This Safety Management System was initially prepared for Infrastructure and Commissioning, Planning and Environment Services, Militia House, English Street, DUMFRIES DG1 2HR by CJM Associates Ltd, Westhill, Aberdeenshire.
## DISTRIBUTION LIST

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restricted visibility guidelines in accordance with MCA audit. Additional legislation added to section 1.3, including MGN337; and Railways and Transport Act 2003; Directive 2009/17/EC; Responsibilities of Duty holder updated in line with revised PMSC.

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### Abbreviations

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<td>Secretary of State Representative</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>UKHO</td>
<td>United Kingdom Hydrographic Office</td>
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<td>VHF</td>
<td>Very High Frequency (Radio)</td>
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1.0 INTRODUCTION

1.1 PURPOSE AND APPLICATION

This document demonstrates Dumfries and Galloway Council’s commitment to operate its Harbours in a safe and environmentally sound manner to the benefit of staff, vessels and their crews, users and the community at large. It gives guidance to staff and others involved in operations on best practice to achieve safe and efficient use of the Harbours, their approaches and environs.

It applies variously to all persons, vessels and craft using, providing services to or otherwise involved with maritime activities on waterways within the various harbour limits or on the harbour estates adjacent to those waterways. It applies to the watery areas and quaysides, defined in the Harbour Empowerment Orders, Harbour Revision Order and Byelaws where enacted, shown as being within port limits on the various harbour plans and to other areas over which Dumfries and Galloway Council, as the harbour authority, may have jurisdiction from time to time.

1.2 POLICY STATEMENT

Dumfries and Galloway Council recognises its continuing responsibility to provide a healthy and safe working environment. Hence, they implement policies in line with provisions of the Health & Safety at Work Act etc 1974 and the Port Marine Safety Code. Dumfries & Galloway Council will:

- Carry out harbour and associated marine operations, in a manner which minimises effects on the environment and the community and which also protects the safety and health of: employees; users; others with business in the harbour areas and the general public;
- Operate wherever practical to at least the standards required by law, regulation and Approved Codes of Practice (ACOP’s);
- Ensure that employees perform their duties in a manner consistent with these principles.

1.2.1 Dumfries and Galloway Council has published the following supporting policies:

- Enforcement policy.
- Marine Conservancy policy.
- Navigation policy.

Copies of these documents are enclosed at Appendix B4.

In addition in October 2016 a formal Enforcement Log was introduced to record occasions when Harbour Masters step in formally and informally in response to breaches of legislation, unsafe working or unsafe navigation. The log allows the Regional Harbour Master to identify trends and recurring offenders who may be dealt with in accordance with the Enforcement policy.
1.3 APPLICABLE CODES AND REGULATIONS

Below is a summary of the more relevant legislation. Individual documents should be consulted for detailed requirements and obligations.

1.3.1 Port Marine Safety Code

The Port Marine Safety Code was issued in 2000. It is subject to a triennial review with the current version being issued in November 2016. It applies to harbour authorities with statutory powers and sets standards for the operation of UK Ports. It codifies Duties and Responsibilities of harbour authorities and requires that ports be operated on the basis of Risk Assessment and a Safety Management System.

The PMSC is complimentary to Health and Safety legislation discussed below. In broad terms, the interface is at the quayside.

Harbour operations should meet the standards of the associated Guide to Good Practice on Port Marine Operations, most recently revised in February 2018.

1.3.2 Health and Safety at Work etc Act (HSWA) and Regulations

The Health & Safety at Work etc Act 1974 and other health and safety legislation applies to dock operations including the loading and unloading of UK and foreign flag vessels at UK ports, in particular to fishing vessels and to the handling of dangerous substances in ports and harbours. It does not apply to normal shipboard activities carried out by the master and crew of vessels. Port users including fishermen and fish sellers have a responsibility to comply. Harbour staff must abide by its provisions and bring non-conformances to the attention of users.

1.3.3 Pilotage Act 1987

DGC is not currently a Competent Harbour Authority, (defined as a body charged with providing navigation aids and pilotage into and within a maritime harbour) under the Pilotage Act. Hence its provisions do not apply.

1.3.4 Docks Regulations 1988 and Approved Codes of Practice

These are specific to quayside work and generally the responsibility of the port users. Harbour staff have an oversight duty to ensure safe practices within the Harbour Area and should have a general knowledge of the regulations.

1.3.5 International Ship and Port Facility Security Code (ISPS) 2004

This applies to harbours handling commercial vessels on international voyages and requires an approved Security Plan, appointment of Port Facility Security Officers, arrival reports on security status and control of access to international vessels. ISPS status is being obtained for Kirkcudbright harbour in July 2018 in order to handle vessels of 500 grt on international voyages.

1.3.6 Port Waste Facilities Management Regulations 2003

This requires the reporting and recording of waste landed by ships and the provision of appropriate reception facilities by harbour authorities. The purpose is to eradicate the dumping of waste at sea. There are special provision for fishing vessels.
1.3.7 Railways and Transport Act 2003

This legislation concerns Professional and non-professional skippers and crew being unfit for duty through misuse of Drink or Drugs (Sections 78 to 81 refer). Harbour Masters and their assistants have the power to detain a vessel pending arrival of the police.

1.3.8 Local Legislation and Harbour Orders

Harbour authorities are granted statutory powers to operate under a variety of legislation; this may be historical, usually confirmed by modern harbour orders, often supported by local bylaws. Local legislation for Dumfries and Galloway Harbours is summarised in Appendix B.1.

1.3.9 Codes of Practice, Regulations, Plans, and Procedures which apply to the Dumfries and Galloway Harbours

There is a set of relevant codes, plans and procedures which are relevant to harbour operations. These are also listed in Appendix B.

1.3.10 Other Legislation

The Authority has obligations under the following legislation, some of which include express planning duties:

- Loading and Unloading of Fishing Vessels Regulations 1988 (SI 1988/1656)
- ACOP Dangerous Substances in Harbour Areas Regulations 2016.
- Control of Major Accident Hazard Regulations 1999
- LOLER Regulations 1998
- Marine Navigation Act 2013
- Merchant Shipping (Oil Pollution Preparedness Response & Cooperation Convention) Regulations 1998
- Merchant Shipping Act 1995
- Merchant Shipping (Prevention of Oil Pollution) Regulations 1996
- Dangerous Vessels Act 1985
- SOSREP – Sections 151 and 293 of MS Act 1995 and as amended by MS and Maritime Security Act 1997
- Merchant Shipping (Dangerous Goods & Marine Pollutants) Regulations 1990
- Merchant Shipping (Prevention of Pollution by Garbage) Regulations 1998
- Merchant Shipping (Port Waste Reception Facilities) Regulations 1997
- Aviation & Maritime Security Act 1990

A full list of relevant legislation is appended to the Guide to Good Practice on Port Marine Operations.
1.4 DUTIES AND RESPONSIBILITIES OF THE DUTY HOLDER

The duties and responsibilities of a statutory harbour authority are set out fully in the Code and its associated Guide to Good Practice. Most significant are:

- To take reasonable care that, so long as the harbours are open for public use, that all who choose to navigate them may do so without danger to their lives or property;
- An obligation to conserve and facilitate the safe use of the harbours and a duty of care against loss caused by the authority’s negligence.

Organisations must have a “duty holder” who is accountable for their compliance with the Code and their performance in ensuring safe marine operations. For most organisations, the role of duty holder is undertaken by members of the management team or a board who are (both collectively and individually) publicly accountable for marine safety under the Code.

If however, the management team or board is not directly accountable for marine safety, or has limited decision-making powers in this respect, it is acceptable for the role of duty holder to reside elsewhere. This might be the position in some municipal ports for example, where accountability for marine safety is overseen by a local authority committee. If so, the organisation should publish and confirm who the duty holder is.

In the case of DGC the Harbours Sub Committee of the Economy, Environment and Infrastructure Committee retains the position of Duty Holder. They remain publicly accountable for the proper operation of the harbours.

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 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.

Harbour authorities have powers to appoint a harbour master and may properly entrust the operation of the harbour to such professional people; but the duty holder cannot assign or delegate its accountability for compliance with the Code.

All duty holders should take time to gain an appropriate insight and understanding of their organisation’s port marine activities, MSMS and supporting policies and procedures. This can be accommodated through briefings and operational visits. Serious consideration should be given to appointing a member to the board who has relevant maritime experience and who can act as the initial point of contact for the
designated person. The duty holder should also ensure that appropriate resources are made available for discharging their marine safety obligations.

1.5 RESPONSIBLE PERSONS – DUMFRIES AND GALLOWAY HARBOURS

1.5.1 Duty Holder

The Harbours Sub Committee of the Economy, Environment and Infrastructure Committee of Dumfries and Galloway Council is the Duty Holder. It was established in June 2016 on the recommendation of the Designated Person.

1.5.2 Chief Officer for Council Harbours (per PMSC: Chief Executive)

Per PMSC, the Chief Executive is responsible and accountable to the Board for operational and financial control of the harbour authority. He/she advises the board on their powers and duties with input from the harbourmaster(s) and other officers; he/she oversees implementation of policy and decisions, has executive responsibility for safety of operations and staffing, oversees recruitment and training.

For Dumfries and Galloway Harbours the Head of Infrastructure and Transportation, Economy, Environment and Infrastructure (the Asset Holder) equates to the position of Chief Executive as defined in the Code, but shall be referred to as the Chief Officer for Council Harbours.

1.5.3 Harbourmasters

Harbourmasters are appointed by the authority. They are responsible for the safety of navigation in the various harbours and for exercising the authority’s powers in the ports and their approaches. Individually and via any staff they are responsible for implementing powers of direction both general and local.

In January 2015 the Council trialled a new operational structure by creating the role of a ‘Senior Harbour Master’. This position was confirmed wef 1st April 2016 with the appointment of a suitably qualified Regional Harbour Master (RHM) to manage the harbours section and compliance with the PMSC. The Regional Harbour Master advises the Chief Officer for Council Harbours on harbour issues via the Infrastructure Manager.

At both Kirkcudbright and Stranraer the full time Senior Harbour Operatives are responsible for the day to day commercial, operational and safety management of the port and associated marinas. They supervise the part time Harbour Operatives and report to the RHM.

A part-time Harbour Observer is appointed to maintain an overview of the operations for The Machars Harbours. Their brief includes monitoring safety, commercial considerations and maintenance, reporting concerns to the Regional Harbour Master. They are supported operationally by the staff from Kirkcudbright and Stranraer as required.

The Authority appoints a suitably qualified person to act as the Designated Person whose function is to provide the Duty Holder with independent assurance that the Safety Management system is working effectively. He/she periodically audits compliance with the Port Marine Safety Code. This person must have a thorough knowledge of the Code and Guide to Good Practice and of associated port and marine legislation. The DP may be an officer of another authority, a Board member, an
external individual or an officer of the authority provided such person has the necessary knowledge and independence.

The Designated Person appointed by the Duty Holder is independent and is currently William Heaps of Marico who superseded David Foster of Marico. They have undertaken annual PMSC audits at all harbours and reported their findings to the Harbours Sub Committee. The DP also advises the Chief Officer for Council Harbours on harbour issues and has reported periodically on the operation of the SMS to the Harbours Sub Committee.

1.6 KEY MEASURES, AUDITING AND REPORTING

The Code requires certain measures to ensure compliance:

- Powers should be kept under review to ensure that they remain current and appropriate for carrying the authority’s duties;
- Formal risk assessments should be used to identify hazards and analyse risks, then those risks should be assessed against acceptable criteria;
- Implementation of a marine safety management system;
- Consultation with users and other stakeholders on the suitability and effectiveness of the Safety Management System;
- Set appropriate competence standards for staff;
- Have an effective system for investigating incidents and for acting upon the findings;
- Publish a Marine Safety Plan for marine operations periodically and report performance against that plan; (See Appendix J for Marine Safety Plan)
- Monitor compliance with the Code and confirm compliance to the MCA at three-yearly intervals.

Compliance with the Code should be audited:

- Approximately 6-12 months after implementation of this Safety Management System;
- Approximately three-yearly thereafter.

Intermediate audits and reports should be commissioned after any significant change to the operating parameters or after a serious incident. Economy, Environment and Infrastructure services will initiate periodic and special audits.

The Duty Holder should report annually on harbour operations and compliance with the PMSC, including safety performance as mentioned above. This Report has been part of the Economy, Environment and Infrastructure Committee’s report which is made available to the public. With the establishment of the Harbours sub-committee this report is now via the sub-committee.

1.7 DUTIES AND POWERS

The General and Specific duties and powers of a harbour authority are set out in Sections 3 and 4 of the Port Marine Safety Code and explained in the Guide to Good Practice. Where relevant they are discussed in this document. The Code and Guide should be consulted for specifics.
1.8 ORGANISATION CHART (SIMPLIFIED)

1.9 QUALIFICATIONS AND TRAINING

Dumfries and Galloway Council maintain qualifications and training standards appropriate to the duties and responsibilities of all personnel. In the case of the RHM, Senior Harbour Operatives, Harbour Operatives and Harbour Observers, these include, as a minimum, appropriate marine and fishing vessel qualifications and experience. These standards are maintained by the Infrastructure Manager for all staff in the Harbours section. He/she also maintains schedules of training for all harbour staff. A matrix for essential harbour staff training is given in Appendix D, Section 7.2.
British Ports Industry Training has developed National Occupational Standards for Port Personnel which may be used for guidance.

### 1.10 DOCUMENT CONTROL PROCEDURES

Numbered, controlled copies of this document will be issued to essential users. They will initiate any required amendments to this document and issue those amendments to registered holders. Any uncontrolled copies are only valid at time of issue for a specific operation. Holders should check with the RHM to obtain updates.

### 1.11 REVIEW AND REVISION

This document will be reviewed at regular intervals to ensure it remains current. An interim review will take place if there has been a significant change to operating parameters, legislation or other matters addressed in the document. The document will be reviewed thoroughly at three year intervals.

The responsibility for initiating and undertaking reviews will lie jointly with:

- The Head of Infrastructure and Transportation, Economy, Environment and Infrastructure as Chief Officer for Council Harbours (reports directly to the Duty Holder). They may delegate to staff within the section;

and

- The Infrastructure Manager. They may delegate this work to the Regional Harbour Master or others.
2.0 RISK MANAGEMENT

2.1 HAZARD AND RISK

2.1.1 Definitions

Following are simple definitions of hazards, risks and associated processes.

**Hazard** means the potential to cause:
- Harm including ill-health and injury;
- Damage to property, plant, products, the environment or reputation;
- Interruption to operations or increased liabilities.

**Risk** is the ‘measure’ of the hazard, where:
- Risk = Severity of Harm x Likelihood of Occurrence or
  Risk = Consequences x Probability of the event.

Hazard Identification:
- Identifying hazards which could cause harm

Risk Assessment:
- Assessing the risk which may arise from those hazards.

Risk Control:
- Implementing appropriate measures to eliminate, reduce or control risk.

ALARP:
- Reducing risks to As Low as Reasonably Practical.

2.1.2 Risk Measurement

A risk measurement matrix follows on the next page.
3.1.3 Risk Assessment Criteria

These values refer to the Risk Matrix diagram above and represent the product of the Probability and Consequences values. They are for comparison purposes only.

- **Low risk:** Keep under review for any increased levels.
- **Moderate risk:** Maintain adequate control by risk reduction measures and specific procedures to reduce probability or consequences and achieve a lower risk value. If not achievable then further review of the activities and need should take place.
- **High risk:** Such activities should not normally continue.

### ALARP Principles

The Authority endorses the principle of ALARP. This requires that hazards be properly identified in a structured manner, resultant risks assessed and then control and reduction measures implemented to reduce those risks to *As Low as Reasonably Practicable*. An illustrative diagram follows on the next page.
ALARP Principle

2.2 HAZARD IDENTIFICATION AND RISK ASSESSMENT

2.2.1 Risk Assessment General

The generic hazards of the harbours are identified and reviewed in Section 2.3. The Principal Hazards identified for DG Harbours and assessed in Appendix C Section 4. The Harbour staff supported by Dumfries and Galloway Council staff from Economy, Environment and Infrastructure plus external consultants will review these hazards and risk assessments periodically.

New or previously unidentified hazards will be assessed for risk and appropriate control measures put in place.

All potentially hazardous operations will be kept under review. Any new, unusual or exceptional operations will undergo formal risk assessment in advance. Again appropriate control measures will be implemented. The operation will be modified or cancelled if resultant risk levels are unacceptable.

Routine operations which involve Potential risk will be subject at least to a Tool Box Talk.

The Infrastructure Manager is responsible for implementing this policy.
2.2.2 Risk Assessment Flow Chart

1. Identify Operations to be assessed
2. Identify potential hazards and effects
3. Assess resultant risks
4. Record control measures
5. Assess and record comparative risk
6. Risk acceptable?
   - Yes: Closeout and record process
   - No: Develop additional risk control measures
7. Implement and demonstrate effectiveness
8. Closeout and record process
9. Monitor and assess effectiveness
10. Risks Change? New Hazard?
2.2.3 Tool Box Talks

A Tool Box Talk or is a simple, informal risk assessment carried out by the personnel involved, often on site, immediately before the task. Its purpose is to ensure that the task and its potential hazards are clearly understood by those doing the job that the correct equipment is in place, that personnel understand their responsibilities and that contingency plans have been discussed and are understood.

