Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: Head of Economic Development

Report No: DV063-F
Potential Diversification of Uses for Sullom Voe Terminal and Port

1.0 Introduction

1.1 The purpose of this report is to inform the Harbour Board of the progress which is being made in identifying and promoting future uses for the Port of Sullom Voe.

2.0 Links with Corporate plan

2.1 Shetland Islands Council's Corporate Plan 2008-2011 contains a section on achieving a sustainable economy in Shetland with aims to:

Link all economic development to market needs;

Encourage enterprise and sustainable economic growth;

Expand knowledge and build skills;

Improve access and extend opportunities; and

Focus on quality

The outcomes of the project proposed in this report would be an important tool for achieving these aims.

3.0 Background

3.1 At the Harbour Board meeting of 29 April 2009 (min ref 10/09) the Chairman called for a report to be provided to the next cycle which detailed progress, timescales, and resources for the provision of a zone plan for the port. This information is provided in the body of this report, for the first phase of development work.

4.0 Development Plans

4.1 Zoning plans

Arch Henderson LLP have been engaged to provide a zone plan of the port which will be an accurate as built plan of existing land use, services, and facilities, and will be presented in the form of a series of base model drawings on which development options can be modelled. The first draft will be ready by the end of July. A series of data gathering meetings have already taken place.

4.2 West of Shetland Developments – Laggan/Tormore Gas

Discussions are ongoing with Total at various levels but coordinated through the Chief Executive office. The stated and potential requirement for the Total project e.g. laydown areas and pier facilities will be considered in the zone plans.

4.3 Renewable Energy Equipment Manufacture and Servicing

The Renewable Energy Development in Shetland Strategy and Action plan, is now out for final comment and I have attached a copy of the draft to this report for information.
A Shetland Marine Energy Development project has been set up utilising European funding and will employ a development worker at the NAFC Marine Centre to develop a Marine Energy Plan for Shetland. A member of the project team attended the 'All Energy Conference' in Aberdeen during May and reported significant interest in Shetland by some major industry players in the marine energy sector. This underlines the importance of the work to be undertaken by the NAFC Marine Centre over the next year.

5.0 Financial Implications

5.1 This report is for information only. There are no financial implications arising from this report.

6.0 Policy and Delegated Authority

6.1 Harbour Board has full-delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations. However, this report is for information only and there are no Policy and Delegated Authority issues to be addressed.

7.0 Recommendations

7.1 I recommend that the Harbour Board note the content of this report.

Anderson Solutions

ECONOMIC DEVELOPMENT CONSULTANCY

Renewable Energy Development in Shetland: Strategy and Action Plan

DRAFT

25 May 2009

GARRAD HASSAN

O'HERLIHY & Co. Ltd.
MANAGEMENT CONSULTANTS
INNOVATION • STRATEGY • CREATIVITY

natural CAPITAL

Highlands and Islands Enterprise, Shetland Islands Council and Shetland Renewable Energy Forum

Renewable Energy Development in Shetland: DRAFT Strategy and Action Plan

25 May 2009

Anderson Solutions (Consulting) Ltd
7 Caledonian Road
Edinburgh
EH11 2DA
T: 0845 459 4785
E: jennifer@andersonsolutions.co.uk
W: www.andersonsolutions.co.uk

Registered in Scotland at 7 Caledonian Road, Edinburgh, EH11 2DA
Registered Number SC339229

Table of Contents

1 About the Strategy 1
2 Draft Strategy Document 6
3 Draft Action Plan 22

Appendix A 30
Appendix B 33

1 About the Strategy

Anderson Solutions was commissioned by Highlands and Islands Enterprise (HIE) to undertake research and create a strategy and action plan for renewable energy development in Shetland. The client steering group for the study consisted of representatives of HIE, Shetland Islands Council (SIC) and Shetland Renewable Energy Forum (SREF).

The contents of the second and third chapters of this report, and its appendices, are intended to be extracted and used as a strategy and action plan for the development of renewable energy in Shetland. The draft strategy and action plan are based on the assumption that improvements to the electricity distribution network in Shetland are feasible and that both private and public sector investment can be attracted to Shetland. However, if this assumption is proven to be wrong, there are elements of the strategy and action plan that remain relevant and of value to Shetland.

This introductory chapter provides the reader with background information on the work that has been undertaken to develop the proposed strategy and action plan. This chapter also includes observations by the team on the way forward.

Outputs from the Study

The following outputs were required from the study:

- a clear and concise strategy that sets out a long-term direction for renewable energy development in Shetland and is appropriate to a wide audience; and that also fits with wider community objectives;
- identification of opportunities for Shetland from renewable energy developments and acknowledgement of the diversity of projects and their individual objectives;
- identification of challenges (technical, economic, social) that must be overcome to achieve the goals of the strategy;
- a short-term action plan in which the potential benefits of each action are understood;
- a monitoring framework so that the progress of the industry can be monitored and communicated to others; and
- a proposed strategic structure to 'own' the strategic process and action plan.

Team

The team commissioned to undertake the study consists of three individuals from separate consultancies who each have their own specific area of expertise. The team is briefly introduced below:

- **Jennifer Anderson** created Anderson Solutions, an economic development consultancy, in 2007. She has over 13 years experience in economic development, nine years of which have been in consultancy and four years in

the public sector in Shetland. Jennifer's projects have included the creation of new economic frameworks and strategies for communities and industries and the development and evaluation of a wide range of public sector interventions. Jennifer is the project manager for the study and is working on an Associate basis with Paul and Donal who are introduced below.

- **Paul Gardner** works for Garrad Hassan, a specialist independent consultancy working in the wind energy and marine renewables industries around the world. Paul runs the Electrical Engineering Group in Garrad Hassan and increasingly finds himself involved in Policy development for renewable energy in Scotland. His experience of integrating renewable energy into the Shetland grid dates back to the 1980s and over the last 15 years he has worked on a number of island projects to integrate wind into diesel systems including projects in the Faroes, Falklands, St Helena and Cape Verde. He has also worked on marine renewable projects.

- **Donal O'Herlihy** is director of O'Herlihy & Co Ltd. He is an experienced strategy consultant and has directed studies covering engineering, the economic value of on-shore windfarms, the Pentland Firth Tidal Energy project and competitiveness of Scotland's High Value Electronics manufacturing. He is a Mechanical Engineer and has 15 years experience as a consultant.

Each member of the team will be at the Panel meeting on 25 May 2009.

Since the study was commissioned, **Phil Say** a Director of Natural Capital (a specialist sustainable development and environmental management company), has joined the team. Phil has extensive experience in Sustainability Appraisal and Strategic Environmental Assessment (SEA) having undertaken assessment for Government agencies, local authorities (including Shetland Islands Council) and producing SEA guidance for the Scottish Government. He was commissioned to undertake preliminary SEA of the strategy and the findings are reported in detail in Appendix B.

Methodology

The following tasks have been undertaken in the delivery of this study:

- a mix of face-to-face and telephone consultations were undertaken with individuals involved in existing or proposed renewable energy developments in Shetland;

- this was followed by analysis of the current context for renewable energy in Shetland and preparation of a draft positional paper which was presented to a previous Panel meeting on 13 March 2009;

- following the Panel meeting, two different workshops were designed in order to collect the views of stakeholders in Shetland on the vision, objectives and actions that should be pursued by the strategic process;

These tasks have shaped the development of the draft strategy and action plan contained within this report. The draft strategy and action plan will be presented to the Panel on Monday 25 May. Following the presentation, those attending the Panel, and any consultees unable to attend, will have a period of three weeks in which to provide comments to the consultancy team. These comments will be discussed with

the client and where appropriate amendments will be made to the draft before a final version is provided to the client.

Observations from the Team

Before proceeding to the proposed content of the strategy and action plan, the following observations are made by the study team.

Debate and discussion during the strategy development process frequently focused on the Viking Energy project and in particular its ability to enable improvements to the current electricity distribution network; and its ability to generate community funds. These funds are sought to support many of the ambitions people have for renewable energy and wider community benefit in Shetland.

On the basis of our interviews and the analysis of available information, the study team concludes that the scale of renewable energy development opportunity which exists in Shetland appears inextricably linked to the capacity of the local electricity network and its ability to add new renewable energy projects.

At the moment the issue of improved grid capacity is tied to the development of the Viking Energy project but, if this particular project does not go ahead, improved grid capacity may be pursued through alternative projects in the future.

The importance of improved grid access to the proposed strategy and action plan lies in the answer to the following question:

How well can Shetland achieve the objectives set out in the strategy regardless of whether or not there is improved capacity in the local electricity network?

The strategy is designed to be applicable whether or not there is improved grid capacity. However, the opportunities open to Shetland, and the level of success which can be achieved under the objectives set out in the strategy, will be influenced by the degree to which new renewable energy projects can gain access to the local grid. For certain actions the draft action plan presumes further investment in the local grid is possible.

It is recognised that technologies will change and the importance of this issue could vary over the long-term. However, on the basis of information collected during this study, and what is predicted for the future, the following observations are made by the study team with regards to the strategy, action plan and in response to the question set out above:

- The generation and distribution of renewable energy in the form of electricity is, with one exception, the most efficient and economic route when there is more than one consumer. Alternative distribution methods can be developed but, where there is more than one consumer, the investment required to generate similar levels of consumer-benefit is expected to be higher than for electricity.
- The one exception, mentioned above, is where energy is initially available as heat (e.g. waste or biomass combustion) and its end use is also heat. In this case, distribution as heat (a district heating system) or as the fuel (e.g. peat) is more efficient.
- Shetland's electricity distribution network has limited ability to accept further renewable production capacity, especially variable renewable such as wind. It

may be possible to innovate and create some improvement in capacity but this would be dependent on solutions to technical issues which the network operator (SSE) has identified. We understand that a connection to the National Grid will make resolutions of these technical issues simpler.

- Without access to an electricity grid (local but especially national grid), it is expected to be difficult to attract substantial private sector investment. Connection to a grid is often considered essential for commercial investment in energy generation and can be a critical factor in the choice of location for research and development activity (as has been seen in the Pentland Firth).
- Without private sector involvement, any investment in renewable energy development will have to be undertaken by the public sector. To create a sustainable benefit to Shetland, and to provide evidence of good return to the public purse, the activity may be required to generate commercial returns otherwise there is a risk that ongoing or repeat public sector investment will be required. However, if significant community spin-off benefits are obtained, ongoing investment by the public sector may be justified.

In responding to the question, the team understands that the underlying rationale for pursuing renewable energy development in Shetland is tri-fold because development can achieve a unique combination of economic, community and environmental benefits which improve the overall quality of life in Shetland. On this basis the study team concludes that the degree to which Shetland has the opportunity to create a step-change in its economy, contribute to wider environmental targets and generate significant community benefits will be constrained if there is no improvement in grid access.

This does not mean that meaningful renewable energy development cannot take place, and it is recognised that if renewable energy skills are retained in or attracted to Shetland the challenge of having very limited access to an electricity grid may lead to innovation, particularly in storage technology. Furthermore, there would remain significant opportunities for energy efficiency. However, overall, the scale and range of activity will be constrained and the ability to achieve the objectives set out in the strategy, particularly those linked to economic benefits, will be restricted. Furthermore, it is expected that to achieve the community or environmental objectives which could still be achieved without grid access, higher levels of investment could be required from the public sector as might otherwise be the case if the most economic and efficient method of distribution, electricity, was available.

Structure of the Report

The remainder of this report is written so that it can be extracted by the client and used as stand-alone documents. For this reason the language is different from that of a standard report. Language such as ‘we’ and ‘our’ is used to demonstrate how this strategy is Shetland’s strategy rather than referring to the opinion or views of the consultancy team.

The remainder of this report is structured as follows:

- Chapter 2 contains the proposed strategy document and is set out in different sections. The strategy document sets out:
    - why a strategy is required;

- the vision which underpins the strategic process and action plan which has been developed on the basis of findings at the workshops;
- the current context for the strategy;
- the objectives for the strategy and action plan which have been developed on the basis of findings at the workshops;
- a description of how each of the objectives could be achieved which has been developed on the basis of findings at the workshops; and
- how good governance will be developed to ensure the strategy achieves its goals.

- Chapter 3 contains the action plan which includes an introduction, an analysis framework to assist project appraisal and the actions which have been proposed by the consultees and those added by the consultancy team following analysis of the findings from the study;
- Appendix A is intended to be a supplement to the strategy document and sets out the range of renewable energy resources available in Shetland and the options for how they can be transformed and transmitted into energy for an end user; and
- Appendix B contains the preliminary SEA analysis of the strategy and its objectives.

2 Draft Strategy Document

Please turn over to see the proposed content of the strategy.

Introduction

Our goal is to use renewable energy to enhance the quality of life in Shetland for future generations. The partners in this strategy believe that the opportunities for renewable energy development in Shetland offer our community a rare opportunity to reduce our fragility and create a positive step-change in our economy. Furthermore, renewable energy development can secure significant community and environmental benefits in addition to the economic benefits which could be created.

Our vision, objectives and proposed actions have been shaped by those already active in renewable energy in Shetland and key public sector partners.

Rationale for Development

The rationale for pursuing renewable energy as a route to future community sustainability is centred on the quality of our natural resource; the need diversify our economy; and our community's high dependence on, and vulnerability to, non-renewable fossil fuel.

Shetland's peripheral location means that opportunities for economic diversification and growth are rare. The fishing industry has been a cornerstone of the Shetland economy during the last century, the oil and gas industry came along and transformed Shetland in the 1970s and aquaculture activity expanded in voes around Shetland in the 1980s. These industries are successful because of our natural environment. Our natural resources have repeatedly given our islands a competitive advantage and encouraged economic activity to locate here.

However, our economy is fragile, there is a limited economic base and our key industries all operate in a global market place. We have been fortunate in recent years that as our industry sectors experience cycles of success and downturn, one sector's success has tended to compensate for another's downturn. However, our ability to balance our economy in this way is largely based on luck as our industries are influenced by global conditions and we have little control over their economic well-being. The challenges we face are evidenced in the population decline we are experiencing.

Renewable energy offers us a rare opportunity to diversify and develop our economy and importantly because it is 'renewable' it offers our community a sustainable economic opportunity.

In addition, and unusually, the development of renewable energy activity in Shetland will provide us with more than just the economic opportunities of new business activity and employment, and the associated spin-off benefits. Renewable energy development, if appropriately targeted, offers significant additional value because of its potential to reduce the threat to our community from rising oil and gas prices. Characteristics such as our dependence on internal and external ferries and air travel for passengers, imports and exports; our dependence on cars; our high cost of living; and our need for relatively intensive heating in our climate, all combine, along with many other factors to make our community one of the most vulnerable to price rises for finite fossil fuels. This is already evidenced in the high incidence of fuel poverty within our community.

Furthermore, renewable energy offers the added benefit of reducing carbon emissions and contributing positively to climate change for which we all have a responsibility. As indicated previously our natural environment, including our climate, is our economic strength and we must do what we can to support it.

We believe that the development of renewable energy activity in Shetland offers a unique opportunity to achieve a mix of economic, community and environmental benefits that would be extremely difficult, if not impossible, to achieve as effectively through any other route. The extent of the benefits we could achieve, and the cost to our community of doing nothing, combine to form our rationale for pursuing development.

Working Together

This strategy reminds us that the development of renewable energy in Shetland, and all its potential benefits, is an opportunity not a certainty. Shetland offers many advantages through the quality of its resource, its infrastructure and the skills of its residents. But there are challenges and costs associated with pursuing the benefits we want to achieve. This is why we have created underpinning principles for the strategy and action plan which state that the development of renewable energy in Shetland should be undertaken with community support and with due consideration to the protection of our environment.

Our strategy explores the potential opportunities, the direction we wish to take and the barriers we may have to overcome if our vision is to be achieved. As partners in the future of renewable energy in Shetland we hope that you are inspired to investigate how renewable energy can improve the quality of life in your community so that we can work together to achieve our vision.

<Signatories from the Strategic Board>

Our Vision

Our overarching aim is:

' to enhance the quality of life in Shetland for future generations by achieving the optimum value from the renewable resources we have available in and around the islands.'

This strategy provides guidance on how we intend to achieve sustainable benefits from harnessing our resources for renewable energy development.

Defining Success

Several recurring themes were raised throughout our discussions about the long-term future for renewable energy development in Shetland. As a result of these discussions we have summarised the characteristics of a future Shetland that, if achieved, will indicate that we have achieved success from our development of renewable energy:

- Shetland's quality of life is high, and is sustainable for future generations;
- Our vulnerability to the price of finite fossil fuels has been reduced and we are substantially energy self-sufficient;
- Innovative and high quality jobs exist in, and in support of, renewable energy activity;
- Our peripheral communities have been rejuvenated;
- Shetland's reputation for good environmental stewardship is widely recognised; and
- The outstanding quality of our resource is contributing towards Scottish, UK and European targets for carbon reduction.

Defining Renewable Energy

It is important to clarify what we mean by 'renewable energy'. Our definition of renewable energy is:

Renewable energy is energy generated from sources which are either naturally (e.g. wind, sun, tidal, biomass) or readiliy replenished (e.g. waste materials), and which therefore can be considered, on timescales of decades or more, to be sustainable.

For clarity our definition of renewable energy includes waste to energy schemes because waste can be expected to be available for some time and incineration of waste is considered to be a suitable environmental option for Shetland.

In Appendix A we have set out the range of renewable resources which could fall within this definition and be utilised in Shetland for energy generation, how the energy could be distributed and who the potential consumers could be.

The Renewable Energy Industry in Shetland

Before we establish what we need to do to achieve our vision we must first understand where we are starting from. In this section of the strategy we explore the current renewable energy generation activity which exists in Shetland. This is followed by consideration of the characteristics of Shetland which influence the scale and nature of the renewable energy activity which takes place.

Current Activity

In Shetland there is one renewable energy project which generates electricity for the local electricity network. The project is the Burradale windfarm which has a capacity of 3.7MW. The electricity is sold to Scottish and Southern Energy (SSE) and is estimated to provide on average 7-8% of Shetland's electricity needs.

Figures estimated for 2006 show that there is 14MW of renewable energy capacity in Shetland. The Burradale wind farm represents 26% of this capacity. The remainder of the capacity is used largely for heating although in some small islands there are 'off-grid' schemes which provide electricity for the small resident populations. The biggest contributor of renewable energy capacity is the Lerwick District Heating Scheme which is powered by energy from waste and has a capacity of 10MW, or 71% of total renewable energy capacity in Shetland. The remaining (approximately 3%) renewable energy capacity, is a mix of:

- community schemes which are largely wind based although there is some small solar projects;
- individual domestic property schemes which are either wind or heat pump systems; and
- schemes in public buildings which are also understood to be largely wind based systems.

Our Strengths and Weaknesses

The discussions held regarding the development of this strategy revealed a wide range of strengths and weaknesses related to the development of renewable energy in Shetland. The characteristics identified which are considered to have the greatest influence over how successful we can be in achieving our vision are summarised below.

Shetland's Strengths and Weaknesses in relation to Renewable Energy Development

Strengths	Weaknesses
• Outstanding renewable energy resources which can enhance the viability of projects • Strong community awareness and engagement and a desire to capture future benefits for the good of the community at large • Determination and skill of individuals already active in renewable energy in Shetland • Strong infrastructure which could support development, for example piers, roads and colleges • Access to public finance • Transferrable and high quality skills within the local economy, for example marine engineering.	• The lack of an electricity distribution network into which renewable energy projects can connect • Strong competition for renewable energy investment from other locations • A disproportionate vulnerability to fluctuations in the price of non-renewable fuel which reflects Shetland's remote location and dispersed population (which is actually a strength in relation to the attractiveness of renewable energy alternatives)

Building on our Strengths

Shetland demonstrates a number of strengths which support renewable energy development, some of which are hard for others to replicate. The quality of the resource in and around Shetland has been estimated at 10,500 gigawatt hours per annum (GWh/y). However, this level of resource is unlikely to be available in reality due to the unacceptable level of development which would be required to harness it. An estimate based on much more conservative levels of development suggests an available resource of 2,200 GWh/y)

The quality of the resource means that renewable energy offers the prospect of a new industry being created on Shetland that would generate jobs and strengthen skills among local people. It could also create diversification opportunities for existing firms operating in the marine and engineering sectors in addition to creating demand to which new firms could be formed to respond. If more renewable energy activity can be supported in the short-term, Shetland's image as a Renewable Energy location could strengthen and as a result we could build on the determination and skills of individuals already active in Shetland and attract further investment for hydrogen and marine technologies.

The quality of the resource means that there is scope for Shetland to become self-sufficient for electricity production. With a focus on green energy solutions, development of renewable energy could be coupled with links to the construction industry whereby future buildings on Shetland are built to a much higher energy conservation standard. This is believed to be critical - while Shetland's wind resource is an asset for generating heat, its ability to chill premises rapidly is also a liability. Reducing fuel poverty on the island must be a priority.

Furthermore, the community dividend from oil and gas activity has been substantial. This has the benefit of providing access to financial resources to support renewable energy development. Those involved in the development of this strategy believe that harnessing renewable energy will replace declining dividends from the oil and gas industry and benefit the community at large.

Overcoming our Weaknesses

Investments in Renewable Energy projects are generally long-term (20-25 years), and often involve relatively high levels of debt finance. Investors appraise projects according to their long-term return and may compare them to other (non renewable) investment paths. In the case of Shetland, the local electricity distribution network is currently at capacity (a development of less than 250 kW is believed to be possible). Without improvements to the capacity of the network the scale of potential new renewable energy projects will remain severely limited. Furthermore it is expected that constructing a case for expanding the local distribution system on the basis of existing and projected demand levels on the island would be challenging.

