAL
.5	11.3		Has the harbour authority ensured that workboats used in the harbour are “fit for purpose” for any use they are involved with i.e. compliant with appropriate MS Regulations and the 2016 revised work boat code.	Y	Through contracts, permitting etc.

11	GtGP	PMSC		Y/N	Comment
.6	11.4, 6.6.3		Does the harbour authority control operations with a process/procedure for: <ul style="list-style-type: none"> <li>• Hot work;</li> <li>• Bunkering;</li> <li>• Engine immobilisation;</li> <li>• Diving/swimmer.</li> </ul>	Y Y N Y	Permit requirements are clearly summarised on web site etc. Code of practice for tanker bunkering GD 8 for Diving
.7	11.5		Does the harbour authority permit recreational diving in the harbour?	Y	See GD 8 for clear direction with regard to permitted areas
.8	11.6		Does the harbour authority exercise powers in relation to commercial vessel mooring plans and mooring parties?	Y	Licensed line handlers. Mooring plans for tankers.
.9	11.6		Does the harbour authority regulate the mooring of vessels in the harbour?	Y	PoJ own and maintain all moorings. Boat owner associations / Marina Manager allocate to users.
	11.6		Does the harbour authority ensure that mooring parties meet industry's competence standards and have access to appropriate training?	Y	Through permit system

## 11.1 COMMENTS

No comments



## 12 PROFESSIONAL QUALIFICATIONS AND COMPETENCIES FOR PORT MARINE PERSONNEL

Harbour authorities must assess the fitness and competence of all persons appointed to positions with responsibility for safe navigation.

Authorities must ensure their staff meet the nationally agreed standards of competence, or alternatively be able to show that their local competency standards are fully equivalent.

Achieving marine port safety is a team operation and people in these roles must be competent and adequately trained.

12	GtGP	PMSC		Y/N	Comment
.1	12.4, 12.5	1.16, 2.18	Does the Harbour Master hold an appropriate qualification?	Y	See general comments for this section below
.2	12.5	1.16, 2.18	Do the Deputy and/or Assistant Harbour Masters hold appropriate qualifications?	Y	
.3	12.7	1.16, 2.18	Do VTS officers hold appropriate qualifications?	Y	
.4	12.8	1.16, 2.18	Does the harbour authority ensure that marine operatives are suitably trained, assessed and competent to carry out their assigned roles?	Y	
.5	12.9	1.16, 2.18	Does the harbour authority exercise control over the training and competence of tugs crews?	Y	(Own staff)
.6	12.10	1.16, 2.18	Does the harbour authority, directly or indirectly, employ suitably qualified hydrographic surveyors?	Y	Directly
.7	12.11	2.18	Does the organisation have a training policy and maintain training records?	Y	See below

### 12.1 COMMENTS

12.1 – 12.7 Since the previous audit the Training Manager's post has been discontinued and the Training Manual withdrawn.

Each Marine Department has been made responsible for setting requirements, monitoring and arranging training for the people working within their department. Each departmental manual has had an additional section inserted covering departmental training procedures plus a matrix showing each individual post's training/qualification requirement.

During this Audit VTS/Coastguard training was examined in more detail:

- The VTS and Coastguard Manual has been updated as required;
- The training requirement matrix is detailed and comprehensive;
- Training is tracked using a combination of:
  - The matrix in the VTS and Coastguard Manual;
  - Q Pulse; and
  - Locally produced spreadsheets.

From what was seen, the VTS/Coastguard department are fully compliant with the PMSC but there is some duplication. All the necessary information is recorded in detail but was not straightforward to quickly look across the whole department to establish an overall picture of the training status and the future training requirement.

It is understood that the PoJ are exploring setting up a common training regime across the business. Because the system is currently fully compliant if somewhat awkward to use, it is recommended, rather than make immediate changes, wait until a decision has been made on the overall training management.

## 13 ACCIDENT REPORTING & INVESTIGATION AND ENFORCEMENT

The duties of a harbour authority include an obligation to conserve and facilitate the safe use of the harbour and a duty of care against loss caused by the authority's negligence. Such losses may involve death, serious injury, pollution and other undesirable outcomes and they may involve breaches of national or local laws.

Investigations by the harbour master of marine incidents have two essential purposes:

- To determine the cause of the incident, with a view to preventing a recurrence of that incident (or similar); and
- To determine if an offence has been committed: if so, there may be the need on the part of a harbour authority to initiate enforcement action that may lead to prosecution in their own right or through an agency of another authority such as the Police or the MCA.

It is, therefore, essential that the marine SMS addresses the potential for incidents to occur and to provide instruction and guidance on any investigations and enforcement action that may be required as a result. By ensuring that a robust, rigorous, independent investigation has been carried out, the board and the duty holder can be assured that their obligations for compliance have been addressed.

13	GtGP	PMSC		Y/N	Detail/Comment
.1	13.8	2.20	Does the SMS include procedures for accident/incident investigation? Recent example?	Y	Managed by Q Pulse software application
.2	13.4.2	2.23	Does the harbour authority follow a set procedure for informing the MAIB?	N/A	But report to State under Shipping Law. MAIB may be asked to assist in some cases (?)
.3	13.3.6-10	2.21	Does the process separate offences for investigation by other agencies? (Police/MCA/EA etc.)?	Y/N	Tick box in Q Pulse, but not clear in procedures.
.4	13.11.6	2.20	Does the investigation process inform the risk assessment for review purposes?	N	See comment below

13	GtGP	PMSC		Y/N	Detail/Comment
.5	13.9	2.11	Does the promulgation of the findings of an investigation include the possibility of passing on findings to harbour authority employees, stakeholders or other organisations, e.g. Ports Group, Harbour Masters' body?	N	This is not clear from procedures
.6	12.8.4	2.20- 2.21	Does the investigation process link with the enforcement process?	Y	Managed by Q Pulse
.7	13.2.2		Does the Harbour Authority understand their powers in relation to drink and drugs afloat?		Not checked.

### 13.1 COMMENTS

13.1-13.7 PoJ makes extensive use of a software application "Q Pulse" to record incidents and manage their investigation and follow up. There was good evidence that all relevant incidents within the harbour area (marine and landside) and in the wider territorial sea area were captured and entered into the system.

The system seemed to require intensive data entry and ongoing management – each incident was reviewed after entry and categorised into occurrence (noted and closed) or incident (full investigation).

However, it appeared that the system was not fully understood by all users, especially the extraction of incident summaries and trends which might inform ongoing risk assessments or reviewed procedures.

The system did not prompt NRA reviews (see section 4 of this report) nor formally identify actions to be followed up (or this was not clear to auditors). In practice, however, weekly meetings are held to review all ongoing incidents and lessons learned are applied.

It is recommended that the training and procedures for using Q Pulse are reviewed and updated in the MSMS, and that more use is made of the software's capability to generate summaries and trend reports to assist with the NRA process and provide assurance to the Board (through reports / KPIs).