All routine operations involving potential hazards should be preceded by a Tool Box Talk. Such routine operations may include:

- mooring/unmooring operations,
- harbour launch operations,
- navaid maintenance,
- manoeuvring larger vessels in and out of the harbours
- unusual quayside operations
- before each shift of an exceptional hazardous operation which has undergone risk assessment.

Examples are discussed in Appendices D and E.

The person in charge of the particular operation is responsible for implementing tool box talks.

2.2.4 Unusual/Exceptional Operations

All and any non-routine operations should be subjected to a Risk Assessment. Depending upon the potential hazards and complexity of the task it can vary from a simple Tool Box Talk to a formal Risk Assessment Workshop. The fact that a risk assessment has been carried out and its conclusions will be recorded in appropriate detail, in the harbour logbook.

Examples of such unusual operations include:

- Vessels of unusual size or configuration;
- Dredging;
- Diving;
- Re-floating a grounded/stranded vessel;
- Vessel towage;
- Lightering;
- Salvage;
- Removal of derelicts.

2.3 GENERIC REVIEW OF HAZARDS

<table>
<thead>
<tr>
<th>No</th>
<th>Hazard</th>
<th>Potential Causes</th>
<th>Potential Consequences</th>
<th>Risk (3.1.2)</th>
<th>Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fire &amp; Explosion</td>
<td>Vessel collisions; Handling petrol; Handling gas bottles; Crew error.</td>
<td>Personal injury or death; Harbour closed or obstructed; Adverse publicity.</td>
<td>Low to Mod</td>
<td>Fishing vessels use diesel; Small quantities of petrol and gas. Specific training exercises.</td>
</tr>
<tr>
<td>No</td>
<td>Hazard</td>
<td>Potential Causes</td>
<td>Potential Consequences</td>
<td>Risk (3.1.2)</td>
<td>Control Measures</td>
</tr>
<tr>
<td>----</td>
<td>--------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2.</td>
<td>Grounding/stranding</td>
<td>Unexpected shoaling; Loss of power; Loss of control in onshore gales; Crew error.</td>
<td>Vessels damage or loss; Fatality; Harbour blocked; Adverse publicity.</td>
<td>Low to Mod</td>
<td>Local knowledge of users; Published advice and recommended routes; Awareness.</td>
</tr>
<tr>
<td>3.</td>
<td>Collision – Kirkcudbright or Loch Ryan</td>
<td>Mechanical failure; Crew error.</td>
<td>Vessel damage or loss; Fatalities; Adverse publicity; Regulator involvement.</td>
<td>Low, includin g Loch Ryan</td>
<td>Local knowledge; Traffic advisories ferry terminals.</td>
</tr>
<tr>
<td>4.</td>
<td>Collision - small harbours</td>
<td>Crew error; Mix of craft.</td>
<td>Minor vessel damage; Personal injury; possible fatality; Adverse publicity.</td>
<td>Low</td>
<td>Speed limits; Harbormasters follow up irresponsible boat operators.</td>
</tr>
<tr>
<td>5.</td>
<td>Pollution</td>
<td>Fuelling vessels; Pumping bilges; Vessel damage as a result of collision; Crew error.</td>
<td>Slippery ladders – potential drowning; Adverse publicity Regulator involvement.</td>
<td>Low</td>
<td>Limited activity; Bunkering procedures; Encourage FV’s to use oilsorb in bilges; Waste oil facilities on quays; Response equipment available.</td>
</tr>
<tr>
<td>6.</td>
<td>Personal injury</td>
<td>Line handling; Fish landing operations; Crew/operato error; Public access to quays.</td>
<td>People in water; Serious injury; Fatality; Adverse publicity; Regulator involvement.</td>
<td>Low to Mod</td>
<td>Harbormaster’s overview; Awareness and caution; Resident and visitor education; Byelaws</td>
</tr>
</tbody>
</table>

Assessments of the principal specific hazards identified in March 2013 are given in Appendix C Section 3

Navigational Risk Assessments have been conducted for all harbours by Marico this includes a ranked hazard list. Copies of these reports are held at Appendix K.
3.0 EMERGENCY RESPONSE PROCEDURES

3.1 RELEVANT EMERGENCY RESPONSE PLANS

The principal emergency procedures under which the harbours operate are:

a) Dumfries and Galloway Coastal Oil Pollution Contingency Plan, Version 2013.

b) Individual Oil Spill Contingency Plans for Dumfries & Galloway Council Harbours, 2016

c) MCA National Contingency Plan for Pollution from Shipping and Offshore Installations – held by Harbourmaster.

Copies of relevant plans are kept at Kirkcudbright Harbour Office and Wigtown Roads Office.

A Marine Emergency Plan to cover all 5 harbours was published in May 2017. A copy is held at Appendix L.

Copies of the plan are kept at Kirkcudbright and Stranraer Harbour Offices and by the Infrastructure Manager’s team.

3.2 REVIEW AND UPDATES

These plans are reviewed for currency at regular intervals, normally between one and three years.

The Head of Infrastructure and Transportation, Economy, Environment and Infrastructure initiates reviews by the RHM and issue updates.

3.3 EXERCISE AND DRILLS

The RHM will review the Marine Emergency plans periodically.

The Infrastructure Manager will initiate review of the oil pollution plans.

All harbour staff will be familiar with their layout and content.

DGC Emergency Planning team arranges periodic desk-top and hands-on exercises based on the various Emergency Plans.

Although full details are contained within the Coastal Oil Pollution Contingency Plan, all staff involved in the operation of council harbours should be aware that a contract exists with Briggs Marine to provide a Tier 2 oil spill response.
4.0 PERFORMANCE MONITORING

4.1 PERIODIC REVIEW AND REPORTING

a) Incidents and Near Misses are reported to the RHM as they occur. Remedial risk reduction measures are taken as appropriate. The incident summary logs are reviewed periodically to identify any trends of concern and to focus on necessary safety improvements.

b) The Senior Harbour Operatives’, Harbour Observers’ diary/logbook records plus SMS Incident reports and Incident Summary logs will be reviewed and analysed at regular intervals, normally annually by the RHM. Trends and proposed improvement actions will be identified. The RHM may report periodically to the Chief Officer for Council Harbours and the Harbours Sub Committee.

c) The periodic analysis of Incidents and Near Misses, trends and proposed actions will be made available to harbour staff and users – see Appendix F.

4.2 AUDITING

Periodically, at one to two year intervals, the Designated Person (see Section Error! Reference source not found.) will commission an audit of the overall Safety Management System. He/she will then report to the Duty Holder on the effectiveness and performance of the system.
5.0 APPENDICES

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6.0 REGULATION, LEGISLATION AND GUIDANCE

The documents listed below may be referenced as part of this Safety Management System.

c) Health and Safety at Work etc. Act 1974 and relevant regulations.
d) Pilotage Act 1987 (of limited relevance).
g) National Occupational Standards for Port Personnel:
   • Marine Pilotage (not currently relevant)
   • Marine Operations (Ports)
   • Stevedoring (not currently relevant).
l) MGN 337 Provision of Safe Means of Access to Fishing and Other Small Vessels.
m) SIP021 Guidance on Safe Access to Fishing Vessels and Small Craft in Ports.
n) Diving at Work Regulations 1997.
o) Marine Safety Notices (MSN), Marine Guidance Notes (MGN) and Marine Information Notices (MIN).

DGC Legal Services access relevant legislation as required. Harbour offices only hold documents which are necessary for day to day operations. Legal Services should be consulted with queries on current or planned regulations or legislation.
7.0 HARBOUR DOCUMENTATION

The documents listed below apply to Dumfries and Galloway Harbours.

7.1 LOCAL LEGISLATION

7.1.1 Kirkcudbright

Dumfries and Galloway Council (Kirkcudbright) Harbour Revision Order 2018 (SI 2018/188) contains adequate powers for the safe management of the harbour. Byelaws 1987, enacted under the Local Government (Scotland) Act, supplement powers within the Harbour Revision Order.

7.1.2 Stranraer and Loch Ryan

Various historical acts from the Royal Charter of 1617 through the Burghs Harbours (Scotland) Act 1853 to the Harbours Act 1964 confirm that the successor to various local authorities – Dumfries and Galloway Council, is the Statutory harbour authority for Stranraer and all Loch Ryan to its northern entrance. Separate harbour authorities have been established around the ferry terminals of Caimryan and Port of Loch Ryan. The East Pier at Stranraer is anomalous: via various 19th century Railway Acts it remains the responsibility of the last ferry operator there (currently Stena). Negotiations are underway to abrogate our historical responsibilities. A Harbour Revision Order for an area of Loch Ryan is under consideration. There are currently no Byelaws applicable to the West Pier at Stranraer.

7.1.3 Port William

Dumfries and Galloway Council (Port William) Harbour Empowerment Order 2008 (SI 2008/188) contains adequate powers for the safe management of the harbour.

7.1.4 Isle of Whithorn

Dumfries and Galloway Council (Isle of Whithorn) Harbour Empowerment Order 2008 (SI 2008/189) contains adequate powers for the safe management of the harbour.

7.1.5 Garlieston

Dumfries and Galloway Council (Garlieston) Harbour Empowerment Order 2008 (SI 2008/190) contains adequate powers for the safe management of the harbour.

7.2 LOCAL CODES AND GUIDANCE

7.2.1 All Harbours

Berthing application form.
Mooring Guidelines.
Harbour Watch checklists which form part of our operational procedures.

7.2.2  **Kirkcudbright**

Harbours Information Booklet.
Harbour Master’s Diary/Log.

7.2.3  **Stranraer and Loch Ryan**

Loch Ryan Ferry Navigation Committee Agreement April 2012; agreement between P&O Ferries and Stena Line; sets out procedures to minimise the hazards resulting from ferry interaction in the loch. Following recommendation in the Loch Ryan Navigation Risk Assessment of May 2016 this has been revised.
Harbours information Booklet: a succinct description of the Loch, principle activities including ferry routing, fishing vessels, excursion vessels and recreational boating for the benefit of local users and visitors; available in printed form and on the internet.
Harbour Master’s Diary/Log.
Boatyard Licence.

7.2.4  **Small Harbours of The Machars Peninsula**

Harbour Master’s Diary/Log.

7.3  **OPERATING PROCEDURES**

Appendix D of this SMS contains the Marine Operating Procedures, Appendix E Safe Operating Procedures and Appendix H Harbour Operations Manuals.

7.4  **POLICIES**

7.4.1  **Enforcement policy**

**DUMFRIES AND GALLOWAY COUNCIL**
**HARBOURS ENFORCEMENT POLICY**

**Introduction**

Dumfries and Galloway Council owns and operate harbours at:
Garlieston
Isle of Whithorn
Port William
Kirkcudbright
Stranraer
At present it is the Statutory Harbour Authority under Harbour Empowerment Orders at Garlieston, Isle of Whithorn and Port William and the Statutory Harbour Authority at Kirkcudbright by way of a Harbour Revision Order 2018. Stranraer has limited powers by adoption of the Burgh Harbours (Scotland) Act 1853 by the Royal Burgh of Stranraer.

Dumfries and Galloway Council is responsible under the Port Marine Safety Code for the effective enforcement of its regulations, which are adopted in order to assist in managing the safety of navigation within its harbour jurisdictions.

Where appropriate, and where empowered to do so, Dumfries and Galloway Council will pursue the prosecution of offenders utilising:

- The Merchant Shipping Act 1995;
- The International Regulations for Prevention of Collision at Sea;
- Harbour Empowerment Orders (at the Machars’ Harbours);
- The Burghs Harbour (Scotland) Act 1853 incorporating the Harbours, Docks and Piers Clauses Act 1847;

**Policy**

The policy is based on education in the first instance and generally only reverting to prosecution for repeat offenders, for offences bringing significant risk of serious injury or loss of life or for when users threaten or abuse our staff members.

The Council recognises that most harbour users want to comply with the law. Therefore, where it can, the Council will help users to meet their legal obligations without unnecessary expense, while taking firm action – including prosecution where appropriate – against those who flout the law or act irresponsibly.

The Council will provide information and advice in plain language on the rules that apply and will disseminate this as widely as possible. The Council will provide encouragement and support to ensure that their legal powers are used appropriately to improve and safeguard public health, public safety and the environment. The purpose of any enforcement action is to promote the safety of harbour users.

Where it appears that regulations or legislation may have been contravened, the Council has the options of negotiation, education and persuasion and, where an offence has occurred, of warning or prosecuting an offender. As far as the law allows, the Council will take account of the circumstances of the case and the operator’s attitude when considering action.

The Council will carry out its duties in a fair, equitable and consistent manner. It will seek to be clear, open and helpful in its approach to enforcement.

The Council will seek to target enforcement resources where they are most needed and will be informed by its other policies, aims and objectives. It will liaise with other authorities and enforcement bodies as appropriate.

Any decision regarding enforcement action will be impartial and objective, and will not be influenced by race, gender, politics, sexual orientation, disability or religious
beliefs of any alleged offender, victim or witness; such decisions will not be affected by improper or undue pressure from any source.

**Procedures**

Dumfries and Galloway Council shall:

Maintain through regular reviews, an effective regulatory framework, which is integrated with relevant national legislation and includes local regulation resulting from risk assessment, or as otherwise made necessary.

Develop and maintain effective enforcement procedures, which comply with relevant national legal requirements and guidelines.

Develop and maintain effective investigation procedures for use in the event of a navigational or other incident, which support Dumfries and Galloway Council enforcement procedures, but also meet the requirements of the navigational Safety Management System in respect of identifying and promulgating any 'lessons learned'.

Ensure that all staff involved in an incident investigation, or who are required to follow Dumfries and Galloway Council enforcement procedures, receives effective and relevant training.

Maintain an effective surveillance and spot check regime, to monitor compliance with, and detect breaches of, relevant national and Dumfries and Galloway Council regulations.

Respond to breaches of regulation, where justified by the evidence and other circumstances, by the use of formal warnings and legal prosecution.

Manage the progress of enforcement activities, including incident investigations and prosecutions, and the maintenance of appropriate records.

**Consideration of action**

Prosecution is a serious step and must be regarded as the ultimate sanction. A prosecution will be initiated only when the alleged conduct has been such that the Council cannot impose an appropriate sanction itself and the matter therefore requires the attention of the courts.

The Council is committed to assisting other enforcement agencies, including Police Scotland, to pursue their statutory duties. The Council will liaise with any enforcement agency that may also have an interest in any matter being considered for prosecution.

When dealing with alleged offences:

Council officers will always identify themselves and explain the purpose of their visit or interview;

Each case will be considered on its individual merits and a prosecution will only be initiated in accordance with this Policy;
Having duly considered the Council’s internal policies due regard will be given to the Crown Office and Procurator Fiscal Service Prosecution Code; Any decision to initiate a prosecution will be recorded in writing and the reasons for initiating the prosecution will be given; Any investigation carried out by the Council will be conducted pursuant to the Criminal Procedure (Scotland) Act 1995 with due regard to the applicable Codes of Practice.

The Council recognises that once a prosecution has been commenced, control of the matter is ceded to the courts.

**Enforcement Factors**

In considering the appropriate enforcement action, the Council will take into account the following:

- The seriousness of the complaint;
- The risk of harm to the public and others;
- The public interest;
- The explanation of the offender;
- The attitude of the offender;
- Whether the matter is a recurrence;
- Whether there have been any other contraventions of byelaws or Legislation by the offender;
- The willingness of the alleged offender to prevent a recurrence of the incident;
- Any action taken by the offender to mitigate damage/loss to others;
- The availability of witnesses;
- The reliability of witnesses;
- The sufficiency of evidence.

**Enforcement Action**

This may take the form of:

- Local Harbour staff’s verbal or written warning;
- Regional Harbourmaster’s verbal warning; and
- Regional Harbourmaster’s written warning;
- Cancellation or suspension of discretionary annual berthing charge;
- Suspension or cancellation of berth or mooring;
- Prosecution under the relevant legislation;
- A combination of any of the above.

**Prosecution**

Prosecution, as an ultimate sanction will be considered in the following circumstances where:

- The alleged offence is a flagrant breach of byelaws or legislation such that public safety or wellbeing is or has been put at risk;
- The alleged offence involves failure to comply with a warning;
- There is a history of similar offences;
- The alleged offence involves risk of damage to the environment;
There are no other public interest factors indicating that prosecution is not appropriate;
What precedents have been set in respect of action taken in respect of similar offences at a Dumfries and Galloway Council operated Harbour.
In appropriate cases, the Council will seek to recover the costs of taking enforcement action following a conviction. Any award of costs will be for the court to determine.

15.11.2015, revised 27.4.16; 5.7.18

7.4.2 Marine Conservancy Policy

DUMFRIES AND GALLOWAY COUNCIL
HARBOURS - MARINE CONSERVANCY POLICY

Dumfries and Galloway Council is the Statutory Harbour Authority for the harbours at:

- Garlieston
- Isle of Whithorn
- Port William
- Kirkcudbright
- Stranraer

Dumfries and Galloway Council is committed to complying with the Port Marine Safety Code. The conservancy duties of a Harbour Authority are detailed in the P.M.S.C. as follows:

A harbour authority has a duty to conserve the harbour so that it is fit for use as a port, and a duty of reasonable care to see that the harbour is in a fit condition for a vessel to utilise it safely. They should provide users with adequate information about conditions in the harbour.