The lack of a link to the UK National Grid and limitations within the existing local network are significant infrastructure constraints. There will be opportunities to develop renewable energy projects 'off-grid' but the attractiveness of Shetland as a location for investment is diminished without a grid connection. To overcome this constraint and create a step-change in the opportunities for renewable energy development in Shetland we either have to significantly increase demand for electricity within Shetland, perhaps by replacing other forms of fuel with electricity, or find a way to export our product, just as we do in our main industries of oil and gas, fisheries and aquaculture.

Our Objectives for the Future

There is a clear rationale for pursuing the development of renewable energy in Shetland. By using this strategy as our guide, we will make sure that wherever possible our support for development ensures that we obtain the optimum economic, community and environmental benefits from our investment.

Based on our vision, we have developed objectives for renewable energy development in Shetland. These objectives, stated below, will be used to guide the prioritisation of renewable energy initiatives within the islands. The same objectives will also be used to gauge our success as we progress our action plan.

Our objectives are to:

1. **Develop economic and effective solutions which significantly reduce the volume of non-renewable fossil fuels required to power Shetland.**

2. **Create employment, income and new skills in Shetland by stimulating new economic activity linked to the presence of renewable energy resources in the islands.**

3. **Ensure there are direct benefits, in addition to employment, income and new skills, to the community from renewable energy development in Shetland.**

4. **Enable peripheral communities to use renewable energy as a way to enhance the viability of their community and community facilities.**

5. **Stimulate awareness of the importance of renewable energy and the need to reduce carbon emissions; and develop skills in energy efficiency and renewable energy alternatives.**

Principles of Development

However, we must achieve these objectives in the context of our vision for a high quality of life in Shetland. Therefore, we are setting the following principles which should be pursued in all of the activities we support:

- support or engagement from the community in our activities; and
- protection of the special qualities and characteristics of Shetland's natural and historic environment.

Our objectives, and the actions which could support Shetland to achieve success, are explored further in the remainder of this strategy and in the accompanying action plan.

Achieving Our Objectives

As stated, our overarching aim is to enhance the quality of life in Shetland for generations to come by achieving the optimum value from the renewable resources that are available in and around the islands.

Our community already has recent experience of pursuing community benefits from new industries in the islands. The lessons we have learned mean that we are well placed to secure optimum value from another new and emerging industry in our community.

Under each of our objectives, we set out the direction we want to go and the nature of activity we wish to target. The objective should remain robust and meaningful regardless of changing conditions. However, as we achieve success, as technology develops and our circumstances change the priorities within each objective are flexible and can be adapted to changing conditions.

While the future of the electricity grid in Shetland is uncertain, this strategy and the associated action plan are based on the assumption that grid improvements are feasible and that both private and public sector investment can be attracted to Shetland.

Objective One: Develop economic and effective solutions which significantly reduce the volume of non-renewable fossil fuels required to power Shetland.

There are two routes to achieving this objective and we will pursue both. The first is through improved energy efficiency which should lead to reduced consumption; and the second is by replacing non-renewable fossil fuels with renewable energy alternatives.

The Carbon Management Strategy currently being developed by Shetland Islands Council will provide the detail on how the Council will reduce its consumption of non-renewable fossil fuels in line with this objective. This is believed to present an opportunity for the wider community to learn lessons from this process and encourage more widespread adoption of successful solutions.

The priorities for Shetland under this objective are summarised below.

<u>Energy Efficiency</u>

The partners in the project will pro-actively encourage the adoption of energy efficient practices and as a result reduce energy consumption in Shetland. This will be an important step in achieving our objective to reduce the volume of non-renewable fossil fuels consumed in Shetland.

One key area of activity will be to engage Shetland's public bodies and the construction industry in our objective and encourage energy efficient construction in new public buildings. By choosing to lead though example, and encouraging new skills and knowledge to develop within the construction industry in Shetland, we can promote the wider adoption of greater energy efficiency throughout Shetland.

<u>Carbon Replacement</u>

Perhaps the more ambitious priority area under Objective One is to replace the consumption of non-renewable fossil fuels with the consumption of energy from renewable resources.

Shetland uses a wide range of non-renewable fuels, both for onshore and offshore activities. Some of these applications will be more readily adapted to renewable sources of energy than others. For example, the gas oil used for heating households already has proven renewable energy alternatives, however, the renewable alternative to the diesel required to power our ferries and private and commercial vessels, is not so apparent. However, technology will continue to develop, particularly as the financial rationale for using fossil fuels diminishes as prices rise. This will continually force innovation and Shetland should be at the front in adopting new alternatives. The high degree of vulnerability within our community from rising fossil fuel prices, and the quality of our natural resource, means that renewable alternatives are likely to become viable in our community before they become viable elsewhere.

Our priority will be to encourage innovation, identify the options already available to Shetland and investigate how adoption of renewable energy alternatives can stimulated.

Objective Two: Create employment, income and new skills in Shetland by stimulating new economic activity linked to the presence of renewable energy resources in the islands.

The strategy process had identified three main routes by which we could achieve this objective. However, achieving success under this objective, more so than perhaps any of the other objectives, is likely to be closely linked to the development of the local grid and its connection to the national grid. Without key pieces of infrastructure it is expected to be extremely difficult to stimulate new private investment in renewable energy in Shetland, and it may prove difficult to maintain current levels of investment.

The three areas under which we propose to pursue development in order to achieve this objective are: new business investment in renewable energy generation; investment in renewable energy research and development activities; and new business investment which takes advantage of access to renewable energy.

<u>Stimulate interest in renewable energy generation in Shetland</u>

Preparatory work can be undertaken now to prepare Shetland for the opportunities that could be created by an interconnector. The interconnector proposed is being constructed to support one specific project. However, it is widely anticipated that there will be capacity for additional generation within Shetland. Dependent on the scale of the opportunity future developments should be prioritised which provide the optimum value in terms of economy, community and environmental impacts and best help us to achieve our objectives. This may include specific consideration of Objective Four, enhancing the viability of peripheral communities.

<u>Stimulate interest and pursue renewable energy R&D activity in Shetland</u>

There is a strong belief that Shetland offers distinct advantages as a test location for prototypes and as an ‘extreme conditions’ test-site. Shetland’s ability to attract investment will be greater if there is a potential to connect a test project to the grid. However, there is expected to be some ‘off-grid’ opportunities and preparatory work could be undertaken now to prepare Shetland for the opportunities which could offer the greatest potential success.

Promote Shetland as a location for low cost or 'green' energy solutions

Industry in Shetland is often disadvantaged in comparison to other locations. This is directly linked to our peripherality, often because of the cost of transport, whether raw materials are being imported or products are being exported, and restricted access to labour and markets. If Shetland can off-set this disadvantage through lower cost or green energy solutions there may be substantial benefits in promoting Shetland to businesses or industries that are energy intensive and may not be particularly dependent on high volumes of goods being transported. Actions under this objective could therefore target businesses which are not directly involved in renewable energy generation or development but may benefit significantly from access to renewable energy resources. Similar to the previous two priority areas under this objective, the opportunity to achieve this is expected to be enhanced by improved electricity grid access.

Objective Three: Ensure there are direct benefits, in addition to employment, income and new skills, to the community from renewable energy development in Shetland.

The strategy process made it very clear that the pursuit of renewable energy was desirable not only from an economic perspective but from a community perspective. This objective aims to ensure that every opportunity is taken to maximise additional community benefits from the development of the renewable energy industry in Shetland.

Areas of particular interest under this objective are initiatives that can be developed to:

- lower the average cost of energy units to individuals and businesses in Shetland;
- provide a return on investment which can be invested in energy efficiency activities;
- provide a return on investment which can be invested in wider community services and facilities; and
- ensure that developers adopt sustainable development principles and that communities directly affected by development achieve direct economic or environmental benefits.

Objective Four: Enable peripheral communities to use renewable energy as a way to enhance the viability of the community and community facilities.

To the peripheral communities within Shetland, and indeed Shetland itself, the development of renewable energy technologies and activities provides an opportunity to enhance community sustainability.

Shetland is experiencing population decline, with projections for further decline in the next 20 years. In addition, within Shetland there is population out-migration from Shetland's more peripheral communities and population drift towards the main employment centre of Lerwick.

Renewable energy developments could offer new economic activity and opportunities to enhance community viability in areas where there are limited opportunities for economic diversification. However, again, success will be dependent on the existence or creation of a suitable distribution network. Examples of the types of

opportunities which might be prioritised under this objective include developments which:

- provide a direct financial return to community development trusts which could in turn be used to support community development activities; and
- reduce the fragility of community facilities and services and rejuvenate them, as already experienced in some community halls.

Objective Five: Stimulate awareness of the importance of renewable energy and the need to reduce carbon emissions; and develop skills in energy efficiency and renewable energy alternatives.

Our ability to achieve any of our objectives is dependent on having people in Shetland who can deliver renewable energy projects. This requires awareness raising, knowledge transfer and skills development. One of Shetland's many strengths is that there are already several companies actively engaged in new and innovative renewable energy projects. However, to progress our ambitions for improved energy efficiency and increased uptake of renewable energy alternatives, the enthusiasm of the individuals within these companies must be shared in the wider community.

There are a number of ways in which awareness raising and skills development can be achieved. Potential areas of focus include:

- demonstration projects which could be promoted to both Shetlanders and a wider audience;
- investment in skills development in colleges, although this will require a suitable local outlet for the skills of significant scale to warrant investment in new courses; and
- curriculum enhancements to develop renewable energy and carbon reduction knowledge.

Summary

There are clearly many opportunities to pursue under each objective. However, as stated earlier, without private sector investment stimulated by the existence of an improved grid, the ability to achieve the objectives will be largely, if not wholly, dependent on public sector funding. As a result of this dependency and future pressures on public sector resources, the opportunities from and benefits of renewable energy development are expected to be substantially more limited than in a future where, with improved electricity grid access, the public and private sectors could work together to create a critical mass of renewable energy activity in Shetland.

Our action plan sets out how we propose to prioritise our activities against the objectives we wish to achieve.

Good Governance

To achieve our vision and our objectives for renewable energy development the strategic process and action plan will require robust governance. We must ensure that we not only pursue activities that fit with our objectives, but that we do so in view of our overarching aim about the quality of life in Shetland and the development principles which have been set for community involvement and good environmental stewardship.

The characteristics which will ensure good governance for our strategy and action plan are:

- we will create a strategic and operational structure which will take responsibility for the strategy and the prioritisation of activity through robust project appraisal mechanisms;
- we will ensure community involvement in the management of the strategy;
- we will ensure that our activities support and enhance our reputation for good environmental stewardship;
- we will ensure our activities fit, where appropriate, with national strategies for renewable energy; and
- we will monitor progress against our objectives to assess whether our activities are supporting the desired change.

We describe how we will achieve each of these characteristics in more detail below.

Strategic and Operational Structure

It is proposed that two groups are formed to oversee and drive forward the effective implementation of the strategy:

- a Strategic Board; and
- a Management Group.

Strategic Board

A Strategic Board will be assembled to engage a relevant cross-section of representatives. The selection of these representatives will be designed to provide input from the Community, the Commercial Sectors, the Public Sector, national Government and the research community. The role of the Board will be to provide appropriate strategic direction for the implementation of the strategy over a period of up to five years.

The Board will meet twice per annum. At its first meeting, it will approve the action plan and associated milestones prepared by the Management Group and whether a weighting system should be applied to the objectives. This will be used to measure progress over the lifetime of the strategy. Furthermore it can identify when actual or proposed activity diverts from the initial plan and agreement can be sought from the Board on the rationale behind any diversion.

In essence the Board's role will be to provide direction and guidance.

Management Group

The Management Group is proposed to represent members of local organisations (both public and private) which have day-to-day responsibility for implementing elements of the action plan.

These representatives will be selected on the basis of their decision-making authority within their respective organisations. The group are expected to meet monthly to ensure effective implementation of the action plan. It is also proposed that this management group undertakes a prioritisation exercise to establish, in agreement with the Board, the first steps to be pursued.

In essence, the Group's role will be to sustain their organisations' commitment to implement the project and ensure that the necessary resources are made available for its effective implementation.

Community Involvement

Community engagement and ownership of the future direction of renewable energy in Shetland is a principle which underpins the implementation of this strategy and action plan. It is proposed that this will be achieved through two routes:

- community representation on the Strategic Board; and
- a transparent management process for the strategy which provides opportunities for feedback from community members.

Environmental Stewardship

As stated in our Principles of Development, we will ensure that renewable energy generation projects are developed in a sustainable way. It is important to protect the special qualities and characteristics of Shetland's natural environment, biodiversity, historic environment, landscapes and seascapes

It is essential that a renewable energy strategy of this kind, that could have significant implications for the environment, is tested on its potential environmental effects and its capacity to support sustainable development.

Sustainable Development

The aims for sustainable development in Scotland were set out in "Choosing our Future – Scotland's Sustainable Development Strategy"[1]. The main thrust of the strategy is enshrined in four key goals:

- the well being of Scotland's people;
- supporting thriving communities;
- Scotland's global contribution; and
- protecting Scotland's natural heritage and resources

[1] Choosing our Future – Scotland's Sustainable Development Strategy", Scottish Executive (now Government), December 2005

The Scottish Government in 2007[2] further developed these into five strategic objectives and it is important to ensure that our strategy and subsequent actions are in line with the sustainable development goals and the Scottish Government Strategic Objectives (Figure 1)

Figure 1: Scottish Government Strategic Objectives

1	Wealthier and Fairer – Enable businesses and people to increase their wealth and more people to share fairly in that wealth.
2	Healthier – Help people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local and faster access to health care.
3	Safer and Stronger – Help local communities to flourish, becoming stronger, safer places to live, offering improved opportunities and a better quality of life.
4	Expand opportunities for Scots to succeed from nurture through to lifelong learning ensuring higher more widely shared achievements.
5	Improve Scotland's natural and built environment and the sustainable use and enjoyment of it.

Strategic Environmental Assessment

The Environmental Assessment (Scotland) Act 2005 is the statutory mechanism by which the requirements of the European Directive 2001/42/EC – "On the assessment of the effects of certain plans and programmes on the environment" (known as the Strategic Environmental Assessment or SEA Directive) are now delivered in Scotland. The purpose of the SEA Directive is twofold. Firstly it aims to provide for a high level of protection of the environment and secondly ensure that environmental considerations are taken into account in the preparation and adoption of plans. This should promote sustainable development as part of the planning process.

Although there is no legal requirement for undertaking a formal SEA of this Renewable Energy Strategy (since it is not a formal planning document produced by the Shetland Islands Council as supplementary planning guidance) it will nevertheless inform future economic planning in Shetland. The Strategy will have significant implications for the environment and so it is considered essential that the Strategy is screened against SEA objectives developed by the Council (for assessing all relevant plans, programmes and strategies) at the earliest opportunity to ensure that environment is considered in a more formal way throughout the strategy development process and the associated action plan.

A preliminary SEA appraisal of the strategic objectives of this plan is summarised in Appendix B.

Fit with National Renewable Energy Strategies

We will pursue our strategy in line with appropriate national renewable energy strategies. However, at this time we are awaiting publication of key strategic documents. Once these have been published we will review our strategy to ensure that we fit, where appropriate, with national ambitions. In summary the key strategies are expected to be:

[2] Principles and Priorities: The Government's Programme for Scotland

Renewable Energy Strategy (UK, BERR/DECC)

Consulted on in 2008, formal publication expected 'this spring'.

The UK Government has already announced that part of the strategy will include a Renewable Heat Incentive from 2011, and a feed-in tariff for small generators (i.e. fixed price for electricity sold to the grid) from 2010.

Renewables Action Plan (Scotland)

The Scottish Government consultation on the Renewable Energy Framework closed in December 2008. Scotland's Renewables Action Plan is due for publication in Summer 2009. It is intended to be aligned with the UK Renewable Energy Strategy.

Heat and Energy Saving Strategy (UK, DECC)

Consultation on this strategy formally closed 8 May, now extended to 15 May. A response to the consultation is likely in early autumn.

Energy Efficiency Action Plan (Scotland)

The Scottish Government intends to develop its Energy Efficiency Action Plan throughout 2009, with a view to publishing the plan by the end of the year.

Monitoring Progress

Our strategy makes clear that there are opportunities for transformational change as a result of renewable energy development but that there are also challenges to be overcome. When resources, both time and finance, are being invested in the strategy and action plan it is important to understand the degree of success achieved from our investment. Monitoring the success of different activities is crucial and this should be done at an individual project level. However, the following indicators should help to understand the changes occurring at a macro level in Shetland as a result of measures to support renewable energy and energy efficiency.

1. MW capacity of renewable energy activities in Shetland.

2. Total energy consumption per head of population.

3. Volume of imported fossil fuel per head of population.

4. Renewable electricity production as a fraction of total electricity consumption within Shetland.

5. Number of households in fuel poverty.

6. Population out-migration from peripheral communities.

By pursuing good governance in the management, implementation and monitoring of the strategy we will significantly enhance our likelihood of success.

3 Draft Action Plan

Please turn over to see the proposed content of the action plan.

The action plan which follows has been created to support the strategy for renewable energy development in Shetland. The plan contains a wide range of potential actions which have been suggested by consultees or as a result of the analysis undertaken in the preparation of the strategy. These actions are not presented in any order of priority at this stage.

The plan also contains a framework to assist decision-makers to assess the expected impact of different actions. The framework specifies, under each of the five strategic objectives, the nature of the impacts that could be expected to assist Shetland achieve its strategic goals. Alongside this there is a scale which allows an assessment to allocate a 'score' to an action under each objective. It is proposed that the Strategic Board for the strategy agrees whether each objective should be given an equal weighting or whether one or more of the objectives demand a higher weighting than the others. The main benefit of using this framework is to improve understanding of the expected impacts of a project which will mean that decision-makers and project sponsors will be able to assess how well a proposed project meets the objectives of the strategy. This will help decision-makers to prioritise projects. Other benefits include it could influence project sponsors to alter the design of a project to better meet the ambitions for renewable energy development in Shetland; and it creates a transparent decision-making process which enables those not directly involved in decision-making to understand how projects are prioritised.

Following appraisal against the framework a list of prioritised actions should be created and each prioritised action should be considered against the underpinning Principles of Development regarding community involvement and environmental protection to ensure that these overarching goals are also addressed.

It is proposed that once the Management Team is formed that the Team jointly assesses each action against the framework. This will support the Team to buy-in to both the prioritised actions and the decision-making process. This prioritised action plan and the final version of the strategy could be presented to the first meeting of the Strategy Board.

The action plan which follows the appraisal framework is divided into the five strategic objectives to show which objective a proposed action targets. Each action is explored under a number of headings which include:

- a unique reference number which links the action to an objective;
- a description of the activity proposed;
- a description of the main benefits expected;
- any potential risk perceived for the activity;
- potential project sponsors, which identifies who might be interested in getting involved in a particular activity. With the exception of SSE no other potential private sector sponsors are mentioned;
- a broad estimate of the potential cost of each activity (no specific scoping work has been done therefore actual costs could vary significantly);
- a column which specifies whether the action is expected to make a contribution to any of the other strategic objectives; and
- an initial appraisal of how important improved grid access is likely to be to the success of the proposed activity.

Framework to Appraise Potential Actions and their Expected Impacts against Objectives

Objective	Impact Appraisal Criteria by Objective	Potential Scale of Impact			
		-	✓	✓✓	✓✓✓
1	Extent to which activity could lead to innovative solutions to the challenges faced, a reduction in the volume of carbon emissions and/or a reduction in the volume of, and therefore dependency on, fuel imported into Shetland.	No net impact expected on carbon emissions or the volume of fuel imported. No new innovation is proposed.	Expected to lead to a small reduction in carbon emitted (<1%) and/or a small reduction in one type of fuel which is imported (<3%).	Expected to lead to noticeable reductions in carbon emissions (1% to 3%) and/or a noticeable reduction in one type of fuel which is imported (3% to 5%) and/or develops an innovative solution which could have practical applications.	Expected to lead to significant reductions carbon emissions (3%+) and/or a significant reduction in one type of fuel which is imported (>5%) and/or develops an innovative solution which could be widely adopted.
2	Extent to which activity will affect the economic development of Shetland as a whole. This could be linked to employment and new business activity in renewable energy activities or commercial activities which benefit from access to renewable energy.	Employment and business activity could displace current activity but no net impact is expected for Shetland as whole.	Expected to create a small number of jobs (<10) for a period of 5 years or more within energy industry or ancillary businesses and services. and/or Temporary construction employment is expected (<30 jobs, 30 FT year equivalents) which local firms benefit from.	Expected to create some jobs (10-20) for a period of 5 years or more within the energy industry or ancillary businesses and services. and/or Temporary construction employment is expected (30+ jobs, 30 FT year equivalents) which local firms can benefit from.	Expected to create a significant number of jobs (20+) for a period of 5 years or more within the energy industry or ancillary businesses and services. and/or a small number of new high quality jobs (5+) are created for a period of at least 2 years which bring new skills to Shetland.
3	Extent to which activity could lead to a reduction in fuel poverty and improve overall comfort and well-being within the community.	No net change in the levels of fuel poverty is expected and there is unlikely to be any improvement in the services available to the community.	There is expected to be little change in the levels of fuel poverty but there are some improvements in the sustainability of services available throughout Shetland.	There is expected to be a noticeable reduction in fuel poverty and/or there should be improvements in quality and range of services available throughout Shetland which improve overall health and well-being.	There is expected to be a substantial reduction in fuel poverty and/or there should be substantial and sustainable improvements in the services available throughout Shetland which improve overall health and well-being.
4	Extent to which activity could support the more fragile communities within Shetland to enhance their sustainability through renewable energy activities.	There is no impact expected on the more fragile communities within Shetland.	Renewable energy activities are expected to improve the sustainability of existing facilities and services in the more fragile communities around Shetland.	Additional wealth is expected to be generated in the more fragile communities around Shetland from renewable energy activities. This wealth supports local facilities and services and improves the overall quality of life for existing residents.	Additional wealth and local employment is expected to be created in the more fragile communities around Shetland from renewable energy activities. This attracts and/or retains population.
5	Extent to which activity is expected to create new skills or raise awareness that could lead to increased renewable energy activity and/or improved energy efficiency.	There is no impact expected on the skills or knowledge within Shetland. There is no promotion of renewable energy development.	A small number of individuals benefit from knowledge transfer.	New knowledge or skills is developed which supports sustainable change in energy efficiency practices. The project raises awareness within Shetland and elsewhere of the benefits of renewable energy activities	Local businesses benefit from new skills which improves uptake of energy efficiency measures and renewable energy alternatives. The project promotes a powerful renewable energy image of Shetland

Objective One: Develop economic and effective solutions which significantly reduce the volume of non-renewable fossil fuels required to power Shetland.