This duty covers several specific requirements:

a) to survey as regularly as necessary and find the best navigable channels;
b) to place and maintain navigation marks in the optimum positions, which are suitable for all conditions;
c) 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;
d) to keep proper hydrographic and hydrological records;
e) to ensure that hydrographic information is published in a timely manner;
f) to provide regular returns and other information about the authorities' local aids to navigation as the General Lighthouse Authority may require.

Dumfries and Galloway Council does this by:

- Carrying out hydrographic surveying in accordance with the hydrographic policy and survey programme and promulgating results to port users and UKHO;
- Providing and maintaining adequate navigation aids, consistent with harbour user requirements to facilitate safe navigation within the harbours and their approaches;
- Maintaining adequate depth in the channels and at the berths, consistent with reasonable harbour user requirements;
Ensuring that channels are maintained clear of wrecks, obstructions or other dangers to navigation;
Working with the Northern Lighthouse Board;
Promulgating warnings to harbour users of changes to navigation aids, depths or other dangers to navigation.

Providing and maintaining Local Aids to Navigation. (LAtOn)

All of the Council’s harbours have some form of navigational aid comprising of:
- Navigation Buoys;
- Navigation lights;
- Lit beacons and leading lights.

Generally, the Council operates and maintains these LAtOn’s under the supervision of the Northern Lighthouse Board (NLB) who monitor outages and carry out random inspections. The exception is Loch Ryan where the NLB maintain the LAtOn’s.

Procedures are in place for Harbour staff to conduct regular checks to ensure that LAtOns are in place and working and any outages or defects are dealt with as promptly as possible.

Further procedures are in place to inspect, maintain and if required replace navigation buoys and/or their associated ground tackle.

Surveys

The Council conducted full hydrographic surveys at all of its harbours in February 2013 and further surveys were undertaken at Kirkcudbright and Stranraer in 2017.

Surveys should be undertaken at 5 year intervals, however this period may be varied by the Regional Harbour Master taking into account:

- Levels of usage.
- The ability to monitor levels visually at all harbours including partially at Stranraer.
- Reports by stakeholders.

In the interim periods the Regional Harbour Master and staff will monitor for shoaling depths visually at drying harbours and respond to reports of shoaling’s by harbour users.

At Kirkcudbright harbour there is historical movement of the navigable channel and a pattern of change in the depths and contours of the river bed, although many of these changes are temporary in nature. The Council operates a harbour boat at Kirkcudbright fitted with depth sounding equipment that allows the Harbour Master to monitor any changes. The drying nature of the harbour and approach channel also facilitates monitoring at Low Water Springs. This information is used to inform the need for more detailed hydrographic surveys to ensure that buoyage is placed in appropriate positions to manage the safety of the navigable channel.

Dredging
There is an operational requirement to carry out maintenance dredging in the vicinity of Kirkcudbright main quay and at the entrance to Port William. This has been expanded to include the beach adjacent to the West Pier and the new slipway at Stranraer. In addition a licence is in place for water injection dredging around the walkway and finger pontoons at Kirkcudbright.

Dredging of the main basin at Stranraer is being progressed following survey in 2017 and is planned for winter 2018.

An application has been made for dredging the entrance and alongside the whole quay at Port William.

The Council will ensure that appropriate dredging licences, Crown Estates Consents, planning permission (where necessary) and/or disposal licenses are in place and that wherever possible environmental impacts are minimised.

Removing wrecks and obstructions

The Council is committed to maintaining safe and navigable access to all of its harbours and will take all reasonable action to remove any wrecks or obstructions as promptly as possible.

Navigation Warnings

When considered necessary and appropriate Navigation Warnings will be issued to:
- Harbour Users;
- UKHO;
- Belfast Coastguard;
- Northern Lighthouse Board;
- Broadcast via VHF;
- Published on the Council’s website;
- Local stakeholders – e.g. sailing clubs, harbour users groups.

15 November 2015. Revised 27.4.16. and 25.5.17 and 26.10.2017. Reviewed 28.5.18; 5.7.18;

7.4.3 Navigation Safety Policy

DUMFRIES AND GALLOWAY COUNCIL HARBOURS – NAVIGATION SAFETY POLICY

Dumfries and Galloway Council is the Statutory Harbour Authority for the harbours at:
- Garlieston
- Isle of Whithorn
- Port William
- Kirkcudbright
- Stranraer
Dumfries and Galloway Council is committed to complying with the Port Marine Safety Code and is responsible for maintaining safe navigation within its harbour jurisdictions. It will do this by:

Maintaining an effective Safety Management System to enable the Council to undertake and regulate marine operations in a way that safeguards all Harbour users, the public and the environment;

Using risk assessment techniques to identify hazards and risks within the Harbours and put in place suitable risk control measures to ensure that the risks identified are 'as low as reasonably practicable', and that the appropriate emergency plans are in place and well-practised;

Monitoring and managing the navigation of all vessels within the Harbour limits;

Consulting widely with Harbour staff, Harbour users and other relevant stakeholders in respect of navigational safety issues;

Undertaking hydrographical surveys and maintenance dredging to ensure that the hydrographic regime is protected;

Placing and maintaining aids to navigation marks where they will be of best advantage to vessels and work in close liaison with the Northern Lighthouse Board;

Removing sunken vessels and other obstructions that are, or may become, an impediment to safe navigation;

Disseminating any relevant navigational safety information to Harbour users;

Evaluating the safety performance of the Harbours through reporting systems contained within the Safety Management System;

Employing suitably qualified personnel and provide the necessary training to ensure that they are competent within the roles they are required to perform, and ensure sufficient resources are available to implement procedures and systems effectively;

Ensuring that Council vessels and craft used within the harbour limits have the required certification and are fit for purpose, and the crew are appropriately trained and qualified for the tasks they are likely to perform;

Maintain a register of Small Commercial craft operating from Dumfries and Galloway Council harbours;

Reviewing this policy on an annual basis with due consideration given to any changes to the operating environment, the organisation and legislation.

8.0 OVERVIEW OF THE HARBOURS

8.1 KIRKCUDBRIGHT

8.1.1 Location and Layout

The town quay lies on the River Dee some 30 metres below Kirkcudbright Bridge in approximately position 54° 50.3' N, 04° 02.9' W. It is approximately 175 metres long in a south-westerly direction. The Harbour Office is located towards the south-western end of the quay. A pontoon marina aligned roughly south-east - north-west lies some 300 metres downstream of the quay with accommodation for up to 50 small craft. There are vertical ladders on the face of the town quay giving access to the fishing vessels which use it. Power and water points are provided on the town quay and marina. Fuel is delivered by road tankers to the quay.

The quayside is a public right of way and used extensively by pedestrians. There are significant hazards to pedestrians when fish landings are taking place. Warning signs are in place and barriers have been installed to restrict vehicular access along with temporary chains to prevent pedestrian access during landing or other higher risk operations. Further safety measures are planned for H2 2018 following a visit by HSE.

Access to the marina is via a walkway with access restricted to users.

8.1.2 Operating Constraints

Principal operating constraints are:

- Maximum LOA: 67 metres
- Maximum beam: proportional
- Maximum draft: see “Controlling depths” below
- Maximum deadweight: 1,500 tonnes

(The above are based upon coastal cargo vessels which once visited the port.)

The principal constraint is the approach channel and the ability to take the ground at low water. Hence the port is unsuitable for recreational vessels with fin keels unless special precautions are taken to remain upright.

In marginal cases, the Harbourmaster should be consulted.

8.1.3 Port Control and Port of Entry Information

There is no formal system of port control. Arriving fishing vessels and recreational vessels should contact the Harbourmaster by telephone or text or email to advise of ETA and other relevant information.

The harbour has a fixed VHF station along with a portable VHF and a VHF on harbour workboat Gordon B. VHF Procedures are set out below and have been promulgated by way of a Local Notice to Mariners:

- Kirkcudbright Harbour Office maintains a listening watch on VHF Channel 16 during working hours.
- The Kirkcudbright working channel is VHF Channel 12.
• At times the Kirkcudbright Harbour operates a workboat call sign ‘Gordon B’
  and can be contacted on the same VHF channels.
• The Harbour Office is not permanently manned; Harbour Master is often best
  contacted by mobile phone on 07709 479663.

The Harbour Master will provide Port of Entry information using the following aide
memoire:

PORT ENTRY GUIDELINES - KIRKCUDBRIGHT.

AIDE MEMOIRE FOR PROVIDING ENTRY GUIDANCE TO COMMERCIAL AND
LEISURE VESSELS.

1. Skipper to refer to Almanac, Pilotage books and Harbours Directory for extra
   information.
2. Vessels must contact Range Safety Vessel ‘Gallovidian’ on VHF 16 or 73 or
   phone 07970 109814 at the earliest opportunity.
3. HM is on 07709 479663 (24/7) and may listen on VHF Ch 16 with working
   channel 12. Ideally, you should email ahead prior to your arrival on
   kirkcudbright.harbour@dumgal.gov.uk, stating your intended arrival window,
   length of stay etc.
4. Access is HW+/- 2.5. hours, entry outside these times is entirely at the
   skippers own risk.
5. IMPORTANT: COLLREGS Rule 9b (narrow channels ) applies.
6. The Beacon and Lighthouse on Ross Island provide a back transit to the
   entrance of the marked channel by the lifeboat station.
7. The channel is well marked and lit, but is narrow with a number of tight turns.
8. The main turns are marked by Quick flashing buoys.
9. The shallowest parts of the channel are in the area of buoys 7 and 8 and
   there is also a line of large stones running between buoys 19 and 22.
10. The tide at Kbt runs very strongly and vessels must take extra care to remain
    within the marked channel as the tide will set vessels outside of the channel
    and possibly on to the rocks at the South of St Mary’s Isle near No 7 buoy.
11. A speed limit of 5 knots is in place upstream of buoy no 17.
12. On coming round the final corner at Castledykes Point the marina will be seen
    on the Starboard side, vessels must stay in the main channel and will find the
    visitors section approx. 2/3rds down the outside of the pontoon near the
    landward walkway. The first 8 pilings you encounter are reserved for
    permanent berth holders. (See 12)
13. Vessels should not berth in other vacant berths without HM permission as
    depths vary.
14. Vessels MUST moor/manoeuvre in to tide.
15. The tide does not run in line with the pontoon and on an ebb tide will set
    vessels into the pontoon, GREAT CARE should be taken to ferry glide in
    slowly.
16. The access codes are: Gate XXXXXX Toilet Block XXXXXX. For the
    security of all, the pontoon gate should be kept closed shut.
17. Payment: At the HM office or by way of the honesty box in the toilet block.
18. Advise skippers to make themselves familiar with emergency plan on rear of
    secure gate.
19. Lifejackets should be worn on the pontoons and walkway.
20. Directions for access to town and information about suitable places to eat, drink and obtain supplies are on the signage at the landward end of the pontoon.

COMMERCIAL VESSELS.

1. Permission to land/berth must be obtained in advance from the HM on 07709 479663 (24/7). If you are unable to contact HM by phone/text, you should email ahead prior to your visit to kirkcudbright.harbour@dumgal.gov.uk
2. No towage should be undertaken without prior agreement from the HM.
3. Vessels must be able to take the ground as the quay dries.
4. Vessels berthing at the main quay must have a berthing plan in place, including line handling.
5. Vessels should have heaving lines prepared and ready fore and aft.
6. Skippers should berth as directed and report to the HM on arrival.
7. AIS is to be kept on by all vessels entering Kirkcudbright harbour.

NOV 2016.

8.1.4 Port Limits

Port limits are specified in The Dumfries and Galloway Council (Kirkcudbright) Harbour Revision Order 2018. They lie between the south side of Kirkcudbright Bridge to a line from the lifeboat slipway in approximately 54° 47.79’ N, 04° 03.75’ W to the west side of the Bay in position 54° 48.04’ N, 04° 05.33’ W – effectively ESE-WNW across the southern end of the buoyed channel.

8.1.5 Approaches

The quay and marina are approached via a channel from Kirkcudbright Bay, about three miles long and marked by lightbuoys. The channel has a minimum width of some 75 metres, but at Chart Datum there is generally less than 1 metre depth of water. The 2017 survey indicates drying heights of up to 0.8m between No7 and No9 buoys. The banks either side of the channel dry out at low water.

South of the channel entrance, charted depths gradually increase to the 5 metre contour running roughly between Torrs Point and Little Ross Island. The 10 metre contour runs from Gipsy Point to Little Ross marking the boundary with the Solway Firth.

8.1.6 Anchorages

Anchorages with good holding ground can be found between the 5 and 10 metre depth contours in the entrance to Kirkcudbright Bay, inward of the Firing Range limit line. It is exposed to southerly gales. With the swell generated by those winds it
would be unwise to anchor in charted depths less than 5 metres. A gas pipeline passes close north and east of Little Ross Island.

8.1.7 Pilotage

There are no authorised pilots for Kirkcudbright. The Harbourmaster can arrange local advice if requested.

8.1.8 Controlling Depths and Drafts

The tidal range in the Bay is from 0.8 to 7.5 m above CD at Springs, 2.4 to 5.9 m at Neaps. Tidal heights at the quay are affected by high pressure and strong winds. Tidal heights in excess of 8 metres above CD are known at which levels the quayside floods. The fishing vessels which use the town quay have drafts typically of 2.5 to 3.0 m and hence take the ground for 2-3 hours either side of low water. The river bed alongside the quay face is dredged periodically with land equipment to maintain a depth of at least 5 metres at Springs, 4 metres at Neaps. Depths below datum at the marina vary between 0.9 and 4 metres and vessels are positioned to remain afloat. Any vessel which can reach the marina or the quay by High Water and then lie aground can use the facilities.

8.1.9 Traffic and Trade

Kirkcudbright is no longer visited by coastal tankers. Occasional small cargo vessels can visit the quay.

Approximately 15 fishing vessels use the port regularly landing shellfish, principally scallops and “queenies”. In recent years between 7 and 8,000 tonnes have been landed to local fish merchants annually, making a significant contribution to the local economy. FV’s also lay-over for repairs and for rest periods.

The marina has berths for up to 50 recreational craft, most of which berths are rented long term. Additionally craft lie on the banks in mud berths. A significant number of visiting recreational craft call at the port.

8.1.10 Environmental Factors

Tides
The tidal range varies between 3.5 m at Neaps and 6.7 m at Springs. Any vessel with a draft that can reach the town quay by High Water can use it – approximately 4 m at Neaps, 5 m at Springs, but the Harbourmaster should be consulted if marginal. A vessel with a draft up to the predicted tidal height should be able to reach the marina, but again the Harbourmaster should be consulted.

Currents
Within Port Limits and Kirkcudbright Bay, currents are principally tidal but strongly affected by discharges from the hydro-electric dams upstream of the harbour. There is good communication between the dam controllers and the Harbourmaster, and generally discharges are used to manage spates. Overtopping of the dams is known to occur, but rarely. Maximum rates on the ebb can reach 5 knots, but are generally between 2 and 3 knots, less on the flood. Discharges from the dams can cancel out the current on the flood. The strongest currents are experienced off the slipway at
Gibbhill Point but the tidal flow diminishes rapidly once the banks cover. Tidal currents in the Bay outside the buoyed channel are noticeable but insignificant. There are significant flows on both flood and ebb through The Sound on the western side of Little Ross Island.

**Wind and Wave**
Kirkcudbright Bay is exposed to southerly gales which, with long fetch, will produce significant waves in the entrance between Gipsy Point and Little Ross. A strong ebb against a southerly gales will produce a short steep sea immediately outside the buoyed channel and within the 5 metre depth contour, making that area unsuitable for anchoring through the period of low water.

**Visibility**
Reduced visibility in frontal conditions is common. Radiation fog with light winds is rare.

**Ice**
Ice in the Bay is almost unknown apart from some light icing on the banks.

**SSSI's**
There are three Sites of Special Scientific Interest in Kirkcudbright Bay:
Shoulder of Craig, on the west side of the river;
Torrs to Masons Walk, on the east side of Kirkcudbright Bay, outwith harbour limits;
Borgue Coast, on the west cost of the Kirkcudbright Bay, north of Ross Bay and outwith harbour limits.

**Oil Pollution**
Oily waste receptacles are provided on the Quay. Tier One response kits are maintained. Dumfries and Galloway Council have a Tier 2 oil spill response call off contract in place with Briggs Marine. Fishing vessels are encouraged to carry oil absorbent kits.

**8.1.11 Aids to Navigation (AtoN's)**

A light flashing every 5 sec is located on the summit of Little Ross Island visible 12 miles. A further light flashing twice every 5 seconds visible 5 miles is located on the northern part of the island and provides a leading line outbound of 201ºT from the end of the buoyed channel. These two Aids are maintained by NLB.

A light flashing every 3 seconds visible 3 miles at the lifeboat station leads inwards to the navigable channel which is marked by port and starboard light buoys, maintained by harbour staff. All lights with the exception of the Scottish Water Sewerage outfall were renewed in Spring 2016. The Marina is marked by 2 flashing green lights – effectively starboard hand marks. Details are given in Kirkcudbright Harbour Operations Manual and Section D.3.3 of this document.