Ref	Activity	Potential Benefits	Potential Risk	Potential Sponsors	Potential Cost	Other Objectives Met	Importance of Grid Improvement
1-1	Investigate renewable transport fuel options for road transport and sea based vessels within Shetland. Within this review(s), establish the fuel price increase necessary in order to make the next best option economic. [A related project is already underway investigating road transport fuel options]	Could reduce the use of finite fossil fuels in transport, retain money within the Shetland economy and achieve 'first-mover' image benefits. This project could also build on the hydrogen research already undertaken in Shetland.	Limited risk as it is an investigative review. The price of fuel in the intervening period is likely to influence the economics and the willingness to engage.	SREF, HIE, SCT, SIC, Carbon Trust, SSE (for electric vehicles)	Less than £50,000 for initial investigation and scoping of a pilot project if justified. Pilot cost unknown but likely to be significant.	2,3,5	Low / Critical (Likely to be critical if only economic solution is electric)
1-2	Identify the local applications where hydrogen technology would provide a competitive option in comparison to alternative energy sources and support an innovative pilot project.	The project could be designed to maximise local benefit and create a test project which could demonstrate wider global applications. Will build on research activity and knowledge already in Shetland and create local demand for further research.	Other technologies may beat hydrogen to widespread adoption. Development costs may be prohibitive.	SREF, HIE, UHI, SIC, Carbon Trust	Less than £50,000 to scope the project. Pilot cost unknown but likely to be significant.	2,3,5	Low
1-3	Undertake an analysis of fossil fuel based energy use across Shetland and identify opportunities for reduction or replacement with renewable alternatives and the conditions required for success (such as fossil fuel price increase).	Enables Shetland to set realistic and relevant CO2 reduction targets and show contribution to National and EU emissions.	No risks identified.	SREF, HIE, SIC, UHI	Less than £50,000	5	Low / Critical (Likely to be critical if only economic solution is electric)
1-4	Undertake a technical study of wind (and other renewable) penetration on existing Shetland electricity system. Incorporate a review of the possible use of deferrable electric heating demand and electric vehicle charging to improve control of electricity system.	Could allow greater penetration of renewable energy on the existing electricity system.	SSE is not able to invest in such a study until the outcome of the Viking Energy project is clear. The required technical information may be unavailable from SSE for confidentiality reasons.	SREF, SSE, Carbon Trust	£30,000-£80,000	2,4	Low

Ref	Activity	Potential Benefits	Potential Risk	Potential Sponsors	Potential Cost	Other Objectives Met	Importance of Grid Improvement
1-5	Appraise the economic costs and benefits of providing large scale heat from wind (or other renewable) via a district heating system, versus direct electric heating by wind.	Will identify the best renewable heating option for Shetland which can then be compared against conventional options for heating in Shetland.	Limited risks as it is an investigative review	SREF, SCT, SIC	Less than £50,000	4	Low
1-6	Investigate and develop a pathway as to how Shetland, or communities within Shetland, could develop as a zero carbon community.	Identify whether it is feasible to pursue Shetland as a 'carbon-neutral' location. Provide assistance to communities to develop their own carbon neutral strategy.	No risks identified.	SREF, SIC, HIE, SG	Less than £50,000	3,4,5	? Depends on pathways available
1-7	Promote the measures pursued by the SIC Carbon Management Strategy to the wider pubic	Learn lessons, adopt proven solutions for Shetland's climate.	No risks identified.	SIC	Less than £10,000	2,3,4,5	Low

Objective Two: Create employment, income and new skills in Shetland by stimulating new economic activity linked to the presence of renewable energy resources in the islands.

Ref	Activity	Potential Benefits	Potential Risk	Potential Sponsors	Potential Cost	Other Objectives Met	Importance of Grid Improvement
2-1	Develop mechanisms to support research and development in Shetland and ensure R&D linkages to future renewable energy projects.	Builds on existing R&D activity and enhances opportunities to create linkages between firms, colleges and research institutions. Could lever in research funds from elsewhere and attract high value jobs.	The spend does not lead to new developments and that the research staff leave creating no legacy benefits.	SREF, SIC, HIE, UHI, BERR, EU	Less than £250,000 locally. Aim to lever in £2 million.	1,4	High / Critical
2-2	Investigate potential for marine research and development (a scoping project has recently been funded).	Could extract further value from Shetland's high quality marine infrastructure and services. May help to identify technologies best suited to Shetland.	Findings may not identify a sufficiently unique strength to overcome other disadvantages of operating in Shetland, for example transport costs and in particular an insufficient electricity network.	HIE, SIC, EU, NAFC	Less than £50,000		High / Critical

Ref	Activity	Potential Benefits	Potential Risk	Potential Sponsors	Potential Cost	Other Objectives Met	Importance of Grid Improvement
2-3	Develop a renewable energy network of contacts throughout Europe and create a coherent promotional message for Shetland. Specifically target higher education institutions (could review success of Heriot Watt link to Orkney)	Use these contacts to understand the needs of developers and how and where Shetland may offer advantages or a unique selling point.	No risks identified.	SIC, HIE, SREF	Less than £10,000	5	Low (May be 'High' or 'Critical' for any follow-on activities)
2-4	Investigate potential for onshore wind test site for 'extreme conditions' testing.	Promote a coherent message about the strength of Shetland's resource. Could be attractive to manufacturers as tests would be completed more quickly in Shetland's operating environment; if close to a port transport difficulties could be reduced; and they could use 'Shetland rated' as an approval mark.	Would need to resolve grid connection issue but potential that it is technically possible to run it isolated from the grid as there may be advantages in testing controlled disturbances on a mock grid. May require significant investment and demand could be variable and inconsistent.	SIC, SSE, SREF	Less than £50,000 for investigation		High
2-5	Develop a legacy plan for large-scale renewable energy projects to ensure potential spin-off benefits are maximised	Identifies a coherent approach to pursuing spin-off benefits such as waste heat projects, test-sites, energy efficiency investment, micro-renewable investment, pilot project investment from community return on investment	No risks identified.	SIC, Developers, HIE	Effort required rather than finance. Legacy actions may require finance.		Critical
2-6	Develop a programme of support to assist local construction firms to visit demonstration projects and develop new skills which can be applied locally and will help them to bid for any renewable energy projects.	Increase the value of projects to the local community	Lack of local critical mass to respond	HIE	Less than £20,000		Low
2-7	Investigate economics of fertiliser production on Shetland using electricity from renewable production and use this to reduce the impact on the electricity system	To protect the agricultural industry from future oil price rises and the knock-on impact to the cost of fertiliser and to retain money in the local economy.	Economics of fertiliser production may strongly favour large centralised plants	Carbon Trust, HIE, SREF, Agricultural industry	Less than £50,000 for investigation	3,5	Low / Medium

Objective Three: Ensure there are direct benefits, in addition to employment, income and new skills, to the community from renewable energy development in Shetland.

	Activity	Potential Benefits	Potential Risk	Sponsor	Potential Cost	Other Objectives Met	Importance of Grid Improvement
3-1	Investigate the economics of wind to heat for individual buildings with reference to the latest technology and current ROC mechanisms	Research could identify specific opportunities that are suited to Shetland, could create net income through ROC mechanism and could help to address fuel poverty.	No obvious risk	SIC, SCT, Carbon Trust	Less than £30,000 for investigation	1,2,4,5	Low
3-2	Evaluate success of existing wind to heat installations	Objective assessment showing benefits of wind to heat on Shetland	Availability of operating data	SIC	Less than £20,000	4,5	Low
3-3	Consider technical options for making use of waste heat from a HVDC converter station, should future large scale Renewable Energy projects be implemented	This may improve the economics of a district heating scheme, for example in Scalloway, or other agricultural or horticultural activities.	No obvious risk	SSE, Carbon Trust, SIC	Less than £50,000 for investigation	1	Critical
3-4	Encourage households affected by fuel poverty to take-up support to improve energy efficiency adoption. Consider providing top-up support if access to finance is a clear barrier. Consider investment as a legacy requirement of future large-scale Renewable Energy projects.	To improve comfort levels, reduce energy consumption and reduce fuel proverty.	The benefit may be taken as improved levels of comfort, with no reduction in consumption.	SCT, SIC, SSE, Energy Saving Trust	£2 million pilot	5	Low

Objective Four: Enable peripheral communities to use renewable energy as a way to enhance the viability of their community and community facilities.

	Activity	Potential Benefits	Potential Threats	Sponsor	Potential Cost	Other Objectives Met	Importance of Grid Improvement
4-1	Create a transparent support programme which assists settlement based renewable energy developments.	To encourage communities to build their own development capacity and create a sustainable benefits. If grid improvements are achieved this could generate a substantial income for a local development company.	No obvious risk	SIC, CES, HIE	Depends on how many community projects can be supported	1	Low / Critical (Will be 'Critical' for electricity generating projects)

	Activity	Potential Benefits	Potential Threats	Sponsor	Potential Cost	Other Objectives Met	Importance of Grid Improvement
4-2	Support professional assistance to community projects including project management, advice and awareness.	To maximise the impact of community project implementation. To minimise the barriers encountered by groups putting forward projects.	No obvious risk	CES, SIC, HIE	Less than £50,000	1,3	Low
4-3	Engage in Scottish and UK energy policy making	Ensure that national policy takes into account the need of peripheral communities such as Shetland and the more fragile communities within Shetland	Other factors more influential	SIC, HIE, SREF	Effort rather than cost	1,2,3,5	Low

Objective Five: Stimulate awareness of the importance of renewable energy and the need to reduce carbon emissions; and develop skills in energy efficiency and renewable energy alternatives.

	Activity	Potential Benefits	Potential Risk	Sponsor	Potential Cost	Other Objectives Met	Importance of Grid Improvement
5-1	Encourage inclusion of Renewable Energy projects in the school curriculum locally to increase focus on energy efficiency, and carbon reduction.	Increased awareness, interest and ultimately cultural change.	Success will depend on capacity/willingness to introduce or expand subject within curriculum.	SREF, SIC	Less than £10,000	-	Low
5-2	Evaluate the success of existing building-specific Renewable Energy schemes that are implemented	To inform future investment	None identified.	HHA, SIC			Low
5-3	Incentivise the use of the highest standards of energy efficiency in construction practices. Standards could be set and demonstrated in new public buildings and new Housing Association or Council Housing. Consider investment as a legacy requirement of future large-scale Renewable Energy projects.	Creation of new skills within construction industry. Reduction in risk of fuel poverty. Public sector sending a clear message to the community about the way forward.	The public sector may not be willing to invest in energy efficiency standards which exceed current requirements.	SIC, NHS, HHA, SREF	Dependent on scale and nature of new projects.	1,2,3	Low (unless investment is dependent on generation of additional community funds)

Appendix A

Please see over for a table specifying options for the utilisation, distribution and use of renewable energy resources in Shetland.

Appendix A: Options for the Utilisation, Distribution and Use of Renewable Resources in Shetland

Resource	Technology	Form of Energy Consumed	Options for Distribution	Potential Consumer
Wind	Wind turbines	• Electricity	• Existing electricity distribution system • Subsea cable to the mainland	• Shetland based households and commercial and public buildings • Mainland customers
			• Direct installation at buildings (micro-generation)	• Individual buildings, which may or may not also be connected to the existing electricity distribution system
		• Heat	• District heating system (i.e. wind turbines directly providing electricity to heat water in the system)	• Individual buildings within range of district heating system
			• Electric heating in buildings, energy distribution via the existing electricity distribution system[3]	• Shetland based households and commercial and public buildings
			• Direct installation at buildings, for electric heating only (micro-generation)	• Individual buildings
		• Hydrogen[4]	• Storage medium for export to any destination	• Individual buildings • Transport (road vehicles, ferries)
Offshore Wind, Wave and Tidal	Various technologies (all electricity generating)	• Electricity	• Existing electricity distribution system • Subsea cable to the mainland	• Shetland based households and commercial and public buildings • Mainland customers
		• Heat	• District heating system (i.e. directly providing electricity to heat water in the system)	• Individual buildings within range of district heating system
			• Electric heating in buildings, energy distribution via the existing electricity distribution system [5]	• Shetland based households and commercial and public buildings
		• Hydrogen	• Storage medium for export to any destination	• Individual buildings • Transport (road vehicles, ferries)

[3] Potential to provide lower cost heating, controlled by the provider to match the varying output of the wind turbines, which could potentially be sold cheaper than fuel oil. It is not clear which heating solution is most economic: investigation of this is included in the Action Plan. With an interconnector, there may be a complex optimisation which could result in installation of greater wind capacity than the interconnector capacity. It may be most economic to export all output wherever possible, and any output which cannot be exported due to interconnector capacity is used to provide electric heating on Shetland.

[4] It is likely that the most beneficial application of hydrogen will be where there is no distribution network for electricity.

[5] As for note 3.

Appendix A: Options for the Utilisation, Distribution and Use of Renewable Resources in Shetland (continued)

Resource	Technology	Form of Energy Consumed	Method of Distribution	Potential Consumer
Heat pumps	Ground source, air source	• Heat	• Direct installation in buildings (the electricity required to drive the heat pumps is supplied by the existing electricity distribution system)	• Individual buildings
Biomass (e.g. peat[6], wood, other energy crops)	Combustion	• Electricity	• Existing electricity distribution system	• Shetland based households and commercial and public buildings
		• Heat	• District heating system	• Individual buildings within range of district heating system
			• Fuel for sale	• Used as currently in individual houses (e.g. in the same way that peat and wood is used)
Waste (possibly combined with biomass)	Combustion / Bio-digestion	• Electricity	• Existing electricity distribution system	• Shetland based households and commercial and public buildings
		• Heat	• District heating system	• Individual buildings within range of district heating system
Solar	Solar thermal panels, passive solar design	• Electricity[7]	• Direct installation on buildings, bus shelters etc	• All buildings, especially where only small amounts of electricity are required
	Photovoltaic devices	• Heat	• Direct installation or incorporation in buildings	• Shetland based households and commercial and public buildings

Note: This table categorises the major renewable energy technologies relevant to Shetland. There are many other potential technologies available, but these are considered to be further from commercial availability or of less relevance to Shetland. For example, hydro-electricity is a well-established technology with stable costs: it is excluded here as the hydro resource in Shetland is very small. There may be a small number of sites on Shetland where hydro could be justified, and exclusion from this table should not rule this or any other opportunities out.

[6] Any major exploitation of peat would have to be closely controlled to ensure sustainability and avoid degradation of the remaining peatland.
[7] Photovoltaic devices are likely to be the best economic option where only small amounts of electricity are required and there is no grid access.

REPORT

To: **Harbour Board** **10 June 2009**

From: **Harbour Master / Head of Service**

Report No: **P&H-15-09-F**

Subject: **Port Marine Safety Code**

1. Introduction

1.1. This report is to brief and inform Members of the Port Marine Safety Code and their duties under the code.

1.2. A copy of the Port Marine Safety Code is attached as Appendix A.

2. Link to Council Priorities

2.1. The report promotes the ideals from the Corporate Plan of sustainable economy whilst protecting the environment.

3. Background

3.1. The Port Marine Safety Code introduces a national standard for every aspect of port marine safety. It aims to improve safety for those who use or work in ports, their ships, passengers and cargoes and the environment.

3.2. The Code is intended to apply to all harbour authorities, to the extent that they have duties and powers relating to marine safety. It applies to port marine operations the well-established principles of risk assessment and safety management systems.

3.3. Harbour authorities must apply these principles if they are to discharge their legal duties and statutory powers to the national standard that the Code establishes.

3.4. The Code is particularly directed at harbour authorities; and to the directors, commissioners or trustees who are members of the boards of such harbour authorities. These authorities have legal duties relating to the safety of people who use our harbours and their property, and to the wellbeing of the port environment and community.

3.5. The Code is not mandatory but is also not intended to be optional. It is written to ports of all sizes, irrespective of resources or levels of traffic.

3.6. Its requirements apply to every harbour undertaking, to the extent that it has the duties and statutory powers described. It bears principally upon any harbour authority with statutory powers in relation to the regulation of shipping movements and the safety of navigation within its harbour. It also applies to other undertakings, which are local lighthouse authorities in relation to those duties.

3.7. The aim is to ensure that risks are tolerable and as low as reasonably practicable.

3.8. The code was published in March 2006 and was initially directed at those harbour authorities with marine pilotage duties and powers. For the 2008/09 Port Marine Safety Code compliance programme, the MCA are asking all statutory harbour authorities to confirm their compliance.

3.9. The Duty Holder ensures the ports compliance with the Port Marine Safety Code. The compliance should include, but is not confined to, confirmation that the duties and powers in relation to marine operations in our ports are discharged in accordance with a Safety Management System based upon a formal risk assessment.

4 Current Status

4.1 The Harbour Board is responsible, in terms of its remit and delegated authority for the ports, harbours and piers belonging to the Council and listed in Appendix B.

4.2 Ferry Services maintains and operates Ferry Infrastructure and facilities.

4.3 Ports and Harbours Operations has three Safety Management Systems:

4.3.1 Shetland Islands Council Towage Operations. This is a requirement for the safe operation of the towage fleet and audited annually by the MCA.

4.3.2 Shetland Islands Council Sullom Voe Safety Management System. The Sullom Voe Harbour Authority's Safety Management System fully meets the requirements and recommendations of the Port Marine Safety Code and contains the policies, procedures and plans detailing the Harbour Authority's commitment to protection of the environment, the port and all personnel within its area of responsibility. To assist in achieving these aims the Harbour Authority ensures the adoption of, and compliance, with best industry practice.

4.3.3 This Safety Management System also provides for the Quality System, as required to meet the requirements for compliance with BS EN ISO

9001:2000, for Sullom Voe which identifies all the controls and measures which are necessary to ensure that all services are supplied in accordance with the specified requirements, in line with stated policies and objectives. The scope of the System is for the provision and operation of harbour facilities and services maintenance, and the safe operation of associated equipment for the port of Sullom Voe. The nature of the business offered by the Sullom Voe Harbour Authority is such that section 7.3 of BS EN ISO 9001:2000, which refers to design and development, does not form part of the business activity.

4.3.4 Protection of the environment is advised on and closely monitored by the Shetland Oil Terminal Environmental Advisory Group (SOTEAG), an independent body with a high international reputation. The Sullom Voe Oil Spill Advisory Committee (SVOSAC) provides advice on pollution prevention and response. Members of this committee include representatives from the Shetland Islands Council, the oil industry, the Maritime & Coastguard Agency and SEPA

4.3.5 Protection of personnel and property is pursued by the undertaking of risk assessments related to the tasks undertaken during the operation of the port. A Formal Safety Assessment of the operation in Sullom Voe, required under the Code, has already been completed and its findings included in the Harbour Authority's Port Marine Safety Code.

4.3.6 Matters relating to the safety technical aspects of the port operation within, or in the approaches to, the Sullom Voe Harbour Area, are within the remit of the Technical Group whose members include representatives of the port users and the Harbour Authority. This constitutes the basis of the formal consultation basis required by the Code.

4.3.7 Reports are submitted by the Harbour Authority at each meeting of the Harbour Board indicating performance against its plans and against the standards in the Code. These documents are available to the public.

4.3.8 The Sullom Voe Harbour Board approved the Sullom Voe Safety Management System developed in compliance with the Port Marine Safety Code and submitted by the Sullom Voe Harbour Authority on 13 November 2001 for implementation with immediate effect from that date (Harbour Board Minutes, min ref 23/01 and Council Minutes, min ref 194/01).

4.3.9 This Safety Management System will be under continuous review and amended where necessary to ensure inclusion of best practice and improved procedures. An annual audit of the system is conducted by DNV to confirm compliance by the Harbour Authority.

4.3.10 <u>Shetland Islands Council Scalloway Safety Management System.</u>

The Safety Management System for the Scalloway Harbour Area fully meets the requirements and recommendations of the Port Marine Safety Code and contains the policies, procedures and plans detailing the Harbour Authority's commitment to protection of the environment, the port and all personnel within its area of responsibility.
To assist in achieving these aims the Harbour Authority will ensure adoption of, and compliance, with best industry practice. The Shetland Islands Council is the statutory Harbour Authority for the Scalloway Harbour Area in terms of the ZCC Act 1974 and had delegated its harbour operations functions to a harbour board responsible for oversight of the whole Harbour undertaking, including Scalloway. The Harbour Board, and the Council as Harbour Authority, has approved the application of the Port Marine Safety Code and associated safety management systems to the whole harbour undertaking. The safety management system covers the port of Scalloway and is audited by DNV.

4.4 The harbour authority also acts as a local lighthouse authority within the limits of our ports and harbours.

4.5 The Safety Management System does not cover and hence the Port Marine Safety Code does not currently cover the small harbours and piers. At present there is no requirement to include them.

4.6 The Harbour Board, represented by the Chairperson, hold the position of Duty Holder. An extract below taken from the Port Marine Safety Code describes the Duty Holder

> "1.5.3. The Code requires each harbour authority to hold themselves accountable for the discharge of its duties and powers to the standard laid down. It requires the board members of each authority to accept responsibility for ensuring that the authority discharges its duties and powers to that standard. Duties and powers relating to the safety of marine operations in any harbour have been entrusted to a statutory authority. Board members are collectively and individually responsible for the proper exercise of their authority's legal duties. It follows clearly that it – and they - are severally and collectively the 'duty holder'.
>
> 1.5.4. Harbour authorities have powers to appoint a harbour master, and to authorise pilots, and may properly entrust the operation of the harbour to such professional people; but they cannot assign their accountability. **Board members may not abdicate accountability on the grounds that they do not have particular skills**. They retain strategic oversight and direction of all aspects of the harbour operation. They must ensure that powers are discharged but not exceeded."

4.7 The Duty Holder is required to acknowledge, to the MCA, the compliance of the operation of the port in relation to the Port Marine Safety Code. The pro-format letter is attached as Appendix C.

4.8 The Harbour Board, acting under its delegated authority on behalf of the Council and as the Duty Holder, should include discussions on strategic safe operation of the ports and harbours under its remit on a regular basis.

5 Financial Implications

5.3 There are no financial implications arising from this report.

6 Policy and Delegated Authority

6.3 Harbour Board has full-delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations.

7 Conclusion

7.3 The port of Sullom Voe and Scalloway Harbour are operated in compliance with the Port Marine Safety Code.

7.4 The Harbour Board is the Duty Holder as defined by the Port Marine Safety Code.

8 Recommendations

8.3 I recommend that the Harbour Board: -

8.3.6 Authorise the Chairperson to sign the compliance letter to the MCA.

8.3.7 Hold a special Harbour Board on, or around 09 July, to allow a presentation by officers of Ports and Harbours Operations on the subject of the Port Marine Safety Code, Safety Management System and Governance.

8.3.8 Require a regular report from the Designated Person on the subject of the Port Marine Safety Code and Safety Management System in relation to Shetland Islands Council ports and harbours. The report should include any updates to the system and the impact of any changes in legislation, guidelines, policy, incidents or risk assessments.

PORT MARINE SAFETY CODE

PREFACE BY KEITH HILL MP, MINISTER FOR SHIPPING

This Code heralds a new approach to the management of safety in ports. It has been developed with the help of a wide range of interests in the ports and shipping industries. I welcome the practical support so many people have given.

The Port Marine Safety Code introduces a national standard for every aspect of port marine safety. It aims to improve safety for those who use or work in ports, their ships, passengers and cargoes, and the environment. It establishes a measure by which harbour authorities can be accountable for the legal powers and duties which they have to run their harbours safely.

Our ports and harbours generally have a good safety record, and serious incidents are rare. This is a tribute to the professionalism of those who undertake and oversee port operations. The Code underpins this achievement Its object is the widest possible adoption of good practice.

Marine operations in ports are hazardous, but they can be conducted safely, provided the hazards and risks have been properly assessed and appropriate systems are in place. Hazards in ports can create a risk to life and property. Port marine operations bring a risk of environmental damage. Managing safety costs money. Overlooking risk to save money in the short term ultimately costs more and will lose business in the long run.

The Code is intended to apply to all harbour authorities, to the extent that they have duties and powers relating to marine safety. It applies to port marine operations the well-established principles of risk assessment and safety management systems. Harbour authorities must apply these principles if they are to discharge their legal duties and statutory powers to the national standard that the Code establishes.

The Government will work with the industry to implement this Code. Our common aim is to make prevailing standards higher and ports even safer.

KEITH HILL

PREFACE BY KEITH HILL MP, MINISTER FOR SHIPPING 1
KEITH HILL 1
INTRODUCTION 5
The Code's two main parts 5
Duties and powers 5
Marine operations 5
Who is the Code for? 6
The aim of the Code 6
The public interest 7
Accountability 7
Who is accountable? 8
Consultation 8
Role of Government 9
Implementation 10
Enquiries 10
PART ONE - HARBOUR AUTHORITIES' DUTIES AND POWERS 11
1.1 BACKGROUND 11
Functions to which the Code applies 11
Other regulations 11
Agents and joint arrangements 12
1.2. GENERAL DUTIES AND POWERS 12
'Open port duty' 12
Conservancy 13
Health & safety at work 13
Environmental duty 14
Harbour authority powers 14
Byelaws 14
1.3. SPECIFIC DUTIES AND POWERS 15
Appointment of harbour master 15
Directions 15
General directions 16
Incidents threatening pollution 16
Dangerous vessels 16
Dangerous substances 16
Prevention of pollution 17
Pilotage 17
Pilotage directions 18
Authorisation of pilots 18
Information to be provided to a pilot 18
Pilot and the Port State 19
Other statutory pilotage provisions 19
Pilot boats 19
Boarding and landing procedures 19
Pilotage exemption certificates 19
Tugs 20
Local lighthouse authority duties 20
Wrecks 21
1.4. REVISING DUTIES & POWERS 21

Harbour orders 21
Limits of jurisdiction 22
Byelaws 22
1.5. ACCOUNTABILITY FOR MARINE SAFETY 22
The duty holder 23
The designated person 24
The authority's officers 24
Chief Executive 24
Harbour master 24
Pilotage 25
Other matters 25
1.6. DUES 26
Resources 26
Pilotage charges 27
Exemption certificate holders' charges 27
PART TWO - MEASURES 28
2.1. SETTING A STANDARD 28
Published policies and plans 28
Taking stock 29
Legal duties and powers 29
Safety assessment and management 30
Continuous assessment and review 30
The 'ALARP' principle 30
Good practice 31
2.2. RISK ASSESSMENT AND SAFETY MANAGEMENT 31
Safety policy 32
Organisation 32
Safety management systems 32
Measuring performance 33
Auditing and reviewing performance 33
Emergency Planning 34
Consultation 34
Risk assessment 34
Risk control 34
2.3. CONSERVANCY DUTIES 35
Hydrography 35
Admiralty charts 35
Prevailing conditions 35
Aids to navigation 36
Anchorages 36
Wrecks 36
Reviewing changes 36
Works in harbours 36
2.4. REGULATION AND MANAGEMENT OF NAVIGATION 36
Available powers 37
Collision Regulations 37
Enforcement 38
Link to safety management system 38
Vessel Traffic Services 38

Directions and passage plans 38
Port passage guidance 39
Scope of passage planning requirements 39
Role of harbour authority on port passage guidance 39
Publication of port passage guidance 40
Passage record keeping 40
Dangerous vessels 40
2.5. PILOTAGE 40
Agents and joint arrangements 41
Assessing the need 41
Providing the service 42
Compulsory pilotage 42
Waiving directions 42
Excepted vessels 42
Two pilots 43
Authorisation of pilots 43
Contracts with authorised pilots 43
Training 44
Boarding and landing procedures 44
Allocating pilots 45
2.6. PILOTAGE EXEMPTION 45
Award of certificates 45
Training 45
Use of certificates 45
Pilotage charges and exemption 46
2.7. marine SERVICES 46
Tugs 46
Pilot launches and workboats 47
Moorings 48

INTRODUCTION

1. This Code has been drawn up with a wide variety of contributions from those associated with the ports industry following a review of the Pilotage Act 1987, published in July 1998[1]. The main proposal resulting from this review was that this Code should be developed.

2. The Code includes a summary of the legal duties and powers of harbour authorities relating to marine safety. It does not create new legal duties for harbour authorities. Such duties and powers are only properly discharged if appropriate standards are fully met. This one has been agreed nationally with representatives of all parties, to apply to all harbour authorities. The Code is not optional - harbour authorities are expected to work to achieve the agreed standard by implementing its requirements.

3. The Code also aims to promote best practice. The Code serves as a framework for the preparation of published policies and plans by harbour authorities in consultation with local users and other interests.

4. The Code is to be read with the Guide to Good Practice for Port Marine Operations when it is available. Competence standards for port marine personnel are also being developed in support of the Code.

The Code's two main parts

5. The Code is in two main parts. The first summarises the general duties and powers resting upon harbour undertakings in relation to marine operations in their waters, including the procedures for revising their powers to make them fully fit for purpose. The second part outlines the measures which harbour undertakings must adopt to fulfil their duties in accordance with the agreed national standard.

Duties and powers

6. The duties of a harbour authority are of three kinds. Some are statutory duties, imposed either in the local legislation for that authority or in general legislation. There are in addition general common-law and fiduciary duties. These include an obligation to conserve - and facilitate the safe use of - the harbour; and a duty of care against loss caused by the authority's negligence.

Marine operations

7. For the purposes of this Code, marine operations are those which facilitate the safe use of a harbour by vessels. They include the direction of shipping and the regulation of safety of navigation in a harbour, and the maintenance of aids to navigation within the jurisdiction of a harbour undertaking.

8. The Code is not intended to replace or duplicate any other legal or administrative requirements. It does not therefore apply to the extent that a matter

[1] *Review of the Pilotage Act 1987* - published by the Stationery Office July 1998 (ISBN 0 11 753471 4)

is covered for example by the Docks Regulations 1988[2], or the Dangerous Substances in Harbour Areas Regulations 1987[3]. More generally, unless otherwise clearly indicated, it does not deal with matters which are regulated by the Health & Safety Executive, or with the oversight by the Maritime and Coastguard Agency of the safety of ships.

9. It is clearly necessary for the safety of any undertaking to be managed as a whole and to similar standards. The requirements of this Code will need to be discharged by systems which also meet the requirements of other legal or administrative requirements.

Who is the Code for?

10. The Code is written for those upon whom any or all of the requirements fall which are described in the following chapters. It is particularly directed at harbour authorities; and to the directors, commissioners or trustees who are members of the boards of such harbour authorities. These authorities have serious legal duties relating to the safety of people who use our harbours and their property, and to the wellbeing of the port environment and community.

11. The Code is not intended to be optional. It is written to apply to ports of all sizes, irrespective of resources or levels of traffic. Its requirements apply to every harbour undertaking, to the extent that it has the duties and statutory powers described. It bears principally upon any harbour authority with statutory powers in relation to the regulation of shipping movements and the safety of navigation within its harbour. It also applies to other undertakings which are local lighthouse authorities in relation to those duties.

12. The Code does not apply directly to the regulation of Dockyard Ports by Queen's Harbour Masters, since their powers are different from those it describes. However, it does apply to the harbour authorities which also exercise powers in harbours which have Dockyard Ports. These must work with the Queen's Harbour Master concerned when implementing the Code.

The aim of the Code

13. The Code aims to help those who have these duties to understand and discharge them, and to be seen to achieve and maintain nationally agreed standards for safe marine operations within their waters. It sets down a standard to which in future they should hold themselves accountable publicly.

14. The Code relies upon the principle that duties and powers in relation to marine operations in ports should be discharged in accordance with a safety management system. That system should be informed by and based upon a formal risk assessment. The aim is to establish a system covering all marine operations in ports which ensures that risks are both tolerable and as low as reasonably practicable.

[2] SI 1988 No 1655
[3] SI 1987 No 37 (as amended)

15. To demonstrate compliance with the standard described, and in the interests of transparency, each harbour authority will need to produce a periodic statement setting out the policy it has adopted for discharging its duty to ensure that marine operations in the harbour and its approaches are properly regulated; and reporting on the effectiveness of that policy and associated systems and procedures.

The public interest

16. Harbour authorities have been created by statute to serve a public interest. Where a harbour authority has been established, there is a public right to use the harbour for the shipping and unshipping of goods and passengers. As a general rule, there is also a public right of navigation in harbour waters. The public interest is wider than that of harbour users, however, including the local community and environment; and there are duties to ensure that these too are protected in the management of the harbour undertaking.

17. Harbour authorities have a duty to take reasonable care, so long as the harbour is open for the public use, that all who may choose to navigate it may do so without danger to their lives or property. The function of a harbour authority is to regulate and facilitate the exercise of these rights.

18. Every harbour authority is given general and specific statutory powers to enable it to discharge the duties imposed upon it. These include powers to raise dues for the discharge of a harbour authority's statutory obligations. People use ports on the condition that they pay dues Safety systems must be properly funded. The exercise of any these powers is ineffective unless it fulfils its purpose. The Code therefore concentrates on the standard to which powers are to be undertaken.

19. The specific statutory duties outlined in this part of the Code imply a general obligation to keep under formal and active consideration the overall safety of the harbour, and to apply all available statutory powers as appropriate to secure the safe use of the harbour by ships and other craft.

Accountability

20. Harbour authorities have duties to ensure the safety of waters within their jurisdiction. Harbour authorities should hold themselves publicly accountable for the duties they have to the public interest. They must treat these duties as primary. Their boards are accountable for the standards they set, the resources they allocate to safety - and for the effectiveness of systems they choose to adopt. Board members' approach to safety will be judged by the decisions they make. Management at all levels taking safety seriously give an essential lead to staff, users and other interests. They will also notice if the requirements of the Code are not taken seriously or properly resourced. Harbour authorities are accountable not only to users but in respect of their local communities and natural environment as legitimate elements of the public interest. Authorities need to adopt an open approach, promoting consultation with a range of interests including users. These interests must recognise in turn that they share a general duty to ensure the safety of the harbour, but not the formal legal duties and powers of the authority.

Who is accountable?

21. Duties and powers rest upon harbour authorities corporately. Board members are collectively accountable and individually responsible for the proper exercise of their authority's statutory functions. Harbour authorities have powers to appoint a harbour master, and to authorise pilots, and properly entrust the operation of the harbour to such professional people; but the authority cannot assign its accountability. Board members may not abdicate their duties on the grounds that they do not have particular skills. The authority retains strategic oversight and direction of all aspects of the harbour operation. The authority is accountable for ensuring that powers are discharged but not exceeded.

22. This Code is not written as a technical document. It is to be used by board members to satisfy themselves that technical operations undertaken in the authority's name represent a full and proper discharge of duties.

23. A system of accountability should have these elements -

- a clear national framework setting a high overall standard;
- an account of the policies and procedures adopted locally to achieve that standard;
- periodic local - and national - reports demonstrating compliance and progress to higher standards;
- performance indicators testing compliance and progress;
- a monitoring and enforcement element.

These are all covered in the Code.

24. Hazardous operations ought not to be undertaken unless measures are taken to reduce the risks to acceptable levels. The use of properly trained and qualified people is one means to this end. Putting untrained people where they may place themselves and others at risk is worse than irresponsible. Harbour authorities need properly qualified people to manage safety.

25. Nationally agreed competence standards for all port marine personnel have therefore been developed to support the Code. These will also serve to recognise these specialist skills more adequately. It is equally important that authorities make proper use of the professional expertise at their disposal. Port marine professionals must have proper access to their boards.

Consultation

26. Harbour authorities holding themselves accountable to the local community will aim to work closely with local interests in developing policies and procedures for the discharge of their duties and powers. The Code aims to express these, and the measures required of harbour authorities, in terms that are accessible to such interests. It serves in the same way to inform the shareholders of company-owned harbour authorities.

27. Harbour authorities must involve all those who work in and use the port and those who represent them. The safety of the port depends upon them all - not just

observing and enforcing the regulations but contributing to the assessments on which they are based.

28. Safety in harbours is not just a matter for the harbour authority, its officers and its authorised pilots. Users are also responsible to minimise risk to themselves and others. It is paramount that ports operate as a regulated environment; their rules – and their commitment to safety - must be accepted and observed by users. Users on the other hand must be fully involved in the preparation of safety policies and procedures, and their commitment secured to the standards adopted. This commitment should be seen as a collorary to standards set for their professions.

29. Users have a specific right to be consulted where they are made subject to general and pilotage directions. Much more consultation is needed to ensure an effective safety management system. Harbour authorities should therefore consult as widely as possible among those likely to be involved in the use of the port. This opportunity should be taken to develop a consensus about safe navigation in the harbour.

30. Parties to be consulted include the authority's authorised pilots; the harbour master and his staff - including port control; terminal operators; tug masters, lock keepers; berthing parties; masters and ship's officers with pilotage exemption certificates, and other users as far as possible.

31. Ship owners or operators are pivotal. They decide which port to use, with a free choice in this country. They hand a ship to the master but remain responsible for crew levels, competence and training. A port safety management system cannot assume that no visiting ships will have deficiencies. The harbour authority's risk assessment should identify deficiencies that are likely to be encountered and develop ways of managing the resulting risks. There should be procedures for ensuring that port marine personnel, as well as masters, report deficiencies to an appropriate manager. Effective enforcement procedures are needed. These will include arrangements for deficiencies to be reported if appropriate to the Maritime and Coastguard Agency.

Role of Government

32. The Code fulfils the Government's role to ensure that an agreed overall standard is applied; and to safeguard the public interest. The Government has therefore undertaken not only to promote an agreed standard but also good practice. This will include advice on appropriate powers, and accessible procedures for authorities to adopt them.

33. The Government represents the flag state and the port state, with responsibility for enforcing internationally agreed standards for ships' seaworthiness and operation. It aims to work with port authorities in discharging this function, to ensure that their operations fully and properly discharge their duties, and to support them in implementing them.

Implementation

34. The Government looks to all harbour authorities with functions to which the standards in this Code relate to implement the requirements of the Code by the end of 2001. The steps required to be taken by that date to meet the standard set by the Code are described in Part 2. The first step is a considered assessment of risks and the means of reducing them. This may require to include a review of the authority's powers to regulate marine operations. The assessment should be used to develop a safety management system. The system will incorporate the policies and procedures adopted by the authority, which should then be reflected in a published plan. Measures should be taken in parallel to ensure that those engaged in port marine operations are trained and qualified in accordance with the competence standards developed along with the Code.

35. Harbour authorities will not be required to submit their plans for formal approval before putting them into operation. These plans will relate to their local duties and powers for which they are accountable. Harbour authorities will, however, be asked to supply to the Department of the Environment, Transport and the Regions copies of the policies and plans required by this Code to be published. The Department is committed to working closely with the industry to implement the Code, and to monitor its effect. Regular meetings with representative bodies will be held for this purpose: meetings may be sought by and with individual authorities as appropriate. The Department aims to assess progress with initial implementation at six-monthly intervals and will invite harbour authorities to assist with surveys for this purpose.

Enquiries

36. Enquiries about this Code should be made to –

Department of the Environment, Transport and the Regions
Ports (2) Division
Zone 2/31
Great Minster House
76 Marsham Street
LONDON SW1P 4DR

tel 020 7944 5069 or 5096
fax 020 7944 2188

PART ONE - HARBOUR AUTHORITIES' DUTIES AND POWERS

1.1 BACKGROUND

1.1.1. This Part of the Code describes the duties and powers of harbour authorities in relation to marine operations. There are several general principles -

A. A harbour authority has duties of three kinds - some are statutory duties; but there are in addition general common-law and fiduciary duties.

B. These duties include an obligation to conserve, and facilitate the safe use of, the harbour; and a duty of care against loss caused by the authority's negligence.

C. Duties to ensure the safety of marine operations are matched with general and specific powers to enable the authority to discharge these duties.

There are procedures for these to be changed where necessary.

1.1.2. Some duties, and each harbour authority's powers, are contained in local Acts and Orders, and, although they have much in common, the detail varies from port to port. Most are established by the incorporation or transposition into local Acts and Orders of model provisions in the Harbours, Docks and Piers Clauses Act 1847. Other duties and powers are in general legislation – for example, the Harbours Act 1964, the Dangerous Vessels Act 1985, the Pilotage Act 1987 and the Merchant Shipping Acts. This part of the Code describes these, and other equally important common-law and fiduciary duties, which govern harbour authorities' oversight of marine operations in waters within their jurisdiction.

Functions to which the Code applies

1.1.3. The Code is directed harbour authorities empowered to regulate of shipping movements and the safety of navigation within their harbours. Most of these are a "competent harbour authority" under the Pilotage Act 1987[4], although some harbour authorities were not so designated because they were not in a former active pilotage district. Every "competent harbour authority" may assume that the Code applies in their case, whether it actually provides a pilotage service or not. There are a much larger number of undertakings that are local lighthouse authorities for the purposes of the Merchant Shipping Acts. The Code applies to the duties and powers conferred on these in that capacity .

Other regulations

1.1.4. The Code does not apply to duties and powers other than those relating to marine operations. The other main bodies of regulations are those made under the Health and Safety at Work Act and related powers of the Health and Safety Executive; and (with some exceptions specifically dealt with in this Code) those relating to the safety of vessels under the Merchant Shipping Acts, administered by

[4] see Section 1(1) of the Pilotage Act 1987

the Maritime and Coastguard Agency. It is clearly necessary for the safety of any undertaking to be managed as a whole and to similar standards. It is likely therefore that the requirements of this Code will be discharged by systems which also meet the requirements of other regulations.

Agents and joint arrangements

1.1.5. The Pilotage Act provides for a competent harbour authority to use an agent for pilotage services, and for formal joint arrangements between competent harbour authorities for the discharge of pilotage functions[5]. There are important limitations to the power to make such arrangements, and key functions must be retained by each competent harbour authority. In these and other cases where harbour authorities have functions relating to the safety of any harbour - for example because they have jurisdictions in different parts of an estuary, they should collaborate as necessary on all aspects of this Code, and not just on pilotage. It is especially important to have a robust agreement about the resourcing of any operations conducted jointly or through another undertaking.

1.2. GENERAL DUTIES AND POWERS

1.2.1. These are the relevant general duties of harbour authorities -

A. Harbour authorities have a duty to take reasonable care, so long as the harbour is open for the public use, that all who may choose to navigate it may do so without danger to their lives or property.

B. This includes an obligation to conserve, and facilitate the safe use of, the harbour; and a duty of care against loss caused by the authority's negligence.

C. Each harbour authority has an obligation to have regard to efficiency, economy and safety of operation as respects the services and facilities provided.

D. Harbour authorities typically have an express duty to take such action as the harbour authority consider necessary or desirable for or incidental to the maintenance, operation, improvement or conservancy of their harbour.

Such actions will in some cases – for example the erection of works or the placing of aids to navigation - be subject to consents or other authorisations.