All the AtoN's conform with the criteria in the NLB document “Instructions on the Provision and Maintenance of Aids to Navigation”. 
8.1.12 Local Consultation

There is no formal Harbour Advisory Committee but the Harbourmaster consults widely with users and the Community Council takes an active interest in harbour affairs.

There is a Kirkcudbright Safety Forum in place with meetings scheduled for once a year.

The RHM now reports regularly to the Harbours sub-committee of the EEI committee.

8.2 STRANRAER AND WEST PIER

8.2.1 Location and Layout

Stranraer West Pier is located in position 54° 54.45' N, 05° 01.75' W at the southern end of Loch Ryan adjacent to the town of Stranraer. It consists of a dog-leg quay approximately 100 metres long and a modern marina at its northern end. A refurbished wooden pier is immediately to the west of the marina. A finger pontoon parallel to the quay, based on the waterfront, is used by small fishing vessels, excursion and recreational craft. Access to the marina and finger pontoon is restricted to users.

The quay walls have sections of both vertical wooden fenders and sheet piling with well-constructed access ladders. Both the quay and marina are provided with electrical and water points.

There is significant pedestrian traffic from the car park at the base of the West Pier to the Marina and wooden pier. There is also modest vehicular traffic and parking on the pier. Interaction between pedestrians and fish handling vehicles needs active management and improvements are being progressed following an HSE visit in February 2018.

A pillar crane was installed in Spring 2016 and operations commenced in August 2016 along with a self-propelled boat transporter. Development of safe supervision of both pedestrian and vehicular traffic is ongoing as at July 2018.

A new slipway and boatyard to the WNW of the West Pier became operational in December 2015.

The East Pier is still used by the railway, and until the last decade was used by ferry operators. It lies 250 metres to the east. It is currently being dismantled but together with its AtoN’s remains under the jurisdiction of the most recent operator (Stena) on lease from the Crown Estates.

Two modern ferry terminals: Port of Cairnryan and Loch Ryan Port are located on the east side of the Loch approximately 4 nm north of the town. Each is a separate Statutory Harbour Authority.

8.2.2 Operating Constraints

Depths alongside the West Pier are between 2.7 and 3.5 m at springs, 2.2 m and 3.0 m at neaps. There is a minimum of 2.8 metres below CD in the immediate approach to the Pier. In the past coasters up to 500 tonnes gross have berthed at the Pier.
The longest section of quay wall is some 65 metres long. A drying bank lies about 50 metres east of the quay walls. Vessels currently using the West Pier are much smaller than these parameters. In general any vessel drawing 3 metres or less can reach the West Pier, but may have to lie aground over low water. Any proposals for larger vessels should be subjected to feasibility and risk assessments, taking account of most recent depth surveys.

8.2.3 Port Control

Please note the harbour office is not manned 24/7.

There is currently no active port control for Loch Ryan. Traffic is monitored by way of Port of Larne VTS. Stena operate a radar which is to be shared with D & G Council and Port of Cairnryan to improve safe monitoring of the Loch (May 2017). The ferries operating in the northern half of the Loch communicate by radio issuing notices on Channel 14 VHF when entering the Loch or preparing to depart from their respective terminals. When one ferry requires the deep water route, they may agree mutually to manoeuvres contrary to the Collision Regulations. They should advise smaller vessel in the vicinity of their intentions so as to avoid confusion and potential close-quarters situations.

Arriving fishing vessels and recreational vessels should contact the Harbourmaster by telephone or text or email to advise of ETA and other relevant information. A VHF radio at the harbour office receives/monitors channel 16 and 14. The Harbour Master will provide Port of Entry information using the following aide memoire:

PORT ENTRY GUIDELINES - STRANRAER.

AIDE MEMOIRE FOR PROVIDING ENTRY GUIDANCE TO COMMERCIAL AND LEISURE VESSELS.

1. Skipper to refer to Almanac, Pilotage books and Harbours Directory for extra information.
2. Vessels must be aware of ferry movements and should listen on VHF 16 or 14 when approaching Loch Ryan.
3. Loch Ryan is shallow. The ferries are CONSTRAINED BY DRAUGHT. Collregs Rules 18 (d I) and Rule 28 apply.
4. HM is on 07734 073421 and may listen on VHF Ch. 16 with working channel 14. Ideally, you should email ahead prior to your arrival on lesley.smith@dumgal.gov.uk, stating your intended arrival window, length of stay etc.
5. Access is HW24.
6. The entrance to Loch Ryan and the channel down to Stranraer harbour and marina is well marked. Particular hazards are:
   - Ferry traffic.
   - The Scar which dries to within 0.5 nm of the Eastern shore.
   - Unlit sewage outlet 0.1nm NW of the harbour entrance.
7. Care should be taken when entering the harbour as a large part of the basin dries.
8. The marina can be found on the starboard side with the visitors section being on both sides of the first pontoon.
9. Vessels should not berth in other vacant berths without HM permission.
10. Vessels wishing to berth at the main quay must contact the Harbour Master in advance.
11. The access codes are: Gate xxxx Facilities Block xxxx. For the security of all, the marina gate should be kept closed shut.
12. Payment: At the HM office or by way of the honesty box in the facilities block foyer.
13. Advise skippers to make themselves familiar with emergency plan on the rear of secure gate.
14. Lifejackets should be worn on the pontoons and walkway.
15. Directions for access to town and information about suitable places to eat, drink and obtain supplies.

COMMERCIAL VESSELS.

1. Permission to land/berth must be obtained in advance from the HM on 07734 073421.
2. If you are unable to contact HM by phone/text, you should email ahead prior to your visit to Lesley.smith@dumgal.gov.uk
3. No towage should be undertaken without prior agreement from the HM.
4. The East Pier is closed and dangerous – there is NO BERTHING.
5. Vessels berthing at the main quay must have a berthing plan in place, including line handling.
6. Vessels should have heaving lines prepared and ready fore and aft.
7. Skippers should note that at times the crane berth is required for lifting boats, contact the HM for information.
8. Skippers should berth as directed and report to the HM on arrival.
9. Code for Fishermen’s Showers is xxxx.
10. AIS is to be kept on by all vessels entering Loch Ryan and Stranraer harbour.

Nov 2016.

8.2.4 Port Limits

Historic legislation plus recent legal and regulatory opinion indicates that Dumfries and Galloway Council is the legal harbour authority for the entire Loch, except the ferry terminals. Harbour Revision Orders were proposed in 2012 limiting the
Council’s responsibilities. The Council is taking action to abrogate these historical responsibilities and form a revised SHA in the Southern half of the Loch which will in due course include those areas currently around the East Pier.

Port Limits for the Port of Loch Ryan and Cairnryan Port are defined by their respective Harbour Empowerment Orders and are shown on Admiralty Chart 1404.

8.2.5 Approaches

Loch Ryan is entered between Milleur Point and Finnarts Point. A fairway buoy is installed approximately 0.2 nm north-east of Milleur Point. A channel with a minimum depth of 8.5 metres in 2011 on a heading of 142°, marked by buoys and leading lights leads to Loch Ryan Port. A channel with depths of at least 7 metres lies some 0.4 miles to the west, passing close to Cairn Point it leads to the ferry terminal at Cairnryan Port.

The south-eastern extremity of a rocky bank called The Scar is marked by The Spit lightbuoy. Fishing, excursion and recreational vessels bound to and from Stranraer West Pier should pass to the east of this buoy and the 3 metre depth contour, but remaining to the west of the deep water channels above, so as to avoid interaction with ferries.

From The Spit buoy a channel marked by three starboard hand light beacons leads to the East Pier with nominal depths of 5 m below CD. These beacons are considered redundant and may be removed in coming years. Depths in the channel have not been actively maintained since ferry traffic there ceased. However, the approach onward to Stranraer has consistent depths of at least 3 metres below CD. The channel into the marina and West Pier has a minimum depth of about 2.8 metres below datum and is marked by port and starboard hand lightbuoys. The drying bank to the east of the Pier and Marina is marked by lit can buoys.

Anchorages
There is an anchorage about 0.5 nm north of the West Pier in depths of approximately 3 metres below CD. Depths greater than 5 metres are available in the northern part of Loch Ryan.

There is anchorage for small craft south-west of The Scar in depths of 2 metres and in the vicinity of the former flying boat slipway at Wig Bay currently used by yacht clubs.

There is also anchorage for small craft in depths of 3 metres below CD in Lady Bay on the west side of the Loch near to its northern entrance. However this area is exposed to northerly winds and seas and potentially to ferry wash.

8.2.6 Pilotage

No pilots are available for Stranraer West Pier. Currently there are no licensed pilots for Loch Ryan. The ferry operators make their own arrangements for Ports of Cairnryan and Loch Ryan.
8.2.7 Controlling Depths and Drafts

Any vessel with a draft which can reach the West Pier will find sufficient water in the approach channels. A nominal depth of 5 m below CD is available as far as the East Pier thence there is at least 2.8 m below Datum to the Marina and West Pier. Hence the effective controlling depth is that alongside the quay wall - a draft of 3.0 metres.

The area in the vicinity of the West Pier shoals with soft sediment, which is cleared, as needed.

8.2.8 Traffic and Trade

In the late 20th century small cargo vessels up to about 500 tonnes gross used the West Pier at Stranraer. That trade has ceased. Various ferries used the East Pier until the first decade of the 21st century and fast catamarans were based briefly at the West Pier. All the ferry traffic has now moved to the two terminals at Cairnryan, with numerous sailings daily, peaking in the summer.

A few small fishing vessels, generally less than 12 m length and 2 metres draft are based at the West Pier and land their catches there. There are regular visiting fishing vessels in the 16m range along with tugs and workboats up to 26m.

The Marina is popular, with many recreational craft based there. Up to 10 visiting craft can be accommodated. Recreational craft are also based at other bays and inlets around Loch Ryan including Loch Ryan Sailing Club based at the former flying boat slipway at Wig Bay south-west of The Scar.

8.2.9 Environmental Factors

Tides
Tidal range varies from 1.9 metres at Neaps to 2.8 metres at Springs.

Currents
The currents within Loch Ryan are tidal and not significant.

Wind and Wave
Loch Ryan is exposed to strong winds and gales from the north. For the northern part of the Loch a maximum significant wave of 2.0 m can be expected; south of the line from Cairn Point to Kirkcolm Point the maximum significant wave expected is 1.2 m. On a sustained northerly an uncomfortable swell can be expected at the Marina and West Pier, with part protection from the breakwater.

Visibility
Reduced visibility in frontal conditions is common. Radiation fog with light winds is rare.

Ice
Ice in the Loch is almost unknown and rare at Stranraer.

SSSI's
There are no Sites of Special Scientific Interest in the vicinity of the port. However, shellfish banks occur in the southern part of Loch Ryan. Terns nest in large numbers on The Scar peninsula in spring and summer.
Oil Pollution

Oily waste receptacles are provided on the Pier above the Marina. Tier 1 response kits are maintained. Dumfries and Galloway Council have a Tier 2 oil spill response call off contract in place with Briggs Marine.

8.2.10 Aids to Navigation

The following are located in Loch Ryan:
- Fairway Buoy located off Milleur Point at the northern entrance to the Loch;
- Leading lights into Loch Ryan Port;
- Flashing red light on Cairn Point;
- Light buoys marking the deep water channels to and from Port of Loch Ryan, Cairnryan Port;
- The Spit starboard hand buoy marking the south-eastern end of The Scar;
- Three starboard hand light beacons marking the former 5 metre channel to the Stranraer Piers; *(the channel is not maintained)*
- Fixed lights marking the extremities of the two current ferry terminals and the former terminal at the East Pier;
- No1 starboard and No2 Port hand light buoys marking the entrance to Stranraer Marina and West Pier, the former guards the end of the breakwater;
- Three lit port can buoys, Nos 4, 6 and 8 marking the edge of the drying bank off the West Pier.

With the exception of lights at the ferry terminals and West Pier, AtoN's are maintained by NLB.

A full list of AtoN's is contained in Appendix D Section 3.3 and also in the Harbour Operations Manual.

All the AtoN's conform with the criteria in the NLB document “Instructions on the Provision and Maintenance of Aids to Navigation”.

8.2.11 Local Consultation

The Stranraer Watersports Association is the umbrella organisation for all water based activity groups and clubs in Loch Ryan. Stranraer Harbour Users’ Group is an active group reporting to the SWSA. Both groups meet regularly at intervals dependent upon development activity. The RHM attends as an observer at both groups.

8.2.12 Hazards

Hazard work sheets follow in Section C.4 below.

A full Navigational Risk Assessment was conducted by Marico in late 2015, report dated May 2016. This identified that the only ‘ALARP’ risk is in the Northern half of the loch and involves ferry to ferry collision.

The principal hazards in the southern half of Loch Ryan, south of Cairn Point and Kirkcolm Point are collisions between small vessels, people falling into the water and stranding of small vessels. The latter risk is unlikely to be severe provided that it
does not occur on The Scar. As with all of Dumfries and Galloway Harbours, the interaction between pedestrians and fish landing vehicles on the West Pier is potentially hazardous if not carefully controlled.

In the northern half of the Loch, in addition to generic hazards, ferry traffic at moderate to high speed and in draft restricted channels is potentially hazardous. However, interaction is managed by the ferry staff themselves and is low risk. The principle risk is when ferries agree on manoeuvres outside the Collision Regulations, but which may be confusing to smaller craft in the vicinity. This again is managed by the ferries by issuing clear advices to craft which may be affected. Local port information advises small craft to keep to the west side of the Loch, and to the west of the deep water channels.

Swamping of small craft by ferry wash was once considered a hazard. As fast ferries are no longer used and conventional ferries manage their speed to minimise wash generation, reports of such incidents have disappeared. Any change in trade patterns and ferry types needs to be monitored in case such hazards reappear.

8.3 THE MACHARS HARBOURS

These are at Port William, Isle of Whithorn and Garlieston. There is no active management of vessel movements at these harbours. The harbours are overviewed by a part-time Harbour Observer under the supervision of the RHM and supported by harbour staff from Kirkcudbright and Stranraer.

Port Limits are established per the three individual Harbour Empowerment Orders enacted in 2008. Broadly they cover the navigable harbours up to MHWS, the immediate harbour-side areas and approaches between 300 and 100 metres to seaward depending upon the geography.

All three harbours land modest amounts of fish traffic from local vessels. Due to the narrow approach road - Harbour Row, there is interaction between pedestrians and fish traffic during landings at Isle of Whithorn. There are significant numbers of recreational craft of various sizes at all three harbours. There is an active sailing club at Isle of Whithorn. The harbours were formerly used by small coasting vessels, particularly Garlieston. Excursion vessels called there up to 2012. The cargo trade has ceased and excursion traffic has an uncertain future.

No pilotage service is offered at these ports, that formerly available at Garlieston is discontinued. The RHM can arrange for local advice if requested.

8.3.1 Port William

The harbour is on the west coast of The Machars peninsula in 54º 45.7' N, 04º 35.1' W and the entrance faces west-north-west. The quayside is nearly 200 metres in length from the entrance to its inner end. It is fitted with bollards, wooden fenders, access ladders, and water and electricity points. A rock breakwater extends for about 100 metres from the shore north of the pier, protecting the harbour from north-westerly winds. There is between 2.5 and 3.8 metres of water at the outer end of the pier at high water; between 1.4 and 2.6 metres at the inner (south-east) end. The pier wall dries out at low water as does much of the harbour leaving only a shallow channel off the pier. The pier is only accessible to vessels drawing more than one metre for two hours either side of high water.
It should be noted that a heavy swell can build within the harbour in strong SW through NW conditions and vessels should consider taking shelter elsewhere.

A gravel bank builds off the entrance in southerly gales and over winter. This is cleared periodically using land moving equipment. A seaweed bed develops at the inner end of the quay, which is also cleared periodically.

Fixed and flashing green lights provide a leading line into the harbour in a direction of 105º. There is an anchorage for small vessels in depths of about 3 metres below CD about 0.4 nm off the entrance. But the approach is exposed to winds and seas between south and north-west.

### 8.3.2 Isle of Whithorn

The harbour is at the south-east extremity of The Machars peninsula in 54º 41.8' N, 04º 21.8' W. The entrance faces south between rocky headlands. The facilities include a quay wall in a south-westerly line about 125 m long along Harbour Row with a slipway at the landward end. A double faced pier 68 m long aligned toward the north-west is at the outer end of Harbour Row. The quays are provided with bollards, wooden fenders, access ladders, and water and electricity points. There are depths between 2.0 and 3.5 metres at the centre of the inner face of the pier at high water and between 4.1 and 5.6 metres at the outer end. All the pier and the Harbour Row quay wall dry out at springs; there is a shallow residual channel at the outer end of the pier at neaps. The outer part of the pier structure is 1.8 metres lower than the remainder and floods at high water springs. The harbour is exposed to the south and southerly gales drive a swell into the beach north of the pier. There can be significant currents in the approach, depending upon the state of the tide in the Solway Firth. They set strongly across Screen Rocks.

There is one SSSI in Whithorn Bay

Rescue Orange leading marks with Red lights for night time approach provide a leading line of 335º between the rocky headlands; a red and white sector light at St Ninian’s Tower warns of the dangerous Screen Rocks to the south. There is a Starboard hand mark on a pole at the end of the breakwater, QG 5sec.

There is an anchorage in about 4 metres below CD 5 miles north, off Garlieston. There is a further anchorage in Portyerrock Bay, close inshore in depths between 5 and 10 metres, just north of Cairn Head and about 2 miles north of Isle of Whithorn entrance.

### 8.3.3 Garlieston

The harbour is on the west side of Garlieston Bay lying on the east coast of The Machars peninsula at approximately 54º 47.3’ N, 04º 21.7’ W. The Bay faces south-east into Wigtown Bay with gradually shelving depths which dissipate the swells from that direction. Apart from the outer Berth 2, the quays are protected from southerly seas. The quay walls form a rough “S” shape in plan and total some 240 m in length. Until 2012 excursion vessels called at Garlieston on voyages to the Isle of Man. Previous to that coating cargo vessels up to 1,000 tonnes deadweight served the...
granary beside the harbour. Fishing vessels continue to land at Garlieston and it is increasingly popular with recreational craft.

Maximum depths alongside the three berths at high water vary from 1.8 metres at neaps to 3.8 metres at springs. All berths dry out at low water but the Pouton Burn flows through the harbour. There are significant flows across the entrance depending upon the state of tide in the Solway Firth.

In times of High spring tides and swell some fishing vessels use holding off lines which create a hazard to navigation and guidelines to cover use of these are in held at Appendix M.

There is a pole with two fixed red lights vertically at the eastern extremity of Berth 2 and an isolated hazard buoy approximately 1.5 nm south of the harbour. There is an anchorage for small vessels with a depth of about 4 metres below CD some 0.5 nm SE of Berth 2. There is a further anchorage in Portyerrock Bay, close inshore in depths between 5 and 10 metres, just north of Cairn Head and about 4 miles south of Garlieston.

8.3.4 Local Consultation

There are no formal Harbour Advisory Committees but the Community Councils at the three location take an active interest in harbour activities. They meet monthly. Annual meetings with the RHM are being developed along with meetings with the Wigtown Bay Sailing Club based at Isle of Whithorn.

Hazards
The principal hazards of The Machars Harbours are: their exposure to gales from particular directions and the resultant swells. The approach to some is made more hazardous by physical features such as rocky entrances.

Fish landings take place at all three harbours. The interaction between vehicles involved and pedestrians watching the operation is a potential hazard. The risks increase according to the frequency of such operations and the physical limitations of the working area.

On fine days there is considerable small craft activity at the recreational harbours particularly around high water. There are risks of collision between small craft and with fishing vessels, but the consequences are likely to be minor. Collision between small craft and swimmers is a possibility and the consequences could be serious.

Hence the principal risks as tabulated in the following section are:

- Fishing vessels grounding or foundering whilst trying to enter the harbours in bad weather;
- Recreational craft grounding or foundering whilst trying to enter a harbour in bad weather with the potential for loss of life;
- Collisions between small craft in the approaches or within the harbours;
- Personal injury due to a small craft running down a swimmer;
- Personal injury due to collision between a fish landing vehicle and pedestrian observer.
8.4 PRINCIPLE HAZARDS

Risk assessment worksheets for the principle hazards identified in 2013 follow on subsequent pages. D & G use a “Risk Assessment and Method Statement” document for assessing special operations such as quayside lifts and other hazardous operations.

A full Navigational Risk Assessment of Loch Ryan was conducted by Marico in late 2015, report dated May 2016. Full Navigational Risk Assessments for Kirkcudbright and the 3 Machars harbours were conducted by Marico during October 2016. See Appendix K.
<table>
<thead>
<tr>
<th>No</th>
<th>Hazard</th>
<th>Potential Consequences</th>
<th>Probability</th>
<th>Consequences</th>
<th>Risk</th>
<th>Mitigation Controls</th>
<th>Resulting Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kirkcudbright: Collision between fish landing vehicles and pedestrian.</td>
<td>Personal injury or fatality; Regulatory controls on harbour operations; Intense media attention; Severe reputational damage.</td>
<td>Moderate</td>
<td>Severe</td>
<td>Moderate</td>
<td>Restrict access to fish landing operations by temporary barriers; Improve and strengthen warning signs.</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>Kirkcudbright: Young people playing among fishing gear storage</td>
<td>Moderate to severe personal injury; Regulatory attention; Media scrutiny; Reputational damage.</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Remove/shield most hazardous items; Fishermen to consider need for extensive storage; Consider secure fencing.</td>
<td>Low</td>
</tr>
<tr>
<td>3</td>
<td>Kirkcudbright: Collision between pedestrian and vehicle using quay.</td>
<td>Severe personal injury; Regulatory attention; Media scrutiny; Reputational damage.</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Stop vehicles circulating around quay; Restrict access to users by barriers, pass system.</td>
<td>Low</td>
</tr>
<tr>
<td>4</td>
<td>Kirkcudbright: Pedestrian falling into river from quay or marina.</td>
<td>Minor personal injury, possible drowning; Media attention.</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Improve quay signage; Secure access to marina; Also see item 1 above.</td>
<td>Low</td>
</tr>
<tr>
<td>5</td>
<td>Kirkcudbright: Recreational/fishing vessel collision.</td>
<td>Vessel damage; minor injury with possibility of drowning; Report to MAIB – investigation unlikely.</td>
<td>Low</td>
<td>Minor</td>
<td>Low</td>
<td>Professionalism of local fishermen; awareness by local boating population.</td>
<td>Low</td>
</tr>
<tr>
<td>No</td>
<td>Hazard</td>
<td>Potential Consequences</td>
<td>Probability</td>
<td>Consequences</td>
<td>Risk</td>
<td>Mitigation Controls</td>
<td>Resulting Risk</td>
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</tr>
<tr>
<td>6</td>
<td>Kirkcudbright: Stranding of fishing or recreational vessel in Bay.</td>
<td>Minor damage, possible minor personal injury; Potentially moderate if stranding on rocks.</td>
<td>Moderate</td>
<td>Insignificant / Minor</td>
<td>Low/Moderate</td>
<td>Local knowledge; Lifeboat in Bay.</td>
<td>Low</td>
</tr>
<tr>
<td>7</td>
<td>Stranraer West: Collision between fish landing vehicle and pedestrian.</td>
<td>Personal injury or fatality; Regulatory controls on harbour operations; Media attention; Reputational damage.</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Temporary barriers at entrance to quay and around fish landing operations; Improved warning signs; Safe Walkways for pedestrians.</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>Stranraer West: Collision between vehicle and pedestrian on quay</td>
<td>Minor/moderate personal injury; Regulatory attention; Media scrutiny; Reputational damage.</td>
<td>Low</td>
<td>Minor</td>
<td>Low/Moderate</td>
<td>Improved warning signs; Safe Walkways for pedestrians.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Stranraer West: Persons falling into water from quays or marina.</td>
<td>Minor personal injury, possible drowning; Media attention.</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Safe Walkways on quay: Warning signs; Local knowledge of Marina users.</td>
<td>Low</td>
</tr>
<tr>
<td>10</td>
<td>Stranraer West: Fishing vessel stranding on bank off quay.</td>
<td>Minor vessel damage; Delays to landing</td>
<td>Low</td>
<td>Insignificant</td>
<td>Low</td>
<td>Education; Possibly light on outer can buoy.</td>
<td>Very low</td>
</tr>
<tr>
<td>No</td>
<td>Hazard</td>
<td>Potential Consequences</td>
<td>Probability</td>
<td>Consequences</td>
<td>Risk</td>
<td>Mitigation Controls</td>
<td>Resulting Risk</td>
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</tr>
<tr>
<td>11</td>
<td>Loch Ryan: Recreational vessel swamped by ferry wash.</td>
<td>Vessel damage, potential fatalities; Regulatory attention; Media scrutiny; Reputational damage.</td>
<td>Very Low</td>
<td>Severe</td>
<td>Low</td>
<td>Fast ferries no longer used; Ferry operating procedures; Monitoring of changes to ferries.</td>
<td>V. Low</td>
</tr>
<tr>
<td>12</td>
<td>Loch Ryan: Fishing/recreational vessel collision:</td>
<td>Vessel damage, potential injuries; Regulatory attention.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Local knowledge of skippers; Exposure low.</td>
<td>Low</td>
</tr>
<tr>
<td>13</td>
<td>Loch Ryan: Ferry/fishing or recreational vessel collision.</td>
<td>Fatalities; Severe regulatory attention; Intense media scrutiny; Reputational damage to ferry operators</td>
<td>Low</td>
<td>Severe</td>
<td>Moderate</td>
<td>Education; Local knowledge of fishing/recreational skippers; Professionalism of ferry officers; Movement broadcasts.</td>
<td>Mod/ Low</td>
</tr>
<tr>
<td>14</td>
<td>Loch Ryan: Ferry/small vessel collision due to confusion over non Coll Regs manoeuvres agreed between ferries.</td>
<td>Fatalities; Severe regulatory attention; Intense media scrutiny; Reputational damage to ferry operators and DGC.</td>
<td>Low</td>
<td>Severe</td>
<td>Moderate</td>
<td>Port information recommending routes away from ferry paths; mandatory “all vessels Loch Ryan” radio advices before manoeuvre.</td>
<td>Low</td>
</tr>
<tr>
<td>15</td>
<td>Machars harbours: Fishing/recreational or recreational/recreational vessel collisions; Vessel stranding within harbour.</td>
<td>Minor/moderate vessel damage; Minor injury, possible fatality; Possible media interest.</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Local knowledge; Harbour-masters promote good practices.</td>
<td>Low</td>
</tr>
<tr>
<td>No</td>
<td>Hazard</td>
<td>Potential Consequences</td>
<td>Probability</td>
<td>Consequences</td>
<td>Risk</td>
<td>Mitigation Controls</td>
<td>Resulting Risk</td>
</tr>
<tr>
<td>----</td>
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</tr>
<tr>
<td>16</td>
<td>Isle of Whithorn: Collision between fish landing vehicle and pedestrian on pier or approach.</td>
<td>Personal injury, possible fatality; Regulatory attention dependent upon severity; Media attention; Reputational damage.</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Local knowledge of vessel and vehicle operators.</td>
<td>Low</td>
</tr>
<tr>
<td>17</td>
<td>Isle of Whithorn: Vessel stranding on rocky entrance.</td>
<td>Serious vessel damage; Serious injury/ fatality</td>
<td>Low</td>
<td>Severe</td>
<td>Moderate</td>
<td>Local knowledge of users; Leading lights.</td>
<td>Low</td>
</tr>
</tbody>
</table>
9.0 MARINE OPERATIONS PROCEDURES

9.1 MANAGEMENT OF MARINE OPERATIONS

9.1.1 Harbour Management

*Kirkcudbright and Stranraer Harbours* are managed by full time Senior Harbour Operatives (Harbour Master) and part-time Assistant. The SHO’s report via the RHM to the Infrastructure Manager.

*Port William, Isle of Whithorn* and *Garlieston* Harbours are overviewed by a part-time Harbour Observer reporting via the RHM to the Infrastructure Manager. The Harbour Observer is supervised by the RHM and supported by harbour staff from Kirkcudbright and Stranraer.

Minor harbour maintenance is carried out by harbour staff, major items by Council staff or sub-contracted to others after requests to the RHM.

9.1.2 Operating Constraints and Controlling Depths

All the harbours are tidal, with residual depths generally of less than one metre at Low Water Springs. Residual depths of 1-2 metres are available off the marina and quay at Stranraer West. Depths of up to 4 metres are available on the outside marina face at Kirkcudbright. Small vessels can lie afloat at Stranraer and Kirkcudbright marinas. Otherwise vessels using the harbours must be able to take the ground safely. (See section 1.3 NAABSA Berths)

In general the maximum draft available is the predicted rise of tide less an allowance of one to two metres. Tidal heights and ranges are given in the table below. The operator of any vessel with a marginal draft should consult the local Harbourmaster for advice.

Vessels up to 67 metres length have used Kirkcudbright; a maximum length of 60 metres is available at Stranraer West; vessels up to 75 metres can lie alongside Berth 2 at Garlieston for limited periods. The largest vessels using Port William or Isle of Whithorn, fishing or recreational, rarely exceed 12 metres overall. Vessels of 1,500 tonnes gross regularly visited Kirkcudbright but required careful handling; vessels of 500 tonnes used Stranraer West Pier and cargo vessels of about 1,000 tonnes used Garlieston; excursion vessels in this size range called at Garlieston until 2012. In 2013 no regular commercial traffic was in prospect.

Any proposals or enquiries for large vessels or vessels of peculiar configuration to visit any of the harbours should be subject to feasibility and risk assessments, taking professional advice if necessary.
9.1.3 Automated Identification System (AIS) - EU directive 2009/17/EF

As an aid to safe navigation vessels fitted with AIS should ensure it is switched on when navigating in the approaches to or within the jurisdiction limits of Dumfries and Galloway Council harbours.

In line with amended EU Directive 2002/59/EC Article 6a:
Fishing vessels equipped with AIS shall maintain it in operation at all times. In exceptional circumstances, AIS may be switched off where the master considers this necessary in the interest of the safety or security of his vessel.

9.1.4 NAABSA Berths

A NAABSA (not always afloat but safely aground) berth is a berth at which a ship may ground in safety at low water. The bottom at such berths is usually soft mud.

All D & G harbours with the exception of Stranraer dry and vessels must therefore be able to take the ground safely. It also incumbent upon D&G Council to have in place a system for regular checking of berths for obstructions, ensuring that vessels using the berth can do so without suffering damage.

D & G Council fulfil this requirement by checks incorporated within the Harbour Watch system of its operating manuals.

The master of any vessel wishing to berth at the NAABSA berth shall provide such evidence by way of risk assessments, reports or others as may be required by the Harbour Master to satisfy the Harbour Master that it would be safe for the vessel to use the NAABSA Berth. The master shall also be required to provide evidence that suitable insurance is in place in respect of the vessel covering the usual maritime risks and in force when the vessel is berthed at a NAABSA berth.

9.1.5 Environmental Factors

Visibility
Reduced visibility due to frontal conditions is common. Radiation fog in light winds is rare. With no active port control, vessels enter or leave according to their own judgment. None the less, harbour staff should monitor activities and raise any concerns with operators of vessels observed acting irresponsibly.

Wind and Wave
All the harbours except Stranraer are exposed in their entrances to strong winds and resultant swells from a variety of directions. The entrance to Isle of Whithorn between rocky headlands can be hazardous in breaking waves; breaking waves will also occur on the bank outside the entrance to Port William with heavy swells within; Garlieston Bay shelves gently and is less hazardous. Vessels entering or leaving Kirkcudbright are protected whilst in the buoyed channel, but a short steep sea will develop on the ebb in strong southerlies once into deeper water. Sustained northerlies can induce an uncomfortable swell at Stranraer Marina despite the breakwater immediately north of it.
Tides
A summary of tidal heights is given in the table below.

<table>
<thead>
<tr>
<th>Harbour</th>
<th>Tidal Range</th>
<th>Max Depth at Quay</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Springs</td>
<td>Neaps</td>
<td>MHWS</td>
</tr>
<tr>
<td>Kirkcudbright</td>
<td>6.7m</td>
<td>3.5m</td>
<td>5.8m</td>
</tr>
<tr>
<td>Stranraer</td>
<td>2.8m</td>
<td>1.9m</td>
<td>3.3m</td>
</tr>
<tr>
<td>West</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port William</td>
<td>5.7m</td>
<td>3.1m</td>
<td>3.8m</td>
</tr>
<tr>
<td>Isle of Whithorn</td>
<td>6.2m</td>
<td>3.3m</td>
<td>5.6m</td>
</tr>
<tr>
<td>Garlieston</td>
<td>6.1m</td>
<td>3.3m</td>
<td>3.8m</td>
</tr>
</tbody>
</table>

Tidal currents are generally insignificant within The Machars Harbours and at Stranraer although significant currents affect the entrances to Garlieston and Isle of Whithorn. Rates of 5 knots occur on the ebb in the Kirkcudbright buoyed channel which can be enhanced by discharges from the hydro-electric dams upstream of the Bridge. Coastal currents into and out of the Solway Firth with rates up to 4 knots Springs, 2 knots Neaps affect Luce Bay, Wigtown Bay and hence the approaches to Kirkcudbright and the Machars Harbours.

Sites of Special Scientific Interest
These are noted against individual harbours.

9.1.6 Moorings

All vessels, whatever their size must be properly moored and moorings properly tended at all times. If vessels are left unattended, the skipper/operator must make arrangements for moorings to be checked and tended regularly. If one vessel of a group moored abreast leaves, then the operator must ensure that moorings of the remaining vessels are left in a satisfactory condition.

Harbour staff will raise the matter with skippers who fail to comply with the above.

9.1.7 Deficient Vessels

The harbourmasters must keep a record in their logs of vessels which, due to deficient performance, crewing or equipment increase the hazards of the port or are otherwise unsuitable. The harbourmasters should raise the matter with the vessel operator and/or take appropriate steps to restrict the operations of such vessels pending modifications or improvements. Actions taken must be recorded in the log.