'Open port duty'

1.2.2. Almost every harbour authority's statutory powers are subject to what is called the 'open port duty'. Upon payment of the rates made payable by the local legislation for that port, and subject to the other provisions thereof, the harbour, dock, or pier shall

[5] Section 11 of the Pilotage Act 1987

be open to all persons for the shipping and unshipping of goods, and the embarking and landing of passengers[6].

1.2.3. This provision is fundamental to the statutory powers of harbour authorities. The provision of harbour facilities is of the nature of a monopoly created by Parliament and undertakers benefiting from the powers conferred are obliged to serve the public interest in certain specified ways. The shipper of goods has a right to bring them on to the dock premises and through these premises to the ship on which they are shipped. The dock company can reasonably regulate the order and place of shipping so long as they do not destroy or unreasonably limit the shipper's right to ship.

Conservancy

1.2.4. A harbour authority has a duty to conserve the harbour so that it is reasonably 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 resort to it. The conservancy duty covers several specific requirements -

a) to survey (and resurvey as regularly as necessary) and find the best navigable channel or channels;

b) to place and maintain navigation marks where they will be of the best advantage to navigation (marked appropriately by day and night);

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 publish as conspicuously as possible such further information as will supplement the guidance given by navigation marks.

1.2.5. Where a harbour authority holds out that there is a certain depth of water at a part of the harbour over which vessels may be obliged to pass, it must use reasonable care to provide that the approaches to that part are sufficient, under normal conditions, or give warning that the advertised depth has not been maintained.

Health & safety at work

1.2.6. Harbour authorities, like all employers, have a duty to conduct their undertaking in such a way as to ensure, so far as reasonably practicable, that persons not in their employment who may be affected thereby are not exposed to risks to their health and safety.[7] A person having control of premises, or of plant or substance in such premises has a duty to take measures to ensure, as far as is reasonably practicable, that the premises, all means of access and egress, any plant or substance in the premises or provided for use there, is or are safe and

[6] Section 33 of the Harbours, Docks and Piers Clauses Act 1847
[7] Section 3 of the Health and Safety at Work Act 1974

without risks to health.[8] Every employer shall make a suitable and sufficient assessment of the risks to the health and safety of his employees to which they are exposed whilst they are at work; and the risks to the health and safety of persons not in his employment arising out of or in connection with the conduct by him of his undertaking.[9]

Environmental duty

1.2.7. Harbour authorities have a general duty to exercise their functions with regard to nature conservation and other related environmental considerations[10]. They may now seek additional powers for these purposes. They also have an obligation, where a Special Protection Area for Birds or a Special Area of Conservation has been designated under the Wild Birds or Habitats Directives, to have regard to the requirements of the Habitats Directive so far as they may be affected by the exercise of those functions[11]

Harbour authority powers

1.2.8. Every harbour authority has power to make the use of services and facilities provided by them at a harbour which, in the exercise and performance of statutory powers and duties they are engaged in improving, maintaining or managing, subject to such terms and conditions as they think fit[12].

1.2.9. Not every duty imposed upon harbour authorities is matched by a specific power, since in some cases the duty itself is sufficient to imply the powers required to carry it out. There are specific powers, however, in relation to the making of byelaws and directions, and to pilotage, lights and wrecks.

1.2.10. It is for each harbour authority to keep under review whether their powers - and the extent of their jurisdiction - are appropriate for maintaining the overall safety of the harbour, and to promote changes where necessary. Chapter 1.4 below explains how a harbour authority's powers may be revised.

Byelaws

1.2.11. Harbour authorities are empowered to make byelaws. Byelaws empower harbour authorities to regulate activities for specific purposes. This power goes beyond simple management to include a power to create and prosecute in the Courts offences for which fines may be levied at different levels up to a substantial amount[13]. Byelaws are a means of reflecting the local needs and circumstances of individual harbour authorities and are intended to allow them to conduct their business efficiently and safely. Harbour byelaws vary widely to suit local powers and needs. Byelaws are generally available to regulate rather than prohibit. Therefore activities cannot be banned from the entire harbour unless the appropriate byelaw-making power so specifies.

[8] Section 4 of the Health and Safety at Work Act 1974
[9] The Management of Health and Safety at Work Regulations 1999 (SI1999 No 3242)
[10] Section 48A of the Harbours Act 1964 (inserted by the Transport & Works Act 1992)
[11] Regulation 3(4) of the Conservation (Natural Habitats &c) Regulations 1994 (SI1994 No 2716)
[12] Section 40 of the Harbours Act 1964
[13] currently a maximum of £2500

1.3. SPECIFIC DUTIES AND POWERS

1.3.1. In addition to these general duties, there are a number of specific duties, with powers to enable them to be discharged.

A. A harbour master must have his powers determined in byelaws.

B. Powers to direct vessels are available - and should be used - to ensure safety of navigation.

C. Dangerous vessels and substances, and pollution, must be effectively managed.

D. A pilotage service must be provided if required in the interests of safety.

E. Properly maintained aids to navigation must be provided, and any danger to navigation from wrecks or obstructions effectively managed.

Some of these have separate chapters in this part of the Code.

Appointment of harbour master

1.3.2. A harbour authority has the power to appoint a harbour master[14] The authority's byelaws may include provisions for regulating the powers and duties of the harbour master[15]. The harbour master is accountable to the authority for the safety of operations in the harbour.

Directions

1.3.3. The harbour master duly appointed by a harbour authority has powers of direction to regulate the time and manner of ships' entry to, departure from and movement within the harbour waters, and related purposes[16]. These powers are given for the purpose of giving specific directions to specific vessels for specific movements, unless the powers have been extended for other purposes. Harbour master's directions may be referred to as 'special directions' to distinguish them from 'general directions' given by the authority itself. Special directions are not for setting general rules but relate to specific vessels on particular occasions.

1.3.4. The powers of direction are exercisable by a harbour master's assistant - or any other person designated for the purpose in accordance with the authority's statutory powers. It is an offence not to comply with directions[17] but the master - or pilot - of a vessel is not obliged to obey directions if he believes that compliance would endanger the vessel. It is the duty of a harbour master in exercising these powers to consider the interests of all shipping in the harbour. Directions may include the use of tugs and other forms of assistance.

[14] Section 51 of the Harbours, Docks and Piers Clauses Act 1847
[15] Section 83 of the Harbours, Docks and Piers Clauses Act 1847
[16] Section 52 of the Harbours, Docks and Piers Clauses Act 1847
[17] Section 53 of the Harbours, Docks and Piers Clauses Act 1847

General directions

1.3.5. Some harbour authorities now have powers to give 'general directions' to regulate the movement and berthing of ships - these are additional to the powers of a harbour master to give 'special directions'. The power is exercisable by the authority itself, although they are for the harbour master to enforce, and to continue to regulate the movement of particular vessels. General directions may only be made after users have been consulted - this is not a requirement for the harbour master's 'special directions', which are more appropriate for emergencies.

Incidents threatening pollution

1.3.6. The Secretary of State has power[18] to give directions to a harbour authority, a harbour master, master of a vessel, pilot, or salvor or owner of a vessel, where an accident has occurred to or in a ship and, in his opinion, oil from the ship will or may cause pollution on a large scale. The power may be used if in his opinion this is urgently needed. The person directed may be required to take, or to refrain from taking, any action whatsoever. Among other things, the direction may require that the ship is moved, or not moved to or from a specified area, locality or place, that any oil or cargo should or should not be discharged, or that specified salvage measures should be taken. The Secretary of State, or persons authorised by him, may take any action he may direct to be taken. A representative of the Secretary of State (SOSREP) has been appointed to exercise these functions.

Dangerous vessels

1.3.7. A harbour master may give directions[19] prohibiting the entry into, or requiring the removal from, the harbour of any vessel if, in his opinion, the condition of that vessel, or the nature or condition of anything it contains, is such that its presence in the harbour might involve a grave and imminent danger to the safety of persons or property or risk that the vessel may, by sinking or foundering in the harbour, prevent or seriously prejudice the use of the harbour by other vessels. He must have regard to all the circumstances and to the safety of any person or vessel. Such directions given by the harbour master may be over-ridden by the Secretary of State[20].

Dangerous substances

1.3.8. A harbour master also has powers to prohibit the entry into a harbour of any vessel carrying dangerous goods, if the condition of those goods, or their packaging, or the vessel carrying them is such as to create a risk to health and safety, and to control similarly the entry on to dock estates of dangerous substances brought from inland[21]. The harbour master also has powers to regulate the movement of vessels carrying dangerous goods. Prior notice must be given to bring dangerous substances into a harbour area from sea or inland. The period of notice is normally 24 hours, although the harbour master has some powers of discretion on both the period and form of the notice.[22] Harbour authorities have a duty to prepare emergency plans for dealing with dangerous substances.

[18] Section 137 Merchant Shipping Act 1995 (as amended)
[19] Section 2 of the Dangerous Vessels Act 1985
[20] Section 3 of the Dangerous Vessels Act 1985
[21] The Dangerous Substances in Harbour Areas Regulations 1987 (SI 1987 No 37)
[22] The Dangerous Substances in Harbour Areas Regulations will be revised during 2000

Prevention of pollution

1.3.9. A harbour master may detain a vessel if he has reason to believe that it has committed an offence by discharging oil, or a mixture containing oil, into the waters of a harbour[23]. The transfer of oil between ships outside harbours will shortly be strictly controlled[24]. Notice must be given to a harbour master before oil is transferred at night to or from a ship in any harbour[25]. This requirement may be supplemented by harbour byelaws regulating transfers at any time. Byelaws may also regulate the offloading of oily water and oil waste residues. All oil spills into harbour waters are to be reported. Harbour masters have powers to board ships to investigate possible offences[26].

1.3.10. Harbour authorities' powers are considered to be wide enough to empower them to clear oil spills from their harbour. They have a duty to prepare plans to deal with such spills for approval on behalf of the Secretary of State[27].

Pilotage

1.3.11. Competent harbour authorities have specific powers under the Pilotage Act to enable them to discharge the pilotage duties imposed under that Act.

1.3.12. Competent harbour authorities have a duty[28] to keep under consideration -

a) whether any and, if so, what pilotage services need to be provided to secure the safety of ships navigating in or in the approaches to its harbour; and

b) whether in the interests of safety, pilotage should be compulsory for ships navigating in any part of that harbour or its approaches and, if so, for which ships and in which circumstances and what pilotage services need to be provided for those ships.

Without prejudice to the generality of this duty, each competent harbour authority shall in performing it have regard in particular to the hazards involved in the carriage of dangerous goods or harmful substances by ship.

1.3.13. Each competent harbour authority should provide such pilotage services as it considers to be needed having considered the requirement as described above[29]. Authorities must ensure that any vessel which they own or operate and use in the exercise of their functions otherwise than for pilotage is subject to the same pilotage obligations as any other vessel[30].

---

[23] Section 144 of the Merchant Shipping Act 1995
[24] Regulations are in preparation
[25] Section 135 of the Merchant Shipping Act 1995
[26] Section 259(6) of the Merchant Shipping Act 1995
[27] The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998 SI 1998 No 1056
[28] Sections 2(1) & (2) of the Pilotage Act 1987
[29] Section 2(3) of the Pilotage Act 1987
[30] Section 9 of the Pilotage Act 1987

Pilotage directions

1.3.14. If a competent harbour authority decides in the interests of safety that pilotage should be compulsory in the harbour or any part thereof, it must issue pilotage directions. The directions must specify how and to which vessels they apply[31]. An authority must consult first with owners of ships customarily using the area where directions would apply and any other person carrying on marine operations within the harbour. HM ships are not subject to pilotage directions.

1.3.15. In some ports, local legislation provides for licensed watermen and related categories. The pilotage directions may then exclude the vessels on which they work.

1.3.16. An authority is not necessarily obliged to issue directions covering all the circumstances for which it is considered that a pilotage service should be provided. There may be other circumstances in which it remains appropriate for the master of a vessel - rather than the authority - to decide whether or not a pilot should be taken. The master of a vessel not subject to pilotage directions has a right to request a pilot, and the authority must decide whether it is obliged to provide such a service having regard only to the interests of safety.

Authorisation of pilots

1.3.17. Each competent harbour authority may authorise suitably qualified pilots in its area[32]. Authorisations may relate to ships of a particular description and to particular parts of the harbour. The authority determines the qualifications for authorisation in respect of age, medical fitness standards, time of service, local knowledge, skill, character and otherwise. It may also - after giving notice and allowing a reasonable opportunity to make representations - suspend or revoke an authorisation if it appears to the authority that the authorised person is guilty of any incompetence or misconduct affecting his capability as a pilot, or has ceased to have the required qualifications - or failed to provide evidence that he so continues. An authorisation may also be suspended or revoked, on reasonable notice, if any contract or other arrangement under which the services of pilots are provided is terminated.

1.3.18. An authority may make such arrangements as it considers appropriate for the provision of the services of authorised pilots (whether under a contract of employment or a contract for services)[33]. It must offer to employ under a contract of employment any person it authorises unless a majority of the relevant authorised pilots have agreed that it need not do so. An authority may refuse to authorise any person who will not accept the arrangements it has made.

Information to be provided to a pilot

1.3.19. A pilot may require[34] the master of any ship he is piloting to declare its draught, length and beam, and such other information relating to the ship or its cargo as the pilot specifies and is necessary to enable him or her to carry out his

[31] Section 7 of the Pilotage Act 1987
[32] Section 3 of the Pilotage Act 1987
[33] Section 4 of the Pilotage Act 1987
[34] Section 18 of the Pilotage Act 1987

pilot duty. The master of a ship must bring to a pilot's attention defects or matters particular to the ship and its machinery and equipment which are known to him or her and likely to affect the navigation of the ship.

Pilot and the Port State

1.3.20. An authorised pilot engaged in the berthing and unberthing of a vessel in the United Kingdom, or engaged on a vessel bound for a port within an European Union Member State, must immediately inform the harbour authority whenever they learn in the course of their normal duties that there are deficiencies which may prejudice the safe navigation of the vessel, or which may pose a threat of harm to the environment[35]. The harbour authority shall immediately inform the Maritime and Coastguard Agency.

Other statutory pilotage provisions

1.3.21. An authorised pilot has the right to supersede an unauthorised pilot in the harbour to which his authorisation refers. A pilot is not to be taken out of his area without reasonable excuse. The master of a vessel has a duty to facilitate the safe boarding and landing of a pilot[36].

Pilot boats

1.3.22. Craft regularly employed in pilotage services provided by or on behalf of any competent harbour authority must be approved or licensed by the authority, the authority having satisfied itself that they are suitable for such use[37]. This statutory requirement is additional to licences required from the Maritime and Coastguard Agency, but the same standards should apply. There are statutory requirements for pilot boats[38] and an associated *Safety of Small Work Boat and Pilot Boat Code of Practice*. These address the safety of operational standards and procedures, including manning requirements, for vessels taken to sea.

Boarding and landing procedures

1.3.23. Pilots must be transferred to or form any ship within United Kingdom waters in accordance with statutory requirements[39], and an accompanying Merchant Shipping Notice.[40] There is also a *Boarding and Landing of Pilots by Pilot Boat Code of Practice*[41].

Pilotage exemption certificates

1.3.24. An authority which has given a pilotage direction must, on application by any person who is *bona fide* the master or first mate of any ship, grant a 'pilotage exemption certificate'[42] to him or her if it is satisfied that his or her skill, experience and local knowledge, are sufficient for him or her to be capable of piloting the ship of which he or she is master or first mate, or that ship and any other ships specified in the certificate,

[35] The Merchant Shipping (Port State Control) Regulations 1995 (SI 1995 No 3128 (as amended))
[36] Sections 17, 19 and 20 of the Pilotage Act 1987
[37] Section 6 of the Pilotage Act 1987
[38] The Mechant Shipping (Small Work Boats) Regulations 1998 (SI 1998 No 1069)
[39] The Merchant Shipping (Pilot Transfer Arrangements) Regulations 1999 (SI 1999 No 17)
[40] Mechant Shipping Notice MSN 1716 (M+F)
[41] Both Codes of Practice are published by the Stationery Office for the Maritime & Coastguard Agency
[42] Section 8 of the Pilotage Act 1987

within its harbour or such part of its harbour as may be so specified. In any case where it appears to an authority to be necessary in the interests of safety, it must be satisfied that knowledge of English is sufficient for that purpose. The requirements for exemption must not be unduly onerous having regard to the difficulties and danger of navigation in the harbour, and must not be more onerous than those required to be met by a person applying for pilot authorisation by the authority. A certificate does not remain in force more than a year but may be renewed annually provided the holder continues to satisfy the requirements.

1.3.26. There is special provision for the Secretary of State to direct that a harbour authority may withhold pilotage exemption certificates where there are unusual hazards[43]. In the nature of this provision, it is for exceptional cases – only two directions are extant[44]: there is no general provision for disallowing properly qualified applications for exemption.

Tugs

1.3.27. Any contract for the use of tugs is formally for the master of a vessel. However, harbour authorities should, in the interests of safety, lay down appropriate guidance for the use of tugs in port areas, including recommendations on the number of tugs required where appropriate. Interested parties, including users and pilots, should be consulted in the preparation of such guidance. It should be reflected in directions. There should be procedures for special directions to be used, if necessary, where a master or pilot proposes that the guidelines should not be applied in some respect.

Local lighthouse authority duties

1.3.28. Each harbour authority, and any other existing local lighthouse authority, is the local lighthouse authority as regards their area[45]. Every harbour authority has the power to carry out and maintain the marking or lighting of a harbour or any part of the harbour within the harbour authority's area or on harbour land[46]. The General Lighthouse Authorities have the general superintendence and management of all lighthouses, buoys or beacons within their respective areas[47]. They have a duty to inspect all lighthouses, buoys, beacons and other navigational aids belonging to or under the management of a local lighthouse authority, and may give directions to a local lighthouse authority. A local lighthouse authority shall not, without the General Lighthouse Authority's consent, erect, remove or vary the character of any lighthouse, buoy or beacon[48].

1.3.29. All aids to navigation maintained by harbour authorities and any other existing local lighthouse authorities must be maintained in accordance with the availability criteria laid down by the General Lighthouse Authorities, and must be subject to periodic review. The characteristics of these aids to navigation must comply with the IALA Guidelines and Recommendations. Local lighthouse

[43] Section 8(3) of the Pilotage Act 1987
[44] these apply in Sullom Voe and to certain traffic in the Firth of Forth
[45] Section 193 of the Merchant Shipping Act 1995
[46] Section 201of the Merchant Shipping Act 1995
[47] Section 195 of the Merchant Shipping Act 1995
[48] Sections 198 and 199 of the Merchant Shipping Act 1995

authorities and their officers must give to the General Lighthouse Authorities all such returns, explanations or information concerning the lighthouses, buoys and beacons under their management of them as the General Lighthouse Authority may require[49].

Wrecks

1.3.30. Where there is a wreck in, or in or near the approaches to, a harbour, which is or is likely to become a danger to navigation, the harbour authority may take possession of, remove or destroy it. They may also light or buoy it until it is raised, removed or destroyed[50].

1.3.31. Harbour authorities must exercise their wreck marking and removal powers where, in their opinion, a wreck is - or is likely to become - an obstruction or danger to navigation. They have a duty to have regard to the environment in the exercise of this and all other duties and powers.

1.4. REVISING DUTIES & POWERS

1.4.1. There are statutory procedures for revising the duties and powers of a harbour authority (besides general legislation) -

A. A harbour order may impose, confer, substitute or remove duties or powers, and change the limits within which they apply.

B. Byelaws may be made, revised or revoked, subject to the enabling powers, and to confirmation by the appropriate authority.

Harbour orders

1.4.2. The statutory powers of a harbour authority, contained in its local legislation, may be revised by means of a harbour revision order, provided the appropriate Minister is satisfied that the making of an order is desirable in the interests of securing the improvement, maintenance or management of the harbour in an efficient and economical manner or of facilitating the efficient and economic transport of goods by sea or in the interests of the recreational use of sea-going ships[51].

1.4.3. Harbour revision orders may be made[52] for objects including imposing or conferring duties or powers on a harbour authority (including powers to make byelaws), either in addition to, or in substitution for, existing duties or powers imposed or conferred, being duties or powers imposed or conferred for the purposes of -

(a) improving, maintaining or managing the harbour;

[49] Section 198(5) of the Merchant Shipping Act 1995
[50] Section 252 of the Merchant Shipping Act 1995
[51] Section 14 of the Harbours Act 1964 (as amended)
[52] Schedule 2 of the Harbours Act 1964 (as amended)

(b) marking or lighting the harbour, raising wrecks therein or otherwise making safe the navigation thereof; or

(c) regulating the carrying on by others of activities relating to the harbour or of activities on harbour land.

There are similar provisions for varying or abolishing such powers.

Limits of jurisdiction

1.4.4. Statutory powers are exercisable within the limits of jurisdiction prescribed in the harbour authority's local legislation, generally geographically. A harbour revision order may also be made settling (either for all purposes or for limited purposes) the limits within which the authority are to have jurisdiction or altering (either for all purposes or for limited purposes) such limits as previously settled. This provision may be used where it is considered necessary to extend controls into the approaches of a harbour.

1.4.5. If a competent harbour authority considers that pilotage should be compulsory for ships navigating in any area outside its harbour, it has a duty to apply for a harbour revision order to be made to extend its limits for the purposes of pilotage to include the area[53].

Byelaws

1.4.6. Chapter 1 explains the function of byelaws in relation to the regulation of marine operations. Byelaws are made on the initiative of any authority having the power to do so. Powers to make byelaws are found for each harbour authority in its Acts and Orders. In many cases, these are incorporated or transposed from the 1847 Act[54], although the procedure for confirmation in that Act is now obsolete and is now modelled upon provisions for confirmation of local authority byelaws[55]. These have in turn been adapted in some cases so that byelaws may be confirmed by the Secretary of State (or the appropriate devolved administration) with modifications.