The harbourmasters have powers to issue Directions in respect of specific vessels or groups of vessels restricting their activities or requiring special provisions whenever such vessels use the harbours. Such Directions may include restrictions to daylight or certain states of wind and/or tide – in extreme cases prohibition from the port.
9.1.8 Handling of Dangerous Goods

Under the ACOP Dangerous Goods in Harbour Areas Regulations 2016, vessels intending to land dangerous goods must advise the Harbourmaster of details 24 hours before arrival. This is an unlikely requirement given the trade at Dumfries and Galloway Harbours. None the less harbourmasters should be aware of this procedure. Any vessel planning to land dangerous goods would be subject to a special risk assessment. Dangerous goods are handled routinely at the two ferry terminals in Loch Ryan and administered by the respective harbour authorities.

Gas cylinders and small quantities of flammable liquids are handled onto and off fishing and recreational vessels at all the harbours. Harbourmasters must encourage vessel operators to take proper precautions when so doing. Neither empty nor full containers may be left unattended on the quays.

High flash-point oil fuel is handled at all the harbours from road tank wagons. Pollution due to spillage is the principal risk from such operations.

9.1.9 International Ship and Port Facility Security Code (ISPS)

The code was introduced in 2004. Dumfries and Galloway Council have a trained Port Facility Security Officer appointed. A Port Facility Security Assessment and Port Facility Security Plan are in place at Kirkcudbright to handle occasional international coaster visits.

9.1.10 Port Control

There is no active port control at any of the harbours, but the harbourmasters will provide advice on entering or leaving, if so requested. Port entry checklists for both Kirkcudbright and Stranraer are incorporated within sections C1.3 and C2.3 of the SMS. They can be contacted on individual harbour mobile telephones. Kirkcudbright Harbour also operates on VHF Channels 16 and 12. Stranraer operates on VHF Channels 16 and 14.

9.1.11 Port Waste Reception Facilities Regulations 2003

Dumfries and Galloway Harbours are subject to these regulations which require: the reporting, documentation and correct disposal of ship generated waste; and a published charging regime.

Port Waste Management Plans, last updated in 2014, are in force for Kirkcudbright, Stranraer West and The Machars Harbours. They are submitted to MCA at three yearly intervals for approval.

The Consolidated European Reporting System for ship’s waste does not normally apply to vessels using Dumfries and Galloway Harbours. Operators of any vessels to which CERS does apply would be aware of the requirement.

9.1.12 Restricted Visibility Guidelines

There is no active port control at any of the harbours, but the harbourmasters will provide advice on entering or leaving, if so requested. They can be contacted on
individual harbour mobile telephones. Kirkcudbright Harbour also operates on VHF Channels 16 and 12. Stranraer operates on VHF Channels 16 and 14.

Visibility at Dumfries and Galloway Operated Harbours is referenced to standard Met Office Criteria as follows:

Restricted Visibility Terms.
Very poor/Fog: Visibility less than 1000 metres.
Poor: Visibility between 1000m and 2 nautical miles.
Moderate: Visibility between 2 and 5 nautical miles.
Good: Visibility more than 5 nautical miles.

General Guidelines.

1. Visibility may deteriorate for a number of reasons from local weather conditions – Fog, snow and heavy rain and also because of the presence of smoke or dust.

2. Visibility may differ greatly over the course of the approaches to the harbour or within the navigable channel itself.

3. Vessels must comply with all regulations within the International Regulations for Preventing Collisions at Sea, 1972. COLREGS. Particular attention must be paid to:
   - Rule 5 (Look Out)
   - Rule 6 (Safe Speed)
   - Rule 7 (Risk of collision)
   - Rule 9 (Narrow channels) – Masters and skippers should be aware that this is particularly relevant at Kirkcudbright Harbour.
   - Rule 19 (Restricted Visibility) - Masters and skippers should in particular be aware of the requirements of Rule 19 (a) which applies to vessels not in sight of one another when navigating in or near an area of restricted visibility:

      Masters and Skippers should be aware of their changing responsibilities under the ColRegs Part B Section II (Conduct of Vessels in Sight of One Another – Rules 11 to 18) and Part B Section III (Conduct of Vessels in Restricted Visibility – Rule 19). Near restricted visibility they may be dealing with several vessels, both in
the area of restricted visibility and in sight, and thus a different response may be required.

- Rule 20 Lights and Shapes (Applications) - lights should also be exhibited from sunrise to sunset in restricted visibility.
- Rule 35 (Sound signals in restricted visibility).

4. Vessels are permitted to move subject to the Skipper/Master being satisfied that it is safe to do so having assessed the vessel’s manoeuvring capabilities, navigation and radar systems, knowledge of the channel and approaches, crew competence and familiarity in relation to any additional risks posed by the restricted visibility.

Restrictions – Visibility under 1000m.

When visibility is restricted to less than 1000m in any part of Dumfries and Galloway Council’s Statutory Harbour Authority Areas, the following regulations are to be followed:

1. Vessels alongside should minimise VHF communications at all times and not communicate with a vessel underway.
2. Vessels of more than 250GRT and any vessel carrying dangerous or polluting cargo in bulk shall not enter or move within the harbour areas if visibility is less than 1000m.
3. Leisure vessels shall not enter or move within the harbour without the permission of the Harbour Master.

Exemptions:

Regular scheduled Ferries operating under the control of Port of Larne VTS to and from Port of Cairnryan or Loch Ryan Port.

9.2 CONSERVANCY

9.2.1 Shoaling

The River Dee at Kirkcudbright is subject to siltation which builds up at the quay, requiring periodic removal. As at April 2017 there is also reported shoaling NE of No13 at Seaward Corner and immediately alongside No26 opposite the marina.
Depths at Stranraer West are generally stable but with light silting. Long shore drift builds up material on the slipway and against the West Pier and is beginning to encroach between the West Pier and Breakwater.

A gravel bank builds off the entrance to Port William on southerly gales, which is also removed periodically.

Depths at Isle of Whithorn and Garlieston are generally stable.

**9.2.2 Surveys**

The council commissions bathymetric surveys of the harbours and approaches at intervals of between 4 and 7 years in line with its Marine Conservancy policy. Surveys were last carried out in 2017 for Kirkcudbright and Stranraer. Latest surveyed depths are available via the local harbourmasters and are promulgated to users by way of Notice to Mariners.

**9.2.3 Inspections**

Harbour fittings and equipment are inspected by the harbourmasters:

- Weekly;
- Following incident, complaint or severe weather;

Weekly inspections follow the checklists set out in the Harbour Watch system.

Periodic safety inspections can cover any aspect of the harbours including condition of quays, fixings, equipment facilities or the operation of the harbour. Any items for improvement or remedial action are reported to the RHM.

Any minor repairs are actioned by the local Harbourmaster. Any request for maintenance or repair beyond local capability is passed for action via the RHM.

**9.2.4 Dredging**

The Council carries out maintenance dredging of the harbour areas and identified high spots in the approaches to maintain target depths. Frequency depends upon need and survey results.

- Accumulated silt at the Kirkcudbright quay faces is removed 6 monthly by land equipment;
- Accumulated mud around the marina walkway and finger pontoons at Kirkcudbright is licensed to be cleared with water injection.
- The gravel bank off the entrance to Port William is also levelled periodically by land contractors, under a waste Exemption Licence.
- At Stranraer sand deposited by longshore drift is cleared from the slipway and base of the West Pier under a Marine License by diggers.
- Dredging, generally by land equipment, is carried out at the other harbours on a need basis.

Following the 2017 survey dredging of the approach and main basin at Stranraer is planned for winter 2018.

An application has been made to dredge the entrance and alongside the whole quay at Port William.
Any dredging operation is considered to be an unusual event and hence is subject to a prior Risk Assessment involving the dredger master or equipment operator and harbour master. Precautions and operating constraints are discussed in the Kirkcudbright and Stranraer and Loch Ryan Harbour Operations Manuals.

Any capital dredging to improve the channels or increase the controlling depths would be a special project requiring:
- Justification based upon need and detailed hydrographic survey;
- Approval of the Crown Estates;
- Consultation with Marine Scotland;
- Risk Assessment - particularly in respect of traffic movements during the project;
- Determination of whether an Environmental Impact Assessment is required under the Harbour Works (EIA) Regulations 1999.

In accordance with the Marine (Scotland) Act 2010, capital and maintenance dredging operations require a license from Marine Scotland.

### 9.2.5 Wrecks

Under general powers and by specific powers in the Byelaws and Harbour Orders, the harbourmasters may order or arrange the removal of any wreck, abandoned vessel or other derelict obstructing the navigable channels or other public areas of the harbours.

Harbourmasters will try to identify the owners of any such derelict and require them to arrange removal. If ownership cannot be established in a reasonable period, or if the derelict is seriously impeding traffic, the authority may arrange removal.

Harbourmasters will ensure that any such operation is properly planned taking account of safety, environmental, traffic and recreational aspects. Any contractors must operate under a risk based Safety Management System. The operation will be subject to an unusual event Risk Assessment involving all concerned parties.

### 9.3 AIDS TO NAVIGATION

#### 9.3.1 Procedures

The suite of navigation aids, listed below is maintained to mark the harbour entrances and in some cases hazards in the approach. The General Lighthouse Authority – Northern Lighthouse Board sets standards for navaids and must be kept advised of any defects to the principal ones. These AtoN’s meet criteria set in the NLB document “Instructions on the Provision and Maintenance of Aids to Navigation”.

Harbourmasters inspect navigation lights within the immediate harbour areas for operation at weekly using the DGC AtoN Inspection and Fault Report. Any defects are advised immediately to NLB. Availability reports are prepared by the RHM and submitted electronically to NLB. All local lighthouse authorities – including harbour authorities which maintain navigation aids, are required to report quarterly to NLB. The report covers the status and downtime of the aids and is submitted either as a written report or electronically.
Refer to NLB document “Instructions on the Provision and Maintenance of Aids to Navigation”.

9.3.2  Maintenance

In general AtoN’s within the harbour areas are maintained by harbourmasters and their staff, others by NLB. Local aids at the two ferry terminals at Cairnryan are maintained by the terminal operators.

9.3.3  List of Aids to Navigation

Kirkcudbright

The following are maintained by NLB:

- Little Ross lighthouse and rear leading light  FL 12s 12 M
- Little Ross front leading light  FL(2) 5s 5 M

The following buoys and beacons mark the River Dee approach channel to Kirkcudbright and are maintained by DGFirst:

<table>
<thead>
<tr>
<th>No</th>
<th>Lat</th>
<th>Long</th>
<th>Type</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>54º 47.74' N</td>
<td>004º 03.84' W</td>
<td>Port hand buoy</td>
<td>FL 3s 3 M</td>
</tr>
<tr>
<td>3</td>
<td>54º 47.73' N</td>
<td>004º 03.79' W</td>
<td>Lifeboat station</td>
<td>FL(2)R 6s</td>
</tr>
<tr>
<td>4</td>
<td>54º 47.88' N</td>
<td>004º 03.66' W</td>
<td>Starboard hand buoy</td>
<td>Q G</td>
</tr>
<tr>
<td>5</td>
<td>Not installed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>54º 48.12' N</td>
<td>004º 04.24' W</td>
<td>Port hand buoy</td>
<td>FL R 3s</td>
</tr>
<tr>
<td>7</td>
<td>54º 48.50' N</td>
<td>004º 04.46' W</td>
<td>Starboard hand buoy</td>
<td>FL(2)G 6s</td>
</tr>
<tr>
<td>8</td>
<td>54º 48.48' N</td>
<td>004º 04.52' W</td>
<td>Port hand buoy</td>
<td>FL R 3s</td>
</tr>
<tr>
<td>9</td>
<td>54º 48.81' N</td>
<td>004º 04.59' W</td>
<td>Starboard hand buoy</td>
<td>FL G 6s</td>
</tr>
<tr>
<td>10</td>
<td>54º 48.88' N</td>
<td>004º 04.68' W</td>
<td>Port hand buoy</td>
<td>FL(2)R 6s</td>
</tr>
<tr>
<td>11</td>
<td>54º 49.01' N</td>
<td>004º 04.68' W</td>
<td>Starboard hand buoy</td>
<td>FL G 3s</td>
</tr>
<tr>
<td>12</td>
<td>54º 49.10' N</td>
<td>004º 04.80' W</td>
<td>Port hand buoy</td>
<td>Q R</td>
</tr>
<tr>
<td>13</td>
<td>54º 49.20' N</td>
<td>004º 04.74' W</td>
<td>Starboard hand buoy</td>
<td>Q G</td>
</tr>
<tr>
<td>14</td>
<td>54º 49.22' N</td>
<td>004º 04.80' W</td>
<td>Pole beacon</td>
<td>FL 3s</td>
</tr>
<tr>
<td>15</td>
<td>54º 49.37' N</td>
<td>004º 04.39' W</td>
<td>Starboard hand buoy</td>
<td>FL G 3s</td>
</tr>
<tr>
<td>16</td>
<td>54º 49.39' N</td>
<td>004º 04.44' W</td>
<td>Port hand buoy</td>
<td>FL R 3s</td>
</tr>
<tr>
<td>17</td>
<td>54º 49.77' N</td>
<td>004º 04.02' W</td>
<td>Starboard hand buoy</td>
<td>FL(2)G 6s</td>
</tr>
<tr>
<td>18</td>
<td>54º 49.70' N</td>
<td>004º 04.14' W</td>
<td>Port hand buoy</td>
<td>FL(2)R 6s</td>
</tr>
<tr>
<td>19</td>
<td>54º 49.98' N</td>
<td>004º 04.03' W</td>
<td>Starboard hand buoy</td>
<td>FL G 3s</td>
</tr>
<tr>
<td>20</td>
<td>54º 49.88' N</td>
<td>004º 04.07' W</td>
<td>Port hand buoy</td>
<td>Q R</td>
</tr>
<tr>
<td>21</td>
<td>54º 50.31' N</td>
<td>004º 03.75' W</td>
<td>Starboard hand buoy</td>
<td>Q G</td>
</tr>
<tr>
<td>22</td>
<td>54º 50.07' N</td>
<td>004º 04.15' W</td>
<td>Port hand buoy</td>
<td>FL R 3s</td>
</tr>
<tr>
<td>23</td>
<td>54º 50.17' N</td>
<td>004º 03.84' W</td>
<td>Sewerage outfall</td>
<td>FL Y 5s</td>
</tr>
<tr>
<td>24</td>
<td>54º 50.36' N</td>
<td>004º 03.62' W</td>
<td>Starboard hand buoy</td>
<td>FL G 2s</td>
</tr>
<tr>
<td>25</td>
<td>54º 50.24' N</td>
<td>004º 03.84' W</td>
<td>Port hand buoy</td>
<td>Q R</td>
</tr>
<tr>
<td>26</td>
<td>54º 50.31' N</td>
<td>004º 03.36' W</td>
<td>Port hand buoy</td>
<td>Q R</td>
</tr>
<tr>
<td>27</td>
<td>54º 50.32' N</td>
<td>004º 03.48' W</td>
<td>Pontoon West</td>
<td>FL(2)G 6s</td>
</tr>
<tr>
<td>28</td>
<td>54º 50.27' N</td>
<td>004º 03.28' W</td>
<td>Pontoon East</td>
<td>FL G 4s</td>
</tr>
</tbody>
</table>

Stranraer West Pier
Maintained by residual operator – (Stena):

- East Pier (redundant) 2 FBu vertl
   2 FR vert QR

There are also 3 starboard hand light beacons marking the former 5 metre channel, maintained by the former operator but now redundant

Maintained by Dumfries and Galloway Council:

1 54º 54.530’ N 005º 01.680’W Starboard hand buoy Fl G 5 sec
2 54º 54.530’N 005º 01 650 W Port hand Buoy Fl R 5 sec

Drying bank off West Pier 3 lit port hand buoys Nos 4,6 and 8
4 54º 54.492’ N 005º 01.674’W Port hand buoy QR
6 54º 54.436’ N 005º 01.728’W Port hand buoy Fl R 3 sec
8 54º 54.412’ N 005º 01.760’W Port hand buoy Fl R (2) 6 sec

**Loch Ryan**

Maintained by NLB:

- Cairn Point Fl(2)R 10s12 M
- The Spit buoy FIG 6s
- Fairway buoys and channel buoys to the ferry terminals

Maintained by terminal operators:

- Port Ryan Iso 2s 9 M
- Fixed red vertical 2 FR vert 3 M
- Cairnryan Port FIR 5s 5 M

**Port William**

Maintained by D & G:

- Leading front FIG 3s 3 M
- Leading rear FG 2 M

**Isle of Whithorn**

Maintained by D & G:

- Leading front OccR 8s 7 M
- Leading rear OccR 8s 7 M
- St Ninian’s Tower FIWR 3s 6-4 M
- Breakwater Stbd hand mark QG 3 M

---

**Garlieston**

<table>
<thead>
<tr>
<th>DUMFRIES AND GALLOWAY SAFETY MANAGEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARBOURS PAGE 5-39 ISSUE A, REV JULY 2018 06</td>
</tr>
</tbody>
</table>
Maintained by D & G:

- Extremity of Berth 2 2 FR vert

Maintained by NLB:

- Isolated hazard buoy QFI(3) 10s

9.4 PILOTAGE

There are no authorised pilots for Dumfries and Galloway Harbours. Harbourmasters can arrange for local advice if requested.

9.5 MARINE SERVICES

Harbour Launches
A harbour launch is maintained at Kirkcudbright and used for AtoN maintenance, occasional surveys and general port duties. Generally, launch operations are carried out in line with the MCA Code of Practice on the Safety of Small Workboats and Pilot Boats. The launch is surveyed periodically by approved consultants for the SWB2 Document of Compliance.