1.5. ACCOUNTABILITY FOR MARINE SAFETY

1.5.1. This chapter is about who is accountable for what aspects of safety of navigation in harbours. It is based on these general principles:-

A. Each harbour authority is accountable for managing operations within the port safely and efficiently and its board members should hold themselves responsible for ensuring that it does so.

B. Each harbour authority should make a clear published commitment to the standard of marine safety required to comply with this Code.

[53] Section 7(5) of the Pilotage Act 1987
[54] Section 83 of the Harbours, Docks and Piers Clauses Act 1847
[55] Section 236 of the Local Government Act 1972

C. This Code represents the national standard against which the policies, procedures and performance of harbour authorities may be measured.

D. Executive and operational responsibilities for marine safety must be clearly assigned, and those to whom they are entrusted must be held accountable for their performance.

E. Harbour authorities must have a 'designated person' to provide independent assurance about the operation of its marine safety management systems, who has direct access to the board.

1.5.2. The key to effective discharge of the functions described in the previous chapters of this Code is the development and operation by each harbour authority of a safety management system. That in turn depends upon a clear assignment of relevant executive and operational responsibilities to the authority's officers.

The duty holder

1.5.3. The Code requires each harbour authority to hold themselves accountable for the discharge of its duties and powers to the standard laid down. It requires the board members of each authority to accept responsibility for ensuring that the authority discharges its duties and powers to that standard. Duties and powers relating to the safety of marine operations in any harbour have been entrusted to a statutory authority. Board members are collectively and individually responsible for the proper exercise of their authority's legal duties. It follows clearly that it – and they - are severally and collectively the 'duty holder'.

1.5.4. Harbour authorities have powers to appoint a harbour master, and to authorise pilots, and may properly entrust the operation of the harbour to such professional people; but they cannot assign their accountability. **Board members may not abdicate accountability on the grounds that they do not have particular skills**. They retain strategic oversight and direction of all aspects of the harbour operation. They must ensure that powers are discharged but not exceeded.

1.5.5. Board members should regard themselves as under a duty to ensure that their authority discharges its duties; and has in place an effective safety management system for this purpose. This Code sets the standard. The duty embraces development and maintainance appropriate policies, plans and procedures and ensuring that assessments and reviews are undertaken as required.

1.5.6. Each harbour authority is obliged to seek and adopt appropriate powers; for the effective enforcement of their regulations; and for setting dues at a level which adequately funds the discharge of all their duties. Board members are responsible for ensuring that it does so. The authority has specific powers and duties relating to appointments and authorisations, and the provision of certain services and facilities - discussed elsewhere in more detail.

1.5.7. It follows that board members should have an appropriate understanding of the authority's marine safety responsibilities - not to displace the professional people on whom they rely, but to provide proper oversight and direction of their work in relation to the safety of marine operations.

The designated person

1.5.8. It is fundamental to an effective safety management system that each harbour authority should assign the functions of a 'designated person' to provide independent assurance to the 'duty holder' that the safety management system is working effectively, and to audit the authority's compliance with the Code.

1.5.9. The person – or persons – to whom this function is entrusted must have direct access to the highest level of the authority.

The authority's officers

1.5.10. The appointment of officers is a matter for the authority, and will depend both upon the needs and resources of the authority. It is important that executive and operational responsibilities should be assigned appropriately by every authority - and to properly trained people. In some small authorities, functions may be combined. It is also important in all cases that there is a proper separation of safety and commercial functions. This is important for authorities of all sizes.

1.5.11. Delegations must be clear and formal; and must not obscure the accountability of the authority and its board members. All the authority's employees should have training appropriate to the responsibilities for marine operations assigned to them relating to the safety of marine operations. Competence standards being developed alongside this Code serve this purpose.

1.5.12. Delegations are not a substitute for the authority itself being directly involved in safety management. It will normally be appropriate therefore, for an authority's principal officers holding delegated responsibilities for safety to attend board meetings.

Chief Executive

1.5.13. Functions assigned to the Chief Executive or equivalent postholder may be set out in the authority's statutes or articles of association. The Chief Executive is accountable to the authority for the operational and financial control of the authority. The Chief Executive will advise the authority on all matters related to its duties and powers, with appropriate advice from the harbour master and other officers. He or she or she will oversee the implementation of its policies and decisions; will have overall executive responsibility for the safety of operations and staff; and will oversee the recruitment and training of staff. The holder will normally be a board member.

Harbour master

1.5.14. Every harbour authority should exercise the power to appoint a harbour master. The harbour master has principal operational responsibility for the safety of navigation in the harbour, exercising the authority's operational powers with respect to the safety of marine activities in the harbour and its approaches. The postholder must

be a suitably qualified person, fit for these purposes. Competence standards are being developed which set a standard for the recruitment and appraisal of harbour masters. He or she must also be fit for other duties imposed upon the harbour master for example by Health and Safety and Merchant Shipping legislation.

1.5.15. The authority's byelaws may include provisions for regulating the powers and duties of the harbour master, making the authority itself accountable for the post holder's work.

1.5.16. The harbour master duly appointed by a harbour authority has powers of direction to regulate the time and manner of ships' entry to, departure from and movement within the harbour waters, and related purposes. These powers are given for the purpose of giving specific directions to specific vessels for specific movements, unless the powers have been extended for other purposes. The powers of direction are exercisable by a harbour master's assistant - or any other person designated for the purpose in accordance with the authority's statutory powers.

1.5.17. The harbour master ensures the co-ordination and regulation of all vessels within the harbour and its approaches. He may be made responsible to the authority for developing and implementing emergency plans and procedures, and for regulating dangerous goods in transit on ships. He may similarly be made responsible for counter-pollution and waste disposal plans.

1.5.18. In relation to the authority's conservancy duties, the harbour master may be made responsible for the provision and maintenance of buoys, markers, beacons, moorings and other aids to navigation.

Pilotage

1.5.19. The Pilotage Act 1987 requires the competent harbour authority to provide the pilotage service, and all that entails. Delegation of management responsibility to the harbour master or other officer must be on that clear understanding.

1.5.20. Harbour authorities must retain a clear role in the authorisation and discipline of pilots, and on the issuing of exemption certificates. These matters have a high technical content but the authority cannot abdicate accountability for this reason. It is entirely proper, however, for the harbour master (or other qualified executive officer) to have management responsibility for the service provided by the authority and for the pilots it has authorised. It is acceptable for prescribed duties to be carried out by more than one person, provided each person's own duties are clearly defined.

Other matters

1.5.21. A safety management system may also assign responsibility for matters which may be more or less peripheral to marine operations - such as the safety of berths; for maintaining channels; hydrographic surveys; environmental monitoring; and the provision of appropriate engineering and environmental advice.

1.6. DUES

1.6.1. This chapter is about the powers harbour authorities have to raise dues to pay for the discharge of their legal obligations.

A. The right to use a harbour for the shipping and unshipping of goods, or the embarkation or disembarkation of passengers, is subject to the payment of dues.

B. Harbour authority boards must ensure that adequate resources are available to discharge marine safety obligations, and to set dues accordingly.

C. It is obligatory for the purposes of meeting the standard in this Code that measures are taken to reduce all risk associated with port marine operations as low as reasonably practicable.

D. It is not acceptable for dues to be set - and exceptions, special rates and waivers agreed - which compromise this obligation.

1.6.2. Harbour authorities have powers to collect dues from users to pay for the discharge of their statutory functions. They may demand, take and recover such "ship, passenger and goods dues as [the authority] think fit"[56]. The public right to use a port for the purpose of shipping and unshipping goods and the embarking and landing of passengers (the 'open port duty') is exercisable expressly upon payment of the rates made payable by the local legislation for that port. There are related obligations to publish dues and to keep accounts[57].

Resources

1.6.3. The power to levy dues is conferred to ensure that users pay for the discharge of an authority's legal functions. It is obligatory to reduce all risks associated with the harbour undertaking as low as reasonably practicable. What this means in practice is explained in the next chapter. It follows that each harbour authority also has a duty, so far as is reasonably practicable, to raise at least sufficient in dues to provide the resources needed fully to discharge these functions. To meet the standard in this Code, sufficient must be raised in dues to fund adequately the full discharge of these requirements.

1.6.4. The board of each harbour authority is responsible for ensuring that adequate resources are provided to its officers to enable them to operate the policies, procedures and systems effectively, recognising that proper discharge of the authority's duties will otherwise be compromised. This includes adequate resource for training.

[56] Section 26(2) of the Harbours Act 1964
[57] Sections 30 & 42 of the Harbours Act 1964 and Sections 10(5) & 14 of the Pilotage Act 1987

Pilotage charges

1.6.5. A competent harbour authority may make reasonable charges in respect of the pilotage services provided by it[58]. Without prejudice to the generality of this power, the charges may include -

(a) charges for the services of an authorised pilot;
(b) charges for expenses incurred by the pilot in providing his services;
(c) penalties for failure to keep an estimated arrival or departure time;
(d) charges for providing, maintaining and operating a pilot boat;
(e) any other costs in providing and maintaining the authority's pilot organisation.

Pilotage charges must be published in such manner as to bring them to the notice of those persons likely to be interested.

Exemption certificate holders' charges

1.6.6. Pilotage authorities may make reasonable charges in respect of any vessel which is subject to its pilotage directions which is under the pilotage of a master or first mate holding a pilotage exemption certificate in respect of the area and ship in question[59].

Appeals against dues

1.6.7. The harbour authority's power to levy dues is subject to a statutory right of objection to the Secretary of State (or the appropriate devolved administration as the case may be)[60]. This is to ensure that the right to use the harbour is not prejudiced by the imposition of unreasonable dues. An objector must have a substantial interest and the objection may relate to one of the following -

a) that the charge ought not to be imposed at all;
b) that the charge ought to be imposed at a lower rate;
c) that particular classes ought to be excluded from the scope of a charge.

1.6.8. The statutory right to use a harbour is expressed to be subject to payment of dues. As a general principle, all those who use facilities for the shipping and unshipping of goods or the embarkation and disembarkation of passengers should contribute through dues to the safe operation of the harbour. Exceptional reasons are therefore needed to justify any exemption - whether total or partial.

1.6.9. Where any appeal against dues is made to the Secretary of State (or the devolved administration as the case may be), consideration will be given – among all other relevant considerations – to the need for resources to discharge fully the duties of the harbour authority, and the requirements of this Code and other related regulations.

1.6.10. The right of objection to harbour dues has been extended to pilotage charges[61].

[58] Section 10 of the Pilotage Act 1987
[59] Section 10(3) of the Pilotage Act 1987
[60] Section 31 of the Harbours Act 1964
[61] Section 10(6) of the Pilotage Act 1987

PART TWO - MEASURES

2.1. SETTING A STANDARD

2.1.1. The chapters in Part 2 of this Code are about the way in which harbour authorities carry out the duties and powers described in Part 1. The aim of the Code is to set a nationally agreed standard for this purpose. This Part summarises the measures an authority must take to meet that standard. It is applicable to authorities of all sizes. The standards are based on these general principles: -

A. Harbour authority boards are accountable for their duties and powers, and should measure themselves against nationally agreed standards.

B. Harbour authorities should publish policies, plans and periodic reports setting out how they comply with the standards set by the Code.

C. Powers, policies, plans and procedures should be based on a formal assessment of hazards and risks, and harbour authorities should have formal safety management systems.

D. The aim of a safety management system is to ensure that all risks are tolerable and as low as reasonably practicable.

E. Safety management systems depend upon competence standards applied to all parties involved - these have been developed in parallel to the Code.

F. Harbour authorities should monitor and adopt good practice - A Good Practice Guide is also being developed in parallel to the Code.

Published policies and plans

2.1.2. All harbour authorities should develop policies and procedures in accordance with the standard in this Code, and should publish the policies and procedures they have adopted to achieve the required standard. Harbour authorities should publish amendments to their plans. They should also publish reports of their formal periodic reviews, setting performance against their plans and against the standard in the Code. The form of each authority's plan and reports will be for it to determine, so long as it covers properly the requirements of the Code. Reports should be at not less than three-year intervals: additional reports may also be appropriate.

2.1.3. A harbour authority's policies and procedures should include a statement of policy committing the authority to undertake and regulate marine operations in a way that safeguards the harbour, its users, the public and the environment.

2.1.4. Harbour authorities exist to facilitate the public right to use a harbour, and to safeguard the public interest in the safety of its operation. These obligations are funded by dues. A harbour authority should manage commercial pressures so as to

be able to discharge these duties effectively. These are not conflicting obligations. The authority should undertake to support commercial activities in the harbour through the safe and efficient provision of specified services, and the effective regulation of shipping within the harbour. Its policy statement should identify the measures it has adopted to this end.

2.1.5. Compliance with the standard set by this Code is achieved in stages. There should be a considered assessment of risks and the means of reducing them; proper control over ship movements in harbour waters; and the use of appropriate standards of qualification and training for all those involved in the management and execution of services. Systems should be put in place and operated effectively which manage the identified hazards and risks. Standards achieved should be monitored, using appropriate measures. There should also be a procedure for auditing performance against the policies and procedures that the authority has adopted in order to comply with the Code.

Taking stock

2.1.6. The first step is therefore to take stock of the powers, policies, systems and procedures that are in place having regard to an overall assessment of the risks to be managed. The level of detail required will depend partly upon the extent to which appropriate systems are already in place, but will also be determined by the requirements that follow in this Code for consultation on, and publication of, the safety policies adopted by each authority. It is a requirement of the Code that each authority's policies and procedures should demonstrate that they are based upon a full assessment of the hazards which have to be managed to ensure the safety of the harbour and its users.

2.1.7. A thriving business and good safety facilities are crucially interdependent - poor safety standards will eventually cost money. To trade commercial constraints against safety needs is the wrong approach. A harbour authority should have a clear view of its business purpose; and identify the implicit risks. It should then identify measurable risk management objectives and assess costs and benefits or any alternative mitigation measures. Every authority should decide whether the risks implied in the way it conducts its business are worthwhile - asking whether the value of an activity justifies the cost of managing the risks associated with it. These decisions will lead it to adopt a cost-effective management plan for the accepted risks.

Legal duties and powers

2.1.8. This Code uses harbour authorities' duties and powers as the basis upon which to establish a standard for safe port operations. Every harbour authority's plans should therefore include a sufficient statement of these powers. Plans and subsequent reports should say when these were most recently reviewed.

2.1.9. Duties and powers - whether in harbour orders, byelaws, or general or harbour master's directions - should be developed from a considered approach to risk. Where statutory force is given to an authority's rules, authority's plans should demonstrate that those rules clearly relate to the management of risks. Harbour authorities should also be able to demonstrate, therefore, that they are equally

clearly enforced, and plans should show that adequate resource is available for this purpose. Powers should only be sought - and, in the case of harbour orders and byelaws, will only be granted - on that understanding.

Safety assessment and management

2.1.10. An authority's powers will only effectively discharge its duties, and comply with this Code, if they are maintained by reference to a full risk assessment and safety management system. Authorities should adopt a structured and systematic methodology, aimed at enhancing marine safety within their jurisdiction and the harbour approaches, including protection of life, health, the marine environment and property, by using risk and cost/benefit assessments. A positive, analytical approach is needed, considering past events and accidents, but examining potential dangers and the means of avoiding them.

Continuous assessment and review

2.1.11. The process of assessment is continuous, so that new hazards and changed risks are properly identified and addressed, but there is also a place for periodic formal review. It is for each authority to determine how often to do a formal review, and to justify its decision in its published plan. A safety management system should be documented. The system is inadequate if it does not prompt a review when circumstances demand one. Local plans should therefore be reviewed as necessary - whenever new considerations need to be reflected. As a guide, a formal review of the whole plan is likely to be needed at least every five years: authorities will be expected to justify longer intervals in their published plans.

The 'ALARP' principle

2.1.12. The aim of assessing and managing marine operations in harbours is to reduce risk **as low as reasonably practicable** ('ALARP'). It is important that the judgement of risk is an objective one, and the size or financial position of the authority are immaterial to making it. The degree of risk in a particular activity or environment can, however, be balanced on the following terms against the time, trouble, cost and physical difficulty of taking measures that avoid the risk. If these are so disproportionate to the risk that it would be unreasonable for the people concerned to incur them, they are not obliged to do so. The greater the risk, the more likely it is that it is reasonable to go to very substantial expense, trouble and invention to reduce it. But if the consequences and the extent of a risk are small, insistence on great expense would not be considered reasonable.

2.1.13. Risks may be identified which are **intolerable**. Measures must be taken to eliminate these **so far as is practicable**. This generally requires whatever is technically possible in the light of current knowledge, which the person concerned had or ought to have had at the time. The cost, time and trouble involved are not to be taken into account in deciding what measures are possible to eliminate intolerable risk.

Competence standards

2.1.14. Systems developed by an authority with the aim of making best use of appropriate powers will fail unless those people assigned any role in the system are competent and trained to nationally agreed standards. This Code will be supported by competence standards designed for a wide range of specialist tasks. The foundation to these standards is an understanding that securing port safety is a team operation demanding an appreciation of the work of other specialists.

2.1.15. Harbour authorities should assess the fitness of all persons appointed to positions with responsibility for safety of navigation. If they do not use the competence standards associated with this Code, they should be able to show that theirs are fully equivalent.

2.1.16. Harbour authorities should promote the involvement of port users in training programmes. They should adopt a training strategy that develops a shared understanding of their safety management systems.

Good practice

2.1.17. The Code is also supported by a Guide to Good Practice on Marine Operations in Ports. This will be kept under review and developed as good practice is developed and published by authorities pursuant to the Code. Authorities' policies and procedures should make full use of developed good practice.

2.2. RISK ASSESSMENT AND SAFETY MANAGEMENT

2.2.1. The Code applies to the regulation of marine operations by harbour authorities the well-developed principles of formal risk assessment and safety management systems. This chapter outlines the approach which harbour authorities should take, following these general principles: -

A. Every harbour authority has a statutory duty to manage safety and should have a safety management system for marine operations in its waters, developed after a formal risk assessment.

B. The safety management system should be described in a published document, setting out the authority's policies and procedures relating to the regulation of marine operations.

C. Every harbour authority's statutory powers to regulate marine operations should be exercised in accordance with the harbour authority's safety management system.

D. The safety management system should include verification and audit procedures.

E. The safety management system should deal with preparedness for emergencies.

2.2.2. The key elements of successful safety management are -

- effective safety policies setting a clear direction for the organisation to follow;
- an effective management structure and arrangements in place for delivering the policy;
- a planned and systematic approach to implementing the policy through an effective safety management system;
- performance is measured against agreed standards to reveal when and where improvement is needed;
- the organisation learns from *all* relevant experience and applies the lessons.

Together these elements constitute a continuous cycle over time, aimed at ensuring continued achievement of safety goals, and relevance of policies, plans and procedures; and continuous improvement in safety performance.

Safety policy

2.2.3. Harbour authorities should develop a safety policy for marine operations within their jurisdiction. This requirement itself makes a contribution to safety by obliging those responsible to consider its importance, and the need for practical and formal safety systems. The policy should be published, both to demonstrate the authority's commitment to the policy and also to ensure the involvement of harbour users. The management of any harbour under statutory powers should be based on a clear safety policy adopted by the harbour authority. Harbour authorities should make the following commitments -

- to manage the relevant assets of the authority safely and efficiently;
- to discharge the duties and powers described in earlier chapters of this Code;
- to maintain relevant harbour equipment - where these exist, to agreed industry standards;
- to recruit and train operational staff to nationally agreed competence levels;
- to ensure that staff are properly trained for emergencies and contingencies.

Organisation

2.2.4. A harbour authority's safety policy should promote a positive safety culture, fostered by the visible and active leadership of senior management. Its aim should include the motivation and empowerment of staff to work safely, not just to avoid accidents. Policy and related procedures should be underpinned by effective staff involvement and participation, and sustained by effective communication and promotion of competence.

Safety management systems

2.2.5. Harbour authorities have a statutory duty to manage safety, under health and safety regulations. The purpose of the Code is not to replace this duty but to set out how the principles to marine operations. The particular risks associated with these operations bring their own safety management requirements, based on an appropriate assessment of port marine activities. The principles and objectives, however, are not fundamentally different.

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

2.2.7. Every harbour authority's policies supported by procedures to:-

- regulate the safe arrival, departure and movement within the harbour of all vessels;
- protect the general public from dangers arising from marine activities within the harbour;
- carry out all its functions with special regard to their possible environmental impact;
- prevent acts or omissions that may cause personal injury to employees or others, or damage the environment.

Measuring performance

2.2.8. A safety management system should include means of active self-monitoring to ensure that the system is functioning. If controls fail, reactive monitoring needs to discover why by investigating accidents, or incidents, which could cause harm or loss. The objectives of monitoring are to determine the immediate causes, and to identify the underlying causes and the implications for the design and operation of the safety management system.

2.2.9. The function of a 'designated person' is to provide independent assurance directly to the 'duty holder' that the safety management system is working effectively. It should be assigned accordingly. A safety management system should include proper record procedures so that the duty holder and designated person can be satisfied that the system is functioning properly. Incidents and complaints about safety should be promptly investigated; and the incident and investigation both properly recorded.

Auditing and reviewing performance

2.1.10. A safety management system should include provision for systematic review of performance based on information from monitoring and from independent audits of the whole system. A strong commitment is needed to continuous improvement involving the constant development of policies, systems and techniques of risk control.

2.1.11. Performance is assessed by internal reference to performance indicators and by external comparison with the performance of business competitors and good practice. Performance should also be recorded in reports published by each harbour authority.

Emergency Planning
2.2.12. A safety management system should include preparations for emergencies - and these should be identified as far as practicable from the formal risk assessment. Emergency plans need to published and exercised.

Consultation
2.2.13. A safety management system is only effective if the authority responsible takes active measures to involve and secure the commitment of all concerned. This applies both to the formal assessment, and to the subsequent operation of the management system. Not all will be the authority's employees. Harbour authorities should proceed in full consultation with all interests, and their published policies should cover these interests' involvement in safety management.