A Tool Box Talk risk assessment will be carried out before each launch operation to identify the tasks, the particular hazards involved, each person's responsibilities, protective equipment to be used and contingency plans in the event of an incident. Safe Operating Procedures for launch operations are given in Appendix E.4 and in the Harbour Operations Manuals.

Individual harbourmasters have overall responsibility for launch operations and safety.

Other Harbour Craft
Any other small craft used for harbour services including those of contractors should be operated to the same safety standards as for the harbour launches: see 10.3. Contractors must also demonstrate that they operate a risk based safety management system. A risk assessment must be carried out before commencement of the operation. The Harbourmaster is responsible for ensuring that this policy is implemented.

Mooring/Unmooring
Fishing vessels normally handle their own mooring lines. Operators of recreational craft are responsible for handling their own moorings

If any Council staff are employed in mooring/unmooring operations they must wear appropriate Personal Protective Equipment (PPE), including lifevests. They should set a good example to others so employed. The harbourmasters are responsible for implementing this policy and for the safety of personnel. Staff should ensure that members of the public and other personnel keep a safe distance from the mooring/unmooring operations, particularly when fishing vessels are at the quays.

Procedures including safety and PPE standards are contained in Appendix E.1.
Dredging
See 9.2.4 above.

Towage
No routine towage services are available at the Harbours. The fishing vessels visiting the harbours are equipped with bow thrusters or are otherwise able to manoeuvre adequately. No tugs currently operate at Dumfries and Galloway Harbours. Any towage vessel of more than 5 tonnes gross proposing to operate at the harbours must be licensed by the Council.

Any towage for specific purposes: to assist an unusual vessel/craft or to assist a disabled or grounded vessel will be planned in advance with the Harbormaster. It will be subject to an unusual event Risk Assessment involving concerned personnel. Any additional control measures indicated by the risk assessment must be implemented. The contractor must satisfy the Harbormaster that the proposed towage vessel:

- Is of sufficient power and manoeuvrability for the vessel to be assisted and the confines of the harbour;
- Is adequately and competently manned;
- Has all critical equipment operational;
- Is operated in accordance with a risk based safety management system, either formal or specific to the operation.

If the towage vessel is unsuitable for these or other reasons, then operations will not proceed until suitable arrangements are in place.

Salvage
Any salvage operations within Dumfries and Galloway Harbours must be carried out by a competent contractor, operating a risk based safety management system.

A formal risk assessment is required prior to commencing the operation. Any specific controls or risk reduction measures identified as being necessary must be implemented. Tool box talks are essential before each shift or phase of the operation.

Procedures for the operation must be produced by the contractor and cover:
- Methodology;
- Required equipment and personnel;
- Exclusions/limitations on other harbour activities;
- Other risk reduction and control measures required;
- Parameters for suspending and aborting the operation;
- Contingency plans.

Harbormasters will implement any necessary and appropriate exclusion zones whilst the operation is being carried out. Other users should be kept advised of progress during any salvage operations.

Diving (Harbour Works and Fishing Vessels)
Dumfries and Galloway Council has a responsibility to ensure that any diving works within the limits of the harbours are carried out safely, by competent divers, in accordance with HSE Guidance.
Recreational diving and swimming is regulated by the Byelaws or Harbour Orders. Any commercial diving including commercial diving for shellfish is subject to the Diving at Work Regulations administered by the HSE.

Any diving works on behalf of Dumfries and Galloway Council will be carried out by competent diving contractors, operating a risk based safety management system. Contractors must provide evidence of their competence and SMS at the time of tendering.

Any required diving on fishing vessels within the Harbours must also be carried out by a competent diving contractor or otherwise be in compliance with HSE Guidance for Diving on Fishing Vessels. No such diving may take place without prior consultation with the Harbourmaster.

In general, for any diving operations:
- The diving system/vessel must be properly equipped and manned;
- Weather and tidal conditions must be suitable;
- Necessary warnings must be displayed and broadcast if appropriate;
- Other vessels, vehicles and persons not involved in the operation must be kept at a safe distance;
- Diving must be suspended when there are increased risks from passing vessels or other activities in the harbour, or when other conditions change significantly;
- Is subject to a Diving Permit (see Harbour Operations Manuals.)

The Harbourmaster may order the cessation of diving if any of the above are not met or the operation appears otherwise unsafe.

**9.6 RECREATIONAL ACTIVITIES**

**9.6.1 Recreational vessels**

Recreational craft use all the Dumfries and Galloway Harbours in varying numbers. Marinas are established at Kirkcudbright and Stranraer West Pier. The smaller harbours host local boat owners, recreational fishermen and visiting yachts. There are large sailing clubs at for example: Isle of Whithorn and at Stranraer Harbour in Loch Ryan. Yachts and excursion craft make extensive use of Loch Ryan for transit between Stranraer Marina and its northern entrance. Recreational craft also anchor in Lady Bay. Hence there is potential interaction between them and the ferries in the northern half of the Loch. However, local recreational operators are aware of the situation and endeavour to keep to the west side of the Loch, clear of the deep water routes. There is some interaction between recreational craft and fishermen in the buoyed channel at Kirkcudbright, but generally there is little conflict. Yacht racing and small boat processions are risk assessed and controlled as laid out in the harbour operations manual.

**9.6.2 Public access**

All the quays operated by Dumfries and Galloway Council are accessible on foot and by vehicle. It is arguable that a Right of Way on foot exists in all cases, but that the roadways are private property of Dumfries and Galloway Council (except for Isle of Whithorn where the B7004 and U242W run through the harbour). Fish in varying quantities is also landed at all the harbours with resultant interaction with members of the public viewing the operation. This gives rise to significant hazards at...
Kirkcudbright due to volumes handled. Potential hazards also exist at Stranraer West Pier and Isle of Whithorn, but they are minor at the other two harbours. Harbourmasters must be aware of the hazards and risks which are assessed in Section C.3.6 and bring the hazards to the attention of skippers and fish merchants, reminding them of their responsibility for a safe operation. Harbourmasters must monitor these operations and take any necessary actions to avoid injury to any personnel. Parking and driving on the quays also causes potential hazards. Harbourmasters must manage that situation to avoid injury. Safe Operating Procedures Section E.3 sets out the requirements.

9.6.3 Jet skis and water skiers

The Byelaws and Harbour Orders require operators to obtain the Harbourmaster’s permission to use such craft within harbour limits and require all users to operate so as not to endanger others. A maximum speed of 5 knots applies within the Machars harbours and at Kirkcudbright upstream of buoys 17 and 20.

9.6.4 General

The Byelaws and Harbour Orders contain adequate powers to control recreational activities although with limited resources available, enforcement has to be by good example and promoting a culture of safe, considerate boating and awareness of hazards on the quays.

In summer time, swimmers may be in the harbours when small craft are manoeuvring. Hence, harbour staff must encourage caution among boat operators to avoid collisions or running down a swimmer.

Regattas, races and public events involving a number of craft within the harbours require advance notice and consultation with the Harbourmaster. In reviewing such proposals the Harbourmaster will consider:

- Potential interference with other port activities;
- Any interaction with anticipated fishing traffic;
- Provision of safety equipment and safety boats;
- Contingency planning in case of bad weather or an incident;
- Competence and safety culture of the organisers;
- Increased pedestrian and/or road traffic on the quays.

9.7 HARBOUR STAFF QUALIFICATIONS AND TRAINING

Guidance on competence of personnel is contained in the National Occupational Standards for Port Personnel. Job descriptions for harbour staff are maintained by the Roads Manager. They are reviewed periodically and amended as necessary.

9.7.1 Experience and Knowledge Requirements

Regional Harbour Master

Harbour Masters Diploma
Relevant, practical marine experience and training;
Risk Assessment Training.
Local maritime knowledge;
Pollution response training;
Safety awareness;
VHF Operation;
Small craft qualifications such as Boatman II or RYA Advanced Powerboat 2;
Understanding of maritime and safety legislation including local legislation;
Administrative skills, Customer Service and Operational Management, Handling Conflicts.

**Harbourmaster Kirkcudbright**

Relevant, practical marine experience and training;
Local maritime knowledge;
Pollution response training;
Safety awareness;
VHF Operation;
Small craft qualifications such as Boatman II or RYA Advanced Powerboat 2;
Understanding of maritime and safety legislation including local legislation;
Administrative skills, Customer Care, Handling Conflicts.

**Harbourmaster Stranraer West**

Local maritime knowledge.
Knowledge of harbour operations;
Pollution response training;
Safety awareness;
VHF Operation;
Small craft experience and qualifications advantageous;
Understanding of local legislation and codes;
Administrative skills, Customer Care, Handling Conflicts.

**Harbour Observer Machars and Harbour Assistant Kirkcudbright and Stranraer.**

Local maritime knowledge;
Pollution response training;
Safety awareness;
Small craft experience or interest;
Awareness of local issues;
Customer Care, Handling Conflicts.

**9.7.2 Harbour Staff – Training Requirements**
<table>
<thead>
<tr>
<th></th>
<th>HM Diploma</th>
<th>Risk Assessment</th>
<th>PFSO</th>
<th>Oil Spill Response</th>
<th>MCA/RYA First Aid</th>
<th>Commercial RYA Powerboat Level 2</th>
<th>Small Craft Experience</th>
<th>VHF</th>
<th>MCA/Seafish Safety Awareness</th>
<th>NPORS Crane/Boat Transporter</th>
<th>Sea Survival</th>
<th>Fire Fighting</th>
<th>Davit Arm</th>
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<tbody>
<tr>
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<tr>
<td>Principal Technician</td>
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<tr>
<td>Senior Harbour Operative</td>
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<td>Harbour Observer</td>
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</tbody>
</table>
A record of actual qualifications and expiry dates is held by way of a Training Matrix under the supervision of the RHM.

British Ports Industry Training has developed a number of Vocational Standards for Port Personnel.
10.0 SAFE OPERATING PROCEDURES

10.1 LINE HANDLING

All persons handling moorings should take proper precautions against injury and/or drowning, including wearing of protective clothing and lifevests. Harbour Staff must set an example and remind others of their responsibility for their own safety. Appropriate precautions include:

- Wear a lifevest properly fastened;
- Be aware of tripping hazards at quayside;
- Take extra care in icy or other slippery conditions;
- Do not lean over quayside;
- Keep the general public and other personnel at a safe distance;
- Provide adequate lighting at night.

Detailed guidance is set out in the Harbour Operations Manuals.

10.2 FISH LANDING OPERATIONS

There are significant hazards to pedestrians and others not involved during fish landing operations. It is essential that non-workers are kept clear of the area where the cargo is being landed and the associated vehicles and plant are operating. Depending upon the intensity of the operation the following must be observed:

- Where road barriers are fitted, these shall be lowered to prevent access by non-service vehicles;
- Temporary barriers including pedestrians chains (Kirkcudbright) shall be erected at a safe distance around the area where vehicles and plant are operating;
- Members of the public and non-workers advised to remain outside the barriers;
- If there are any incursions within the working area, then operations shall cease until a safe situation is restored;
- Public access is restored as soon as the operation is complete and vehicles/plant removed or parked.

Implementing these precautions is the responsibility jointly of the skipper and fish merchant. Harbourmasters must ensure that they understand their responsibilities and the reason for the precautions and enforce compliance.

Refer to the Regulations on Loading and Unloading of Fishing Vessels 1988, and Harbour Operations Manuals and Harbour Rules (small harbours).

10.3 MARINE CRAFT – GENERAL

Any small craft used for harbour and associated works, including harbour surveys and any assistance to other vessels, whether operated by the Authority or by contractors must:

- Be suitable, and certified where appropriate, for the task, the working area and the environmental conditions;
- Be crewed by at least two competent persons unless a dispensation for one;
- Be aware of larger vessel movements which may affect the operation;
- Have an alternate means of propulsion to the primary engine;
Maintain watch on VHF and be in constant radio contact with a designated person onshore;
Carry lifejackets, a torch, flares and other means of attracting attention;
If proceeding outwith the port limits be fitted with an operating compass.

The crew must wear lifejackets, properly fastened, when on exterior decks or when in an open craft. Single operators must wear a lifevest at all times when in the craft.

The crew and their onshore supervisor must carry out a “tool-box talk” before commencing the operation, at the least this should cover:
- All required tools and equipment for the task available;
- Sufficient, competent crew for operation, task requirements understood;
- Weather and tidal conditions, present and expected, checked and suitable;
- Marine craft safety and communications equipment in place, usage understood by crew;
- Communications procedures and methods agreed and understood;
- Parameters for aborting the operations agreed;
- Contingency/escape plans agreed and understood in the event of problems or incident.

10.4 LAUNCH OPERATING PROCEDURES

These apply to specifically craft operated by Dumfries and Galloway council staff, regardless of ownership:
Risk assess the operation: if an extended voyage is planned, for example for repairs, then a special assessment is made taking account of distance offshore and the ports of refuge passed en route;
Determine number of crew required – normally 1, minimum 2 if outside immediate harbour area;
Check lights, safety equipment, charts and LSA, run up engine, check compass operational; confirm sufficient fuel for the operation;
For intended task, check required equipment on board; confirm adequate depth of water and weather suitable
For voyages outwith the harbour limits advise a third party of proposed activity, time of departure and estimated time of arrival, in advance of sailing;
That third party will be advised immediately when the operation is complete and launch re-secured.

Refer also to Harbour Operations Manuals for Kirkcudbright and for Stranraer and Loch Ryan.

10.5 VESSEL ACCESS

Generally, vessels of the size using the Dumfries and Galloway Harbours are required to provide their own means of access. However, harbour authorities must provide ladders to facilitate passage between quays and vessels when vessel decks are below the level of the quay. These ladders must be of suitable strength and length, be kept clear of marine growth or other slippery material and provide a safe and effective means of transferring between the vertical section and the quayside. When gangways are used they should be properly secured, be of adequate strength and if needed be fitted with a safety net. General guidance is given in Marine Guidance Note 337 “Provision of Safe Means of Access to Fishing and Other Small
Primary responsibility for safe access lies with the vessel skipper or operator. Harbourmasters must monitor access ladders via Harbour watch checks and physical 3 monthly inspections to ensure that ladders are suitable, arranging cleaning or maintenance if needed. They should ensure that vessel crews act in a safe manner when transferring between vessel and quayside or pontoon. They should bring any concerns to the immediate attention of the skipper or operator.
11.0 INCIDENT AND NEAR MISS REPORTING

11.1 REPORTING AND FOLLOW-UP FLOWCHART

The flowchart summarises the incident reporting and follow up system.

HAZARDOUS EVENT

Stabilise Situation

Prepare report, record initiating events and contributory factors

Review control measures: Satisfactory?

Yes

Risk Assess: New control measures?

No

Common event? Increased frequency?

No

Yes

Record, classify and closeout

Feedback to staff and personnel involved

Designated Person Audit

Annual review and trending

REPORT TO DUTY HOLDER
11.2 DEFINITIONS

An **Incident** is an event which results in actual contact, harm, damage, injury, loss of life or material loss. Examples include:
- Groundings, strandings, foundering;
- Collision or contact with other vessels or craft, navaids, other fixed objects, significant debris or persons in the water;
- Break out from berth or moorings.
- Hard landings against quays, damage to quays and/or vessels;
- Injury to personnel, falling into water, drowning, other fatality;
- Significant equipment or propulsion failure on vessels;
- Other damage to vessels, or property, including wash damage;
- Other incidents which may result in loss, litigation or reputational damage.

A **Near Miss** is an event which has the potential to result in damage, injury or loss. Examples include events which could have resulted in any of the above incidents but for prompt or fortuitous actions plus:
- Close quarters situations with other vessels/craft or persons in the water;
- Vessel equipment or propulsion failure with the potential to cause an incident;
- Personnel errors with the potential to cause an incident.

11.3 REPORTING

In order to identify trends towards serious marine incidents, it is essential that all Incidents and as many Near Misses as possible which occur in the harbours or approaches be recorded and analysed using the Incident Logs. The Accident/Incident Reporting Procedures issued by the Corporate Health and Safety Section and last updated August 2012 must be completed for internal use. If not held at harbour offices, they can be obtained via the RHM.

From July 2018 incidents and near misses are to be recorded on Hazman II Software.

As these Procedures are aimed primarily at personnel injury, it is recommended that the Report formats which follow be used to record and analyse marine incidents. In order to assess the probability of potentially serious marine events, the responsible harbourmaster should complete such a Report and record:

- whether an incident or near miss;
- the location;
- vessel(s), equipment and/or personnel involved;
- a brief description of the event;
- the conditions at the time of the event including tide/current weather, light and visibility;
- the initiating event and contributory causes;
- the resultant damage, injury or loss;
- in the case of a near miss, the potential damage, injury or loss.

The Report should be retained at the harbour where it occurred and the relevant Incident Log updated and analysed to check for any trends, and also to assess if any remedial action is required. Copies of the report form and Incident Log should be forwarded to the RHM to review whether control measures were adequate. If they
are deemed inadequate, a Risk Assessment may be required and procedures need modifying (see Flowchart 11.1 above). The RHM and Harbourmaster will also review whether the event is common or becoming more frequent. The RHM/Harbourmaster will decide whether a report to MCA or MAIB is needed. The event should be recorded and classified per the Incident and Near Miss Record. Examples of the report and analysis forms follow in Section F.8. with an example of an Incident Log at F9.