2.2.14. Harbour authorities should consult as appropriate among those likely to be involved in or affected by the safety management system they adopt. This opportunity should be taken to develop a consensus about safe navigation in the harbour. Parties include the authority's authorised pilots, the harbour master and his navigation staff - including port control, towage providers and tugmasters, lock keepers, berthing parties, masters and ship's officers with pilotage exemption certificates, and other port users as far as possible.

Risk assessment
2.2.15. A safety management system should be informed by and based upon a formal risk assessment of the port's marine activities, a documented, structured and systematic process comprising -

- the identification and analysis of risks;
- an assessment of these risks against an appropriate standard of acceptability;
- a cost-benefit assessment of risk reducing measures where appropriate.

Every authority should make such a formal, documented assessment. A safety management system cannot rely upon informal procedures or partial evaluations; systems and procedures should be developed through a considered and comprehensive process. A safety management system provides for the implementation and monitoring of the results of the formal assessment.

2.2.16. There should be a critical appraisal of all routine and non-routine activities. Those involved should not just include employees, but others including members of the public, contractors and users of the port.

2.2.17. Assessing risks to help to determine precautions can be qualitative or quantitative. Quantified risk assessment is not a requirement, and may not be practicable. Legal limits may apply in some cases. Risk assessments should be done by competent people, especially when choosing appropriate quantitative risk assessment techniques and interpreting results.

Risk control
2.2.18. All final decisions about risk control methods should take into account relevant legislation, which establishes minimum standards. Human factors should

be considered. The aim is reduce risks **as low as reasonably practicable** (see chapter 2.1 above). The preferred hierarchy of risk control principles -

- eliminate risks - by avoiding a hazardous procedure, or substituting a less dangerous one;
- combat risks - by taking protective measures to prevent risk;
- minimise risk - by suitable systems of working.

If a range of procedures is available, the relative costs need to be weighed against the degree of control provided, both in the short and long term.

2.3. CONSERVANCY DUTIES

2.3.1. This chapter is about the general requirements imposed upon a harbour authority under the conservancy duty:-

A. 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 use it.

B. Harbour authorities should provide users with adequate information about conditions in the harbour.

C. Harbour authorities have duties and powers as local lighthouse authorities; and specific powers in relation to wrecks.

Hydrography

2.3.2. Harbour authorities have a duty to find, mark and monitor the best navigable channel or channels in the harbour. This task is an essential part of a formal hazard assessment and safety management system. They should include in their published policies and plans a statement of the measures adopted for this purpose.

2.3.3. Harbour authorities should have effective arrangements to publish appropriate hydrographic information, including not only charts but supplementary information including especially warnings on recently identified navigational hazards.

Admiralty charts

2.3.4. Harbour authorities should provide regular information required for Admiralty Charts and publications. The UK Hydrographic Office provides a standard form of agreement for these arrangements.

Prevailing conditions

2.3.5. In addition to information about general conditions, harbour authorities should also have procedures to make available timely information on prevailing and forecast meteorological conditions such as wind, tide and other factors liable to be affected by the weather and the way the harbour is used.

Aids to navigation
2.3.7. A local lighthouse authority should exercise its functions in accordance with a safety management system. The provision and level of aids to navigation provided should be based on formal risk assessment. The characteristics and availability of all aids to navigation should comply with internationally agreed guidelines, applied in consultation with the General Lighthouse Authority.

Anchorages
2.3.8. A harbour authority's safety management system should make appropriate provision for safe anchorages in the harbour and its approaches, taking into account the size and type of vessels likely to require them, the needs of other shipping - including passing shipping, and the local conditions.

Wrecks
2.3.9. A harbour authority's safety management system should require a risk assessment to be undertaken of any wreck in, or in or near the approaches to, a harbour. The authority's powers to raise, remove, destroy and mark a wreck which is, or is likely to become, a danger to navigation should be exercised having regard to that assessment, with the aim of reducing the risk to as low as reasonably practicable.

Reviewing changes
2.3.10. The need for survey should be considered if harbour operations are changed - for example the use of berths; the reception of larger vessels - and also significant increases in harbour traffic which may require additional passing places, anchorages, etc..

Works in harbours
2.3.11. Works in harbours are liable to interfere with navigation. The safety management system should have appropriate provision for this, should works be undertaken. There will be a need for a special assessment in each case where new hazards are likely to arise. The safety management system should provide in particular for the regulation of dredgers and other craft associated with such works.

2.4. REGULATION AND MANAGEMENT OF NAVIGATION

2.4.1. This chapter is about the powers which harbour authorities have to make byelaws and give directions. These powers give statutory force to requirements of the safety management systems developed under this Code. The use of these powers should follow these general principles:-

A. Ports have rules in byelaws and directions, which every user must obey as a condition of his or her right to use the harbour.

B. Harbour authorities have a duty to make proper use of powers to make byelaws, and to give directions (including pilotage directions), to regulate all vessel movements in their waters.

C. These powers should be exercised in support of the policies and procedures developed in the authority's safety management system, and should be used to manage the navigation of all vessels.

D. Harbour authorities should have clear policies on the enforcement of directions, and should monitor compliance.

E. Powers of direction should be used to require the use of port passage plans in appropriate cases - whether vessels are piloted or not.

Available powers

2.4.2. There are four main powers available to a harbour authority to regulate ship movements -

- **byelaws**: provide a general framework for rules of navigation which apply to all vessels - including speed limits, defining fairways, anchorages, etc. - and which can be treated as unlikely to require frequent or short term amendment.

- **harbour directions -** may be given by the harbour master: these directions are time and vessel specific, and are most apt for operational purposes and for emergencies. Some harbour authorities have more effective powers of general direction to be given by the authority itself[62]. Directions should apply to all vessels, including where a vessel is conducted by a pilot or the holder of a pilotage exemption certificate.

- **pilotage directions -** may generally be given by harbour authorities which have the power to regulate navigation: these determine the circumstances in which pilotage is to be compulsory.

- **dangerous vessel directions -** are a special case, permitting a harbour master to remove a vessel from the harbour in clearly defined circumstances: they may be over-ruled by the Secretary of State.

The use of all these powers should be governed by the authority's formal risk assessment, and should support the safety management system. It is to be noted, in this connection, that the master - or pilot - of a vessel is not obliged to obey directions if he believes that compliance would endanger the vessel. It is therefore essential that the use all of these powers should be clearly based on a proper assessment of the safety of the harbour and vessels using it.

Collision Regulations

2.4.3. The Collision Regulations[63] apply to all vessels upon the high seas and in all waters connected therewith navigable by sea-going vessels. They generally apply in harbours, but not in land-locked channels. Nothing in the rules interferes with the

[62] The report on the Review of the Pilotage Act proposed legislation to permit all authorities with powers in relation to the regulation of shipping movement to give general directions - this has not yet progressed.

[63] The Merchant Shipping (Distress and Prevention of Collision) Regulations 1996 (SI 1996 No 75)

operation of special rules by an appropriate authority (including a harbour authority). Such special rules should conform as closely as possible to those in the Regulations. Thus, a byelaw made by a harbour authority will prevail if inconsistent with the Regulations, but there must be strong reasons for making or confirming such a byelaw. Byelaws should be considered to meet circumstances for which the Collision Regulations do not provide. A byelaw which deals with the same subject as a provision in the Regulations will exclude the application of that provision.

Enforcement

2.4.4. Byelaws and directions adopted in order to manage navigation risk should be backed by an appropriate policy on enforcement. Where, for example, directions are adopted in the interests of safety to ensure that vessels using the harbour are appropriately manned, this should be monitored with the assistance of port controllers and pilots.

2.4.5. Where statutory powers are linked to a proper process of assessment, so that rules relate to identified risks, they should be equally clearly enforced. It is therefore important that the power to give directions is properly controlled by the delegation procedures adopted by the authority. Communications to vessels should be in a specific language which makes clear whether it is advice or a direction that is being given.

2.4.6. Each authority should have a clear policy on prosecution, which is consistent with the safety assessment on which its directions are based. Authorities should not expect enforcement to pay for itself, or adopt a policy with that objective.

Link to safety management system

2.4.7. The authority's safety management system needs to make proper use of all the available powers. There should be a demonstrable connection between powers adopted and the formal risk assessment.

2.4.8. Rules required in the interests of safety of navigation should be given legal power by means of byelaws or directions. Authorities without appropriate powers to manage navigation risks identified by their formal risk assessment should consider seeking them.

Vessel Traffic Services

2.4.9. Harbour authorities use various methods to monitor and communicate with vessels using their harbour. These should allow appropriate information, advice and directions to be passed between the harbour master or port control and ships in the harbour. Where the formal risk assessment indicates a requirement, a functional radar or radio-based vessel traffic services should be established and operated in accordance with internationally agreed guidelines.

Directions and passage plans

2.4.10. Harbour authorities' and harbour masters' powers to regulate the time and manner of ships entry to, departure from and movement within their waters serve to compliment port passage planning. Passage plans are therefore to be operated and enforced as an adjunct to the powers of direction.

Port passage guidance

2.4.11. The next part of this chapter deals with the adoption by harbour authorities of port passage guidance as an adjunct to the powers of direction already described. These plans are to be given legal force by the harbour authority's statutory powers. They are to be used in conjunction with master/pilot exchange forms, which ensure that both have information needed for an agreed pilotage passage plan.

2.4.12. The object of port passage guidance as required by this Code is to ensure that -

- all parties know relevant details of any particular port passage in advance;
- there is a clear, shared understanding of potential hazards, margins of safety, and the ship's characteristics;
- intentions and required actions are agreed for the conduct of the port passage - including the use of tugs and their availability - and any significant deviation should it become necessary.

2.4.13. Harbour authorities should use directions not only to require the use of plans, but also the advance preparation of appropriate passage plans by visiting ships' masters, including masters and ships officers exercising pilotage exemption certificates. Authorities should monitor compliance with such requirements.

Scope of passage planning requirements

2.4.14. The use of passage planning is not confined to vessels conducted by a pilot, but should also be required for vessels conducted by the user of a pilotage exemption certificate, and on vessels excepted from an authority's pilotage directions.

2.4.15. Passage plans may be dispensed with for particular kinds of vessel if the formal risk assessment has established that they are not necessary for the management of risk in such cases. As a general rule it is acceptable to exclude those vessels for which the harbour authority's byelaws give sufficient control - for example, recreational vessels. There is, however, no objection to including such vessels if that is necessary and practicable.

Role of harbour authority on port passage guidance

2.4.16. Harbour authorities should take the lead in promoting the use of passage planning. They should take an overall view of the scope and content of passage plans for use in their areas. Published safety policies should state and justify the conclusion they reach. They should seek to establish general guidance - in simple cases for any entry to the port; in others, elaborated for particular berths, ship sizes, cargoes, conditions, tidal constraints, tug allocation, holding areas, etc.. Particular attention should be paid to critical port movements, for example the movement of deep draught vessels to particular berths.

Publication of port passage guidance

2.4.17. Authorities should take appropriate steps to publish up to date guidance or general plans adopted by the port.

2.4.18. Passage plans are not immutable. It is important not to constrain the pilot's need to react to unforeseen circumstances; but deviations from the agreed plan should be discussed with the master and, when relevant, with port control, and recorded with reasons.

Passage record keeping

2.4.19. Plans adopted for particular passages should be recorded - ideally on the chart or other plan record. Harbour authorities should satisfy themselves that they can secure access to these records in any case where they may be needed for incident investigation.

Dangerous vessels

2.4.20. The potential need to give directions in relation to a dangerous vessel should be addressed in the harbour authority's safety management system. There should be clear procedures for the harbour master to use in assessing all the relevant considerations when a case arises. Since the power of direction can be over-ruled by the Secretary of State, it is desirable to have an understanding with the Maritime & Coastguard Agency about the circumstances in which a dangerous vessel might require access to, or to be kept in, a harbour. This will not displace the statutory obligation on the Secretary of State, or his representative, to consult in particular cases.

2.5. PILOTAGE

2.5.1. This chapter is about the powers and duties which harbour authorities have to provide a pilotage service. The use of these powers should follow these general principles:-

A. Harbour authorities are accountable for the duty to provide a pilotage service; and for keeping the need for pilotage and the service provided under constant and formal review.

B. Harbour authorities should therefore exercise control over the provision of the service, including the use of pilotage directions, and the recruitment, authorisation, examination, employment status, and training of pilots.

C. Pilotage should be fully integrated with other port safety services under harbour authority control.

D. Authorised pilots are accountable to their authorising authority for the use they make of their authorisations: harbour authorities should have contracts with authorised pilots, regulating the conditions under which they work - including procedures for resolving disputes.

Agents and joint arrangements

2.5.2. A harbour authority may arrange for certain pilotage functions to be exercised on its behalf by such other persons as its sees fit, including a company established for the purpose, or another harbour authority. Two or more authorities may arrange to discharge such functions jointly.

2.5.3. These arrangements may not be used to assign or share -

- the duty to keep the need for pilotage under review;
- the authorisation of pilots;
- the employment arrangements for its authorised pilots;
- the approval of pilot launches;
- the issue of pilotage directions;
- the issue of exemption certificates.

2.5.4. These are all key elements of the safety management system required by this Code. Where other functions have been delegated, or there is a joint arrangement, the other body or authority should be fully consulted in developing the system. It is open to more than one authority operating a joint arrangement for pilotage to have a joint safety management system.

2.5.5. Any delegation or joint arrangement should be subject to a formal contract with any other body used in this way (including another harbour authority) which fully protects statutory obligations. The contract should set out the decisions which the delegated or joint body may make, and any conditions to which this is to be made subject. There should be provision in such a contract to terminate the arrangement at any time in order to enable an authority to carry out delegated or joint functions itself, or to make some other permissible arrangement instead.

Assessing the need

2.5.6. Every harbour authority with powers to regulate navigation in its waters should keep under consideration the need for pilotage services to be provided to secure the safety of ships navigating in or in the approaches to its harbour. This consideration should be part of the authority’s formal risk assessment. There is a specific duty to have regard in particular to the hazards involved in the carriage of dangerous goods or harmful substances by ship. The requirement should be kept under constant review to take account of changes in the use of the harbour. Paragraph 2.1.11. requires a review of an authority's whole plan not less than at five year intervals: pilotage directions should have more frequent re-assessment at not more than three-year intervals.

2.5.7. The process of review is used to establish whether pilotage should be compulsory for ships navigating in any part of that harbour or its approaches and, if so, for which ships and in which circumstances and what pilotage services need to be provided for those ships. This is to be determined on grounds of safety only. It should be covered by the formal risk assessment required by this Code, and the requirement kept under review in the harbour authority's safety management system.

Providing the service

2.5.8. Each competent harbour authority should provide the pilotage services it considers to be needed. This duty is not discharged simply by authorising one or more pilots: it includes the management of the service, ensuring that the person assigned as pilot to every vessel taking one is fit and appropriately qualified for that task. The service should be managed in a way which allows such control.

Compulsory pilotage

2.5.9. Compulsory pilotage is imposed by means of directions. Directions should define the circumstances in which pilotage is to be compulsory. A considered approach should be taken to this. Pilotage directions should specify how and to which vessels they apply, and in what circumstances. It may be that pilotage is appropriate for a class of vessels in some circumstances and not others.

2.5.10. A pilotage direction may specify that it does not apply for example to a vessel under the command of a licensed waterman. It may also be appropriate, for example, not to require pilotage while a dredger is working within the pilotage limit but when it is transiting from the sandbanks to a river berth. A direction might also, for example, exclude certain vessels from compulsory pilotage except in 'circumstances' such as poor visibility. It is always necessary for these cases to be decided by reference to the authority's formal risk assessment, which must provide assurance to the authority that risks remain properly managed; and on the competence of those excepted from pilotage by these means.

2.5.11. The master of a vessel may ask for a pilot even when not required to take one by pilotage directions. These may be special circumstances - for example, the master is unfamilar with the port, or traffic or weather conditions are difficult. The authority should allow for such requests when providing the pilotage service. An authority is obliged to satisfy itself that any vessel representing that it is not covered by the pilotage directions is entitled to do so. A harbour authority should monitor such requests carefully and refer to them when reviewing whether in any such circumstances pilotage should become compulsory.

Waiving directions

2.5.12. There is no provision for pilotage directions, once given, to be waived or disapplied - other than by the making of new directions by the authority. This is not a matter on which a harbour master or port controller should have discretion. It may be necessary for the directions to be carefully drafted to ensure that special circumstances in which they would otherwise apply are properly covered. Exceptions should be fully justifiable by reference to the formal risk assessment. It is unlikely to be appropriate, for example, for directions not to apply in highly adverse conditions which make boarding or landing a pilot too dangerous to be undertaken.

Excepted vessels

2.5.13. Pilotage directions may not apply to certain small vessels and other means need to be identified to manage any risks associated with these. The formal risk assessment may confirm that other vessels need not be subject to pilotage

directions provided any risk relating to them can be effectively managed by other means

Two pilots

2.5.14. The formal risk assessment should be used to identify any circumstances in which more than one pilot would be needed to conduct the navigation of a vessel safely.

Authorisation of pilots

2.5.15. Each competent harbour authority may authorise suitably qualified pilots in its area. Authorisations may relate to ships of a particular description and to particular parts of the harbour.

2.5.16. Authorities should determine the qualifications for authorisation in respect of age, physical fitness, time of service, local knowledge, skill, character and otherwise. Authorities should establish proper arrangements for assessing competence, in accordance with the competence standards developed in parallel to this Code and for keeping fitness under review. These should be published and available to applicants.

2.5.17. Authorities should have procedures for re-validating authorisations not less than every five years. Harbour authorities should not allow pilot authorisations to be held by persons who have not been rostered as working pilots for more than two years. Re-validation should include an assessment of competence sufficient to satisfy the authority that the pilot remains qualified to be authorised. The authority should consider re-assessing any authorised pilot who has not been active for any reason if it considers that competence may be in question. It should do that assessment, and arrange appropriate training, before allowing the pilot to be rostered.

2.5.18. Authorities are empowered to make appropriate arrangements for the provision of the services of authorised pilots. A contract of employment should be offered unless a majority of the relevant authorised pilots have agreed otherwise. Authorities should be able to show that any alternative arrangement does not fetter its ability to fulfil any of the requirements of this Code.

2.5.19. It is for the harbour authority alone to decide (using appropriate procedures for delegation to its officers) that an authorisation should be given. Subject to that principle, it is for an authority or its agent to determine that a particular authorised pilot is appropriately qualified and fit to pilot any ship on any occasion. Authorities are accountable for these decisions. They and any agent should have discretion to decide not to allocate an authorised pilot for a period, or for particular ships, and this should be an accepted condition of every authorisation.

Contracts with authorised pilots

2.5.20. For the purposes of being able to regulate the provision of its pilotage service, each authority should have a contractual arrangement with its authorised pilots (whether under a contract of employment or a contract for services). This may be individual with each pilot or with an agent such as a pilot company. The contract should

reflect the general conditions under which people are employed by the authority, including regulation of hours, leave, medical standards, training, incident reporting, discipline, employment protection, grievance and complaints procedures. The purpose of the contract is to regulate the relationship between the authority and its pilots in the proper interests of both. In the authority's case, it should retain control over the provision of the service for which it is accountable.

2.5.21. The contract between an authority and its authorised pilots should also take account of any contract the authority has made with another body or authority to have pilotage functions discharged on its behalf.

2.5.22. An authorised pilot's contract should enable the authority or its agent to decide that a particular pilot may, or should not be allocated to a particular ship on a particular occasion. Authorities should ensure that any arrangements by which the operation of the pilotage service is delegated reserve this control.

2.5.23. An authority may refuse to authorise any person who does not accept the arrangements it has made for providing the pilotage service. An authority may also - after giving notice and allowing a reasonable opportunity to make representations - suspend or revoke an authorisation if it appears to the authority that the authorised person is guilty of any incompetence or misconduct affecting his capability as a pilot or has ceased to have the required qualifications - or failed to provide evidence that he so continues. An authorisation may also be suspended or revoked if there is a surplus of pilots or if any contract or other arrangement under which the services of pilots are provided is terminated. Authorities should have formal procedures for these circumstances, incorporated in the contracts they have with authorised pilots.

Training

2.5.24. Harbour authorities should ensure that all their authorised pilots are trained so as to be qualified to conduct the vessels to which they are likely to be allocated. They should not allow any pilot to be allocated if not appropriately trained and qualified. The training standards should be appropriate to the competence standards developed in parallel with this Code. Every authorised pilot's training needs to be kept under review, with additional training provided before allocating to different types of vessels or to the use new types of tugs.

Boarding and landing procedures

2.5.25. A harbour authority's safety management system should be used to identify safe pilot boarding and disembarkation areas. Every harbour authority's safety management system should incorporate the requirements of the Merchant Shipping (Pilot Transfer Arrangements) Regulations 1999, and the requirements of the accompanying Merchant Shipping Notice. There is also a *Boarding and Landing of Pilots by Pilot Boat Code of Practice*. They should take steps to ensure that pilots do not board or land from vessels in conditions contrary to these requirements.

2.5.26. A pilot is not to be taken out of his area without reasonable excuse. The pilot cannot be disembarked, however, while the vessel is subject to compulsory pilotage under pilotage directions. If the risk assessment shows that it is acceptable

in some or all cases for a pilot to be disembarked within the port limit, this should be reflected in the geographical limit of the appropriate pilotage directions.

Allocating pilots

2.5.27. Authorities of their agents should arrange for pilots to be allocated in adequate time to prepare passage plans. To comply with the Code, harbour authorities or their agents should should ensure that systems exist for the provision of relevant information for their pilots, and ensure that they operate properly.