From July 2018 incidents and near misses are to be recorded on Hazman II Software.

11.4 FOLLOW-UP

Any resultant new Risk Control measures will be reviewed after an appropriate period, generally not exceeding three months, for effectiveness. Staff and personnel involved in the event will be advised of revised measures and of their effectiveness.

11.5 PERIODIC REVIEW

Periodically, at intervals not exceeding one year, the Incident Logs will be reviewed for trends (using Hazman II). If any type of incident, cause or contributory factor appears to be increasing in frequency, the RHM or Harbourmaster will convene a workshop of knowledgeable individuals to review the trends, the need for the particular operation, current and future risk control measures. The RHM will work with the SWSA/SHUG and Kirkcudbright Safety Forum to review incidents and determine that the most suitable risk control measures have been implemented.

Annually, or at other lesser intervals and after any significant incidents, The RHM will report to the Chief Executive/Duty Holder on the operation and effectiveness of the system. Frequency and analysis of Incidents and Near Misses form part of the Duty Holder’s annual report on harbour operations.

11.6 FEEDBACK AND AUDITING

The annual report will be made available to staff, and concerned users. Staff and other personnel should have the opportunity to comment on incidents, control measures and follow up. They should be consulted on trends and proposed actions.

The Designated Person will commission an audit of the system at agreed intervals and report to the Duty Holder on its effectiveness.

11.7 RESPONSIBILITIES

All vessel masters/skippers/operators, harbour staff, users and other involved persons who become aware of Incidents or Near Misses are responsible for submitting reports.

The RHM is responsible for the administration and implementation of this policy.

11.8 INCIDENT REPORT FORMAT

(See next page)
### HARBOUR Incident/Near Miss Report
No(Year/No) __________

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Daylight/Darkness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind / Sea / Visibility</td>
<td>Tide State / Height / Flow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vessel(s)/Facility</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation or Activity</td>
<td></td>
</tr>
<tr>
<td>Other Vessel/Craft/Facility</td>
<td></td>
</tr>
</tbody>
</table>

**Incident** [ ] **Near Miss** [ ] **Damage?** [ ] **Yes/No**

**Damage or Casualty which Occurred** ________________

<table>
<thead>
<tr>
<th>Person Making Report</th>
<th>Witnesses</th>
<th>Capacity</th>
<th>Contact details for queries/follow-up</th>
</tr>
</thead>
</table>

### EVENT TYPE
(tick as many as apply)

<table>
<thead>
<tr>
<th>EVENT TYPE</th>
<th>CAUSE/CONTRIBUTORY FACTORS (tick as many as apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounding</td>
<td>Wind/wave</td>
</tr>
<tr>
<td>Collision</td>
<td>Visibility</td>
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<tr>
<td>Fire/explosion</td>
<td>Other weather</td>
</tr>
<tr>
<td>Foundering</td>
<td>Current/tide</td>
</tr>
<tr>
<td>Hard landing/berthing</td>
<td>Available depth</td>
</tr>
<tr>
<td>Machinery/equipment failure</td>
<td>Machinery/equipment failure</td>
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<tr>
<td>Wash damage</td>
<td>Crew error</td>
</tr>
<tr>
<td>Close quarters</td>
<td>Other personnel error</td>
</tr>
<tr>
<td>Person in water</td>
<td>Communications</td>
</tr>
<tr>
<td>Overrun swimmer</td>
<td>Other (specify)</td>
</tr>
<tr>
<td>Personnel injury</td>
<td></td>
</tr>
<tr>
<td>Fatality</td>
<td></td>
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</table>

**Other (specify)** ________________

Attach sheet(s) describing event and consequences. Include sketch if helpful.
Description of Incident/Near Miss and Causes
(Include/add sketches and extra sheets if needed)

Actions required to avoid repetition:

Actions carried out:

Date completed ____________________________ By whom ____________________________

Personnel affected advised of actions taken

Date completed ____________________________ By whom ____________________________

Incident & Actions closed-out

Input to Hazman II

Signed ____________________________ Harbormaster / Team Leader

Date ____________________________
# 11.9 INCIDENT AND NEAR MISS SUMMARY

<table>
<thead>
<tr>
<th>Date and Time</th>
<th>Person/Vessel involved</th>
<th>Short Report of Incident</th>
<th>Remedial Action</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
12.0 PERMITS TO WORK

These are included in the Harbour Operations Manuals at Appendix H.
13.0 HARBOUR OPERATIONS MANUAL
14.0 MOORING GUIDELINES

DUMFRIES AND GALLOWAY COUNCIL HARBOURS

Moorings Guidelines

General Guidelines

These general guidelines are based on The Yacht Harbour Association guidelines for fore and aft chain trot moorings. They may need to be varied slightly due to local conditions - advice and agreement should be sought from the local Harbour Master or the Regional Harbour Master before laying your mooring.

1. The rising chain may be marine grade 30 with a minimum diameter of 19mm. Its length should be at least 3 times the water depth at HAT.

2. The chain bridle to the mooring buoys should have a minimum diameter of 12mm and include a swivel at the junction with the ground chain and a swivel at the mooring buoy.

3. The buoy should be sufficient in size to support the total weight of the bridle chain when at its highest level and preferably have an eye above the buoy for use by the vessel crew.

4. It is recommended that all shackles are seized with stainless wire or similar.

Kirkcudbright Harbour:

These guidelines are based on custom and practice to cope with the fast flowing and corrosive nature of the muddy water at Kirkcudbright.

The riser chain should consist of:

1. 2m of heavy gauge chain with a minimum diameter of 19mm. (Sections of 26mm used chain are available at Kirkcudbright harbour office.)

2. 5m of tested ‘proof’ chain between the heavy gauge and the buoy with a minimum diameter of 12mm.

3. Shackles to connect both sections of chain together, to connect to the ground chain/block and to connect to the strops – shackles should be of 14mm galvanised and the shackle pins seized with stainless wire or similar.

Note: Avoid stainless steel:
Do not mix mild and stainless steel. This will create a galvanic reaction that will quickly eat away the mild steel chain.
4. 2 x buoys – sufficient in size to support the total weight of the chain when at its highest level and preferably have an eye above the buoy for use by the vessel crew.

5. At the forward mooring there should be a single strop (twin for Catamarans) with a hard eye spliced around a thimble at one end for connection to the chain and a soft eye spliced at the other for the securing point on deck. Strops should be 12mm or 14mm depending on the size of vessels and the type of warp used. – Strops should be of a suitable type e.g. Liros, and not made up from old genoa lines, cheap DIY shop rope etc.

6. Stern moorings should consist of a bridle of 2 strops with a hard eye spliced around a thimble at one end for connection to the chain and a soft eye spliced at the other for connection to the securing point on deck.

7. Strops should be long enough so that the chain does not hit the boat – but no longer.

8. You will need a pick up line to join your two sets of strops. The length of the line between the strops is slightly more than the length of your boat and should have floats/buoys which will both keep the line afloat and clearly mark its position to other users.

**Isle of Whithorn Harbour:**

Vessels at the Isle of Whithorn should use a mooring bridle at both the bow and stern to reduce the risk of contact with adjacent boats.

**Maintenance.**

Under our General Terms and Conditions ‘Maintenance of riser chains and mooring buoy(s) is the responsibility of the boat owner.’

It is recommended that moorings are checked at least twice a year for wear.
15.0 MARINE SAFETY PLAN

DUMFRIES AND GALLOWAY COUNCIL
MARINE SAFETY PLAN 2017 to 2019

Version 03. Date: May 2018.
Author: Keith Armstrong-Clark, Regional Harbour Master.

Contents:
1. Introduction
2. Safety Plan Key Factors
3. Performance Objectives

Introduction

Dumfries and Galloway Council (DGC) is the Statutory Harbour Authority for 5 harbours at:
- Garlieston
- Isle of Whithorn
- Kirkcudbright
- Port William
- Stranraer.

It places responsible safety and security at the forefront of its activities to ensure a safe environment for all those who work at, operate in or visit its harbours.

In compliance with the Port Marine Safety Code (PMSC), DGC publishes the following Marine Safety Plan for marine operations within its harbours for the period of 01 January 2017 – 31 December 2019.

The Marine Safety Plan is in place to ensure safe and effective management and regulation of marine operations within DGC harbours and to continuously develop and improve our safety and environmental management culture and performance.

This Marine Safety Plan commits Dumfries and Galloway Council to undertaking the proper management and regulation of marine operations within the scope of its powers and authority in a way that manages the safety of navigation within its Harbours, including protecting the environment, so that the Harbours and its users are all safeguarded.

The Council will undertake its role and responsibilities to ensure that it safeguards the harbours’ infrastructures, users of the harbours including members of the public,
and enables all vessels, commercial or recreational, irrespective of size, to navigate safely on the approaches to and within its Harbours. A more comprehensive overview of the structure, management and maintenance of the Marine Safety Management System (SMS) and compliance with the PMSC in support of this Plan is contained within the SMS as published on our website at: www.dumgal.gov.uk/harbours

DGC will undertake its role and responsibilities to ensure that, whenever possible, it provides efficient and effective services for the control of both commercial and leisure vessel movements within its Harbours, ensuring the safe transit of all such vessels. In ensuring the continued provision of services, especially during times of disruption, DGC will always regard the safety of its personnel, customers and vessels as its highest priority. At times this may mean that normal service and therefore vessel movements or other activities are subject to delay in order to preserve safety of life and maintain overall marine safety of navigation standards.

Safety Plan Key Factors

DGC has published a number of Marine Policies and Plans in support of the SMS as follows: -

- Policy Statement
- Enforcement Policy
- Marine Emergency Plan
- Marine Conservancy Policy
- Navigation Policy
- Oil Pollution Plans
- Port Waste Management Plans

DGC does not provide a VTS, Pilotage or Towage services at any of its harbours.

In line with its conservancy policy DGC ensures its Harbours and their approaches have an adequate depth for safe navigation of users. This is verified by visual checks and hydrographic surveys, that are undertaken in line with a defined schedule as set out in its conservancy policy.

Other Marine Services are provided as required to ensure safe navigation, enforcement of legislation and compliance with good practice for all vessels which use DGC Harbours. DGC employs a fully qualified Regional Harbour Master to overview its Harbours supported by Harbour staff who are suitably trained in compliance with applicable legislative requirements and undertake continuous professional development (CPD).
Communication, consultation and feedback are fundamental requirements in ensuring the safety and navigational requirements are understood and continually reviewed. The following processes are undertaken to ensure the maintenance of an effective safety management system in support of compliance with the requirements of the PMSC:

- Daily liaison as required between Regional Harbour Master (RHM) and staff to ensure the safe movement of vessels in the Harbours and their immediate approaches.
- **Fortnightly** reports to the Duty Holder (Harbours Sub Committee), Designated Person and the Chief Officer of Council Harbours by the Regional Harbour Master regarding Staffing, Operations, Infrastructure and PMSC related matters.
- Annual Designated Person report to the Duty Holder.
- Rolling PMSC audit programme by the Designated Person covering all the D&GC harbours at least once over a three year period.
- Quarterly meetings (with a minimum of 3 per year) of Duty Holder, Chief Officer of Council Harbours (Head of Infrastructure and Transportation), Infrastructure Manager and Regional Harbour Master.
- Attendance by RHM at Harbour User group meetings –
  - Garlieston and Port William – attendance at Community Councils.
  - Isle of Whithorn - attendance at Community Council and Wigtown Bay Sailing Club.
- Dedicated Risk Assessments of new and existing marine operations and services including liaison with DGC Engineering Design on marine related projects.
Performance Objectives

Marine Safety Plan 01 January 2017 – 31 December 2019

<table>
<thead>
<tr>
<th>No.</th>
<th>Objective</th>
<th>Action</th>
<th>By When</th>
<th>Comment</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To review the Marine Safety Plan on annual basis</td>
<td>To complete review and issue plan for approval by Duty Holder</td>
<td>May 2017/2018/2019</td>
<td>First draft Feb 2017. Amended April 2017. For submission to sub-committee July 2017 Reviewed by RHM Oct 2017 and May 2018</td>
<td>On target</td>
</tr>
<tr>
<td>3</td>
<td>To ensure the current policies and Marine Safety Plan are published on the DGC website</td>
<td>Publish via Ian Cooper/Web Team as part of SMS</td>
<td>May 2017</td>
<td>SMS Version 05 is on website, but excludes draft Marine Safety Plan. Version 06 published July 2017</td>
<td>Version 06 published July 2017</td>
</tr>
<tr>
<td></td>
<td>To review DGC SMS and operational procedures on an annual basis or after every accident/incident</td>
<td>Review after each incident to check for trends and action learning points</td>
<td>November 2017/2018 and 2019</td>
<td>Kbt and Machars reviewed Nov 2016 as part of NRA’s by Marico. Operational procedures subject to regular review e.g lifting operations May 2018. Incidents reviewed and ongoing action being taken.</td>
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<td>5</td>
<td>To investigate and complete all navigational incidents within one month.</td>
<td>Identify opportunities for improvement and ensure policies and procedures reviewed where applicable. Ensure information is promulgated as required.</td>
<td>Ongoing</td>
<td>Meeting target</td>
<td></td>
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<tr>
<td>6</td>
<td>Regular Internal and External audits and</td>
<td>An annual internal review, annual DP review to</td>
<td>November 2017, 2018 and 2019</td>
<td>DP audits: Kbt April 2015, Str and Machars March</td>
<td>Meeting target</td>
</tr>
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<tr>
<td>10</td>
<td>To ensure required qualifications are current for all DGC harbour staff with Marine Services responsibilities and any on-going professional development and training needs identified, to ensure they are competent to undertake their duties.</td>
<td>Undertake annual appraisals with all staff, to ensure training needs are met. Compile matrix with staff qualifications and revalidation dates.</td>
<td>May 2017/2018/2019</td>
<td>PDR’s undertaken as at March 2017 and April/May 2018. Renewal dates for qualifications diarised via PE harbours calendar. Training plan is already in place and active with CDU and updated as at March 2018. Audit finding DP May 2018 recommends</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Task Description</td>
<td>Lead and Status</td>
<td>Notes</td>
<td></td>
<td></td>
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<td>---------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------</td>
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<tr>
<td>11</td>
<td>Ensure LAToN database is maintained and fully up to date. Followed by the annual compliance check by Northern Lighthouse Board.</td>
<td>Ensure navigational aids are incorporated in the inspection and maintenance regime.</td>
<td>Ongoing &lt;br&gt;NLB PMSC audit June 2016. Kbt LAToNs subject to risers renewal regime. Str Latons upgraded January 2018 with maintenance regime now in place. NLM 2018 visit very satisfactory. IOW Latons on order for upgrade summer 2018. LAToN availability targets 2014 to 2017 achieved.</td>
<td></td>
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<tr>
<td>12</td>
<td>To maintain published depths and provide a revised Bathymetric Survey every 5 years in line with Marine Conservancy policy.</td>
<td>Conduct hydrographic surveys of all harbours. &lt;br&gt;Survey intervals to be revised as part of review of Conservancy policy to take account of differing needs at Kbt, Str and Machars.</td>
<td>Due 2018 &lt;br&gt;Last survey undertaken 2013. N to M issued re Port William depths. Potential shoaling at Stranraer under observation. N to M issued re shoaling at Kbt. Survey being progressed for Kbt summer 2017. Kbt and Str Surveys undertaken in 2017. Dredging application for Str and Port William being progressed as at On target</td>
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<tr>
<td>13</td>
<td>Gain dredging consents in a more timely and cost effective manner.</td>
<td>Investigate provision of outside expert assistance.</td>
<td>Q2/18</td>
<td>Report on current issues with dredging consents and recommendations submitted to Harbours Sub Committee April 2018. Harbour’s staff have attended courses with Stena delivered by ABP Mer and HR Wallingford. Site visits at all harbours conducted with case officers from Marine Scotland and Director, Marine Scotland.</td>
<td></td>
</tr>
</tbody>
</table>
16.0 NAVIGATIONAL RISK ASSESSMENTS
17.0 MARINE EMERGENCY PLAN
18.0 GARLIESTON HOLDING OFF LINES

GARLIESTON HARBOUR – USE OF HOLDING OFF LINES

During periods of high spring tides combined with swell and waves fishing vessels tied to the quay are vulnerable to damage.

To prevent such damage fishing vessel owners may secure holding off lines to mooring blocks on the opposite side of Pouton Burn. (Please refer to the illustration below.)

The Pouton Burn flows through this drying harbour and is the main navigation channel for both commercial and leisure craft.

Owners of the fishing vessels may secure holding off lines to the mooring blocks provided the following guidelines are followed:

1. Holding off lines must be clearly marked by way of brightly coloured ribbons or cloths tied at intervals not exceeding 1m along the length of the holding off line.

2. If in use at night holding off lines must be clearly marked above the water level by way of fluorescent ribbons again at intervals not exceeding 1m.

3. The Regional Harbour Master should be advised before lines are deployed so that a Notice to Mariners may be issued.
trot moorings

Pouton Burn

Garlieston Quay

vessel in berth with hazardous line tied to trot mooring block