2.6. PILOTAGE EXEMPTION

2.6.1. This chapter is about the powers and duties which harbour authorities have to exempt certain ships' officers from their requirements to take an authorised pilot. The use of these powers should follow these general principles:-

A. The standards for exemption certificates must not be more onerous than those required for an authorised pilot; but they should be equivalent.

B. Exemption certificate holders and their employers are accountable to the issuing harbour authority for the proper use of any certificate.

C. Harbour authorities should have formal written agreements with certificate holders and their employers to regulate the use of certificates.

Award of certificates

2.6.2. Authorities have a duty to issue pilotage exemption certificates to appropriately qualified mariners, and are not allowed to withhold one for reasons unconnected with an applicant’s skill and experience.

2.6.3. Harbour authorities should have formal procedures for assessing the suitability of applicants. The standards adopted by harbour authorities should be equivalent to the national guidelines developed in parallel to this Code for the issue of exemption certificates. The standards and procedures adopted by each authority should be published and available to applicants. Where an authority’s pilots participate in the assessment process, it is necessary to have an additional independent element of validation.

Training

2.6.4. Harbour authorities should satisfy themselves that would-be certificate holders are properly trained on the conduct of the vessel or vessels to which a certificate applies.

Use of certificates

2.6.5. An exemption certificate may only be used *bona fide* by the master or first mate of a vessel, and only if that vessel is named on the holder’s certificate.

2.6.6. The holder of a certificate is directly accountable to the issuing authority for its proper use. The holder's employer - and, where the holder is serving as *bona fide* mate, the master - are similarly accountable.

2.6.7. Authorities should make agreements with certificate holders and their employers, setting out agreed conditions on which certificates are issued to ensure the use certificates only in accordance with the terms on which they are issued. The agreements should bind holders and employers to co-operate with procedures for checking the proper use of certificates and investigating irregularities. They should include a commitment that a certificate will be surrendered if mis-use is proved. They should allow the authority to take reasonable steps to satisfy themselves about the continuing competence and medical fitness of the certificate holder.

2.6.8. If the ship is not being navigated under the pilotage of a master or *bona fide* first mate who has a valid certificate for the ship, it becomes liable to take a pilot where pilotage directions apply. The ship is not exempt merely by virtue of having a certificate holder on board.

Pilotage charges and exemption

2.6.9. Pilotage authorities may make reasonable charges in respect of any vessel which is subject to its pilotage directions but is under the pilotage of a master or first mate holding a pilotage exemption certificate in respect of the area and ship in question, and there is a right to object to the charges set.

2.7. MARINE SERVICES

2.7.1. This chapter is about various marine services, including the use of tugs and workboats in a harbour, and the provision of moorings. The following general principles apply -

A. An authority's safety management system should cover the use of harbour craft and the provision of moorings.

B. The formal safety assessment should be used to identify the need for, and potential benefits for safety management, of harbour craft.

C. The authority should ensure that harbour vessels or craft which are used in the harbour are fit for purpose and that crew are appropriately trained and qualified for the tasks they are likely to perform.

D. Byelaws and the power to give directions are available for these purposes.

Harbour craft include tugs, pilot boats and workboats.

Tugs

2.7.2. The need for tugs should be included in the risk assessment – taking account not only of vessels which need their assistance to navigate in the harbour (whether

as an active or passive escort), but also of the scope for using tugs as a means of reducing risk. An assessment may identify that additional use of tugs is an appropriate means of adequately reducing a particular risk.

2.7.3. The assessment should have regard to the capacity of available of tugs. If tugs are provided commercially, this may be determined by the operator's judgement of the likely work. If commercial provision of tugs is not enough for the effective management of relevant risk, the authority will have to identify other means of doing so. These may impose restrictions on harbour operations. Options include augmenting commercially provided towing resources - including the authority contracting tugs itself.

2.7.4. Where a need for tugs is found, harbour authorities should develop towage guidelines from their risk assessment and incorporate them in their safety management system. The guidelines should be based on an objective assessment of safety, not on economic considerations. They should take account of the physical conditions of the harbour and the characteristics of vessels using it. There should be effective procedures in place to keep the guidelines up-to-date and to enforce them with directions. Towage guidelines should be developed in consultation with users and pilots. It is not a function of towing guidelines to restrict access to the provision of services by properly qulified suppliers.

2.7.5. The use of tugs for for berthing, unberthing and escorting is a matter for the master – and for agreement with a pilot, where embarked. If a master does not wish to follow the guidelines, against the professional judgement of a pilot, the harbour master should be referred to for special directions. The harbour master may direct a ship to wait for appropriate conditions in these circumstances.

2.7.6. Towage guidelines, and related directions, should be used to ensure the use of tugs with appropriately trained and qualified pilots and crew. Competence standards developed for inshore tug personnel should be used for this purpose. The safety management system should provide wherever possible for tug crews to train with pilots and other port marine personnel.

Pilot launches and workboats

2.7.7. Harbour authorities have a duty to approve the use of vessels as pilot launches. Authorities should not approve any vessel as a pilot launch that does not satisfy the Merchant Shipping (Small Work Boats) Regulations 1998 and the associated *Safety of Small Work Boat and Pilot Boat Code of Practice*.

2.7.8. Harbour authorities should ensure compliance with the boarding and landing Code of Practice. Pilots should be instructed not to use facilities which do not comply with statutory safety requirements. Failure to board a pilot for this reason does not entitle a master to proceed without a pilot where his vessel is subject to pilotage directions.

2.7.9. Authorities should also ensure that workboats used in their harbours comply with the Merchant Shipping (Small Work Boats) Regulations 1998 and the

associated *Safety of Small Work Boat and Pilot Boat Code of Practice*, and that they are fit for purpose for any use to which they are put.

2.7.10. Harbour authorities have a duty to ensure the safety of those they employ to work on or from their tugs, launches and workboats. They have a similar duty where they contract such vessels. Proper training is one means to this end: it is not optional.

Moorings

2.7.11. Harbour authorities have powers in byelaws and directions to regulate the mooring of vessels in the harbour. The safety management system should govern the use of these powers. Appropriate use should be made of mooring plans. These should not necessarily be left to the master or pilot: it may be appropriate to promulgate agreed requirements after discussion with users and pilots. Authorities should also ensure that mooring parties meet the industry's competence standards, and have access to appropriate training.

Appendix B

Report: P&H-15-09-F Port Marine Safety Code

Ports and Harbours

Statutory Harbour Areas:

- Sullom Voe including Collafirth, Toft and Ulsta;
- Scalloway;
- North Haven, Fair Isle;
- Cullivoe
- Out Skerries (West Voe, South and North East Mouth);
- Symbister and North Voe;
- Vaila Sound / Gruting Voe Area;
- West Burra (Hamna Voe) Area;
- West Burrafirth Area;
- Housa Voe, Papa Stour Area;
- Hamars Ness, Fetlar; and
- Uyeasound.

The Council also owns and maintains a number of small piers not included in the defined harbour areas:

- Billister;
- Easter Dale;
- Mail Pier;
- Mid Yell; and
- Toogs.

Ferry Services operate and maintain the Ferry shore infrastructure, regardless of whether it lies within or without a designated harbour area.

Head of Ports & Harbours Operations / Harbour Master:
Capt Roger Moore

Ports and Harbours Operations

Port Administration Building
Sella Ness
Sullom Voe
Shetland ZE2 9QR

Telephone: 01806 242551 / 244200
Fax: 01806 242237
port.reception@shetland.gov.uk
www.shetland.gov.uk

Technical Support Team
Assistant Director Coastal Safety
Maritime and Coastguard Agency
Bay 2/01
Spring Place
105 Commercial Road
SOUTHAMPTON
SO15 1 EG

If calling please ask for
Roger Moore
Direct Dial: 01806 244201

Our Ref: RM/LAB OO-HBC
Your Ref:

Date: 10 June 2009

For the attention of the Chief Executive, Maritime and Coastguard Agency

Dear Sir,

PORT MARINE SAFETY CODE - STATEMENT OF COMPLIANCE

I, Councillor Alastair Cooper, the Chairman on behalf of the Shetland Islands Council Harbour Authority, being the Port Marine Safety Code Duty Holder for the Port of Sullom Voe and Scalloway Harbour, having considered all the requirements of the Port Marine Safety Code, including reviewing the risk assessment and safety management system, certify that the Port of Sullom Voe and Scalloway Harbour meets the standards required by the Port Marine Safety Code.

Yours faithfully,

Alastair Cooper
Chairperson of the Board and Duty Holder

Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: **Head of Finance**
Executive Services Department

Report No: F-024-F

REVENUE MONITORING - PORTS & HARBOURS OPERATIONS

1. Introduction

At the Harbour Board on 4 March 2009, the Chairman requested information on revenue monitoring for Ports & Harbours Operations. The purpose of this report is to provide Members with up-to-date revenue monitoring information for 2009/10.

2. Links to Corporate Priorities

This report links to the Council's corporate priorities, defined in its Corporate Plan, specifically in relation to reviewing financial performance relative to the Council's financial policies.

3. Background

3.1 At the Harbour Board on 4 March the Chairman expressed an interest in more detailed revenue monitoring information being presented to the Harbour Board showing up-to-date financial information.

3.2 As the second financial period of 2009/10 closes on 8th June, an overall Ports & Harbours revenue monitoring report both by service area and subjective category will be tabled at the meeting to allow the most up-to-date figures to be included. This will be tabled as Appendix A.

3.3 In line with 3.2 above, a summary Ports & Harbours report by service area and cost centre with reasons for variances and additional explanatory comments will be tabled at the meeting as Appendix B.

3.4 The Chairman has indicated that the Harbour Board may wish to look at particular areas in more depth and I propose to provide appropriate detailed financial information to allow full consideration of any area identified.

3.5 Possible areas for consideration:

Ports Management
- Support Services
- Engineering Services

Sullom Voe Harbour
- Towage
- Mooring
- Pilotage
- Buildings/Vehicles/Plant/Vessels

Jetties & Spur Booms
- Maintenance Contracts

Scalloway Harbour
- Usage
- Maintenance

Other Piers
- Usage
- Maintenance

4. Financial Implications

This report is for information and therefore there are no financial implications arising directly from this report.

5. Policy & Delegated Authority

The Harbour Board has full delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations.

6. Conclusion

The appendices to this report provide the most up-to-date financial information on harbour activities in 2009/10. Members are requested to determine the frequency of this report and, if they wish also to focus on a particular area, to indicate which area should be considered in the next report.

7. Recommendation

I recommend that the Harbour Board note the information contained in this report and identify

(a) the frequency of future revenue monitoring reports,
(b) whether an area should be chosen for particular focus, and
(c) if so, which area should be chosen.

Report No: F-024-F
Ref: GJ/HKT/BR Date: 5 June 2009

Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: **Harbour Master / Head of Service**

Report No: **P&H-10-09-F**

Subject: **Ship to Ship Operations**

1. Introduction

1.1. This report is to brief and inform Members of Ship-to-Ship (StS) operations within the port of Sullom Voe.

1.2. The draft guidance note from the MCA on Ship-to-Ship transfers is attached as Appendix A.

2. Link to Council Priorities

2.1. The report covers the topic of Ship-to-Ship operations and as such contributes to the Corporate Plan objective to "promote Sullom Voe Oil Terminal as a centre for ship-to-ship oil transfer, attracting new business in this area, wherever possible."

3. Background

3.1. The first Ship-to-Ship transfer at Sullom Voe occurred in April 2004. Since that date a total of nine Ship-to-Ship transfers have taken place within the port.

Date	Ship 1	Gross Tonnage	Ship 2	Gross Tonnage
25-27/04/04	Seaking	146,541	British Merlin	63,661
22/02/05	Luxembourg	157,833	Pantelis	62,877
17-19/03/05	SCF Khibiny	81,085	Aberdeen	47,274
12/05/05	Astro Callisto	157,833	Evita	72,120
20/05/05	Da Li Hu	84,855	Loch Rannoch	75,526
23/06/06	Tantramar	163,720	Gerd Knutsen	79,592
20/09/06	Cape Baldur	84,855	Petroatlantic	54,865
25/11/08	King Darwin	42,010	Perserverance	42,661
25-26/03/09	Perserverance	42,661	King Darwin	42,010

3.2. Jetty 4 was released from the Brent blend service in 2003. This allowed the potential development of new services that included Ship-to-Ship transfers.

3.3. There has been an increase in the interest for StS operations over the last few months. This may be attributed to a change in the global economy leading to a more favourable environment for StS operations.

3.4. Ship-to-Ship transfers normally take place on Jetty 4. However in 2005, a Ship-to-Ship operation took place on Jetty 2 between the tankers “Luxembourg” and “Pantellis” and in 2006 on Jetty 3 between the tankers “Cape Baldur” and the “Petroatlantic”.

3.5. Ship-to-Ship transfers have also taken place in the form of bunkering. Generally the bunkering operation is for the benefit of the vessels servicing the Schiehallion FPSO, although other vessels have used the facility. In total 25 Ship-to-Ship bunkering operations have taken place between April 2004 and April 2009. These operations have taken place on Jetty 3 and Jetty 4.

3.6. The terminal operator vets all vessels proposed for StS. The tankers must also be double skinned and carry up to date “full entry” P&I club insurance.

3.7. Fender Care provides the fenders, hoses and is responsible for the StS transfer operations. At present Fender Care have fenders and hoses located at the harbour, which is an added incentive to prospective StS operations by reducing mobilisation costs and potential delays. This arrangement is under review by Fender Care.

3.8. Ports & Harbours have been advertising and promoting the port of Sullom Voe for StS operations.

3.9. Orkney harbour has had 10 StS operations in 2009. The long-term anchorage of large tankers, due to the global economic downturn, has helped this.

3.10. In 2008 the MCA launched a consultation and draft guidelines for Ship-to-Ship operations, including bunkering. The guidelines will require all StS operations to be conducted within port limits. A copy of the draft guidelines is attached.

3.11. The Council owns four oil jetties at the port of Sullom Voe. In agreement with the terminal operators, the jetties are utilised as follows:

- Jetty 1 is used for LPG and Brent, Ninian and Clair cargoes.
- Jetty 2 is used for Brent, Ninian and Clair.
- Jetty 3 is used for Schiehallion.
- Jetty 4 is used as lay-by berth and for StS operations.

4 Issues

4.1 The procedure of vetting has reportedly caused the loss of at least one StS. BP, as terminal operators, vet all tankers using the jetties. The vetting is carried out irrespective of whether any cargo is loaded or discharged to / from the terminal.

4.2 Vetting has insured that vessels entering the port of Sullom Voe are of a high standard and has helped to maintain the good safety and environmental record of the port.

4.3 Since the port of Sullom Voe opened, legislation has changed and all tankers now operate under a much stricter code of operation. Pollution regulations have become more stringent. ISM, ISPS and STCW are just a few of the new rules and legislation that ships now operate under.

4.4 Tankers chartered to, or operating for, the major oil companies are vetted long before they reach the port of Sullom Voe. The majority of charter's use internationally recognised systems such as SIRE. Such systems may simplify the process of vetting StS vessels.

4.5 Ship-to-Ship operations, excluding bunkering, are conducted at Jetty 4. There have been two exceptions, one StS operation took place on Jetty 2 and one on Jetty 3.

4.6 At present Jetty 4 is unavailable whilst the jetty tower is replaced. The jetty should be available by mid June. During this period the port has potentially lost four Ship-to-Ship operations, which potentially included two million barrel ships. These operations consequently moved to Orkney and a potential loss of income (estimated at a minimum of £75,000) for Sullom Voe Harbour.

4.7 The SVT partners do not wish any Ship-to-Ship operations to occur on any the operating piers without a letter of indemnity. The stated concerns are the risk of damage to the jetty and the possibility of demurrage being levied if the Ship-to-Ship transfer took longer than anticipated and delayed another vessel due to uplift a cargo.

4.8 A letter of indemnity is currently being negotiated on by BP and SIC legal officials. The letter will be in a standard from and be available to "pull off the shelf" when required.

4.9 The final draft of the letter, accompanied by a report, will be presented to the Harbour Board for approval. The matter has been given some priority but no clear timescale is available. It is unlikely that the letter will be in place prior to the re-instatement of Jetty 4.

4.10 The skills and experience of the staff, accompanied by the safety operating procedures have meant that there has been no damage to the piers as a result of any of the StS operations. It is highly unlikely that any increase in damage will be experienced if StS operations were to take place on another jetty apart from Jetty 4.

4.11 The feedback from those involved in previous StS operations is that the service we offer is professional and acceptable. At least one operator has stated a preference to use Sullom Voe. However the feedback on trying to arrange a StS operation in Sullom Voe, compared to other ports such as Orkney, is poor. There is a perception of a "can do" attitude at Orkney whilst at Sullom Voe there always seems to be a problem.

4.12 The issue of StS has been raised at the Sullom Voe Association.

4.13 The Sullom Voe Terminal Manager has expressed his support for Ports & Harbours pursuing other streams of income, including StS.

4.14 Lack of StS operations risks the removal of fenders and pipes supplied by Fender Care, thereby reducing the attractiveness of the port as a venue for StS.

4.15 The port is attempting to attract new business. A few successful and trouble free StS operations this year will go a long way to raising the profile of the port and putting Sullom Voe back on the map for future StS operations. StS operations will also secure the storage of fenders and hoses in the port.

5 Financial Implications

5.1 This report is for information only. There are no financial implications arising from this report. However an increase in StS operations will increase the revenue returned at the port of Sullom Voe.

6 Policy and Delegated Authority

6.1 Harbour Board has full-delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations. However, this report is for information only and there are no Policy and Delegated Authority issues to be addressed.

7 Conclusion and Summary

7.1 StS operations provide an additional income for the harbour. Reports from vessels and agents that have carried out STS in Sullom Voe have been favourable.

7.2 A number of issues have caused the port to lose potential StS operations.

7.3 Work continues to both promote Sullom Voe as a venue for StS and to ease the process in achieving that goal without compromising safety.

8 Recommendations

8.1 I recommend that the Harbour Board note the contents of the report.

Maritime and Coastguard Agency

MARINE GUIDANCE NOTE

MGN XXX (M)

Guidance on the Merchant Shipping (Ship-to-Ship Transfer) Regulations 2008

Notice to all Shipowners, Agents, Masters & Officers on Ships, Harbour Masters, Ship-to-Ship Transfer Operators and Bunkering Operators etc

This notice should be read with SI 2008 /xxxx

PLEASE NOTE:-
Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel and you should consider seeking independent legal advice if you are unsure of your own legal position.

Summary

This notice sets out:

- new restrictions regarding transfers between ships of cargo and bunker fuel in UK waters
- considerations for exemptions from the restrictions
- industry guidance on best practice for transfer of cargo

1. Introduction

1.1 The Merchant Shipping (Ship-to-Ship Transfer) Regulations 2008 place restrictions on transfers between ships of cargo or bunker fuel that consists wholly or mainly of a hazardous substance in UK waters.

1.2 The legislation is applicable within the United Kingdom's internal waters and territorial seas, namely those waters within the baseline and those waters extending to 12 nautical miles from the baseline.

2. Application

2.1 Transfers of cargo or bunker fuel between ships are prohibited, unless the ships are within harbour authority waters (subject to exceptions described in Section 3).

2.2 Transfers of cargo (including where bunker fuel is carried as cargo) between ships within harbour authority waters is subject to the following additional restrictions:

a) They must be part of a programme of transfers (a planned series of transfers in a specified location or locations) which has been authorised by the relevant harbour authority.
b) Where harbour authority waters include one or more European Sites (as defined by the Conservation (Natural Habitats, &c) Regulations 1994) it must established that the programme of transfers would not be likely to have any significant impact upon these sites.
c) The Harbour Authority must also have obtained the environmental consent of the appropriate authority to the programme of transfers.

Schedule 1 of the Statutory Instrument provides detail concerning assessment of impact on European Sites. Schedule 2 provides detail concerning obtaining environmental consent from the appropriate authority.

3. Exceptions

3.1 Transfers are not subject to the restrictions if they meet the following criteria:

- between a ship and an offshore installation;
- to or from a warship, naval auxiliary ship or other ship owned or operated by a State and used solely, for the time being, on government non-commercial service.

4. Exemptions

4.1 In addition, exemptions to these restrictions will be considered on a case by case basis.

4.2 Further applications for exemption should be made to the Counter Pollution Team of the Maritime and Coastguard Agency. Annex A provides details:

5. Industry Guidance / Best Practice

5.1 It is strongly recommended that transfers of cargo carried out as part of a permitted programme of transfers within harbour authority waters, or carried out outside of harbour authority waters but within the scope of the regulations, owing to exemption from the restrictions, is carried out in line with industry guidance on best practice.

5.2 The following texts are currently considered as best practice:

- Ship to Ship Transfer Guide (Petroleum), 4th Edition (2005), ICS/OCIMF
  ISBN 1 85609 258 5
- Ship to Ship Transfer Guide (Liquified Gases), 2nd Edition (1995)
  ISBN 1 85609 082 5

5.3 Further guidance will be issued by the MCA should the above documents be further updated or new best practice be recognised within industry.

More Information

Counter Pollution
Maritime and Coastguard Agency
Bay [tbc]
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel : +44 (0) 23 8032 9525
Fax : +44 (0) 23 8032 9485
e-mail: meor.meor@mcga.gov.uk

General Inquiries: 24 Hour Infoline
infoline@mcga.gov.uk
0870 600 6505

MCA Website Address: www.mcga.gov.uk

File Ref: MPCU 035/003/0032

Published: Printers to Insert [Month Year]
Please note that all addresses and
telephone numbers are correct at time of publishing

Safer Lives, Safer Ships, Cleaner Seas

Printed on material containing minimum 75% post-consumer waste paper

An executive agency of the Department for **Transport**

Annex A – Application for Exemption from the Regulations

A1.1 The Maritime and Coastguard Agency (MCA) will not consider exempting any transfer of cargo or bunker fuels between ships outside of harbour authority waters that can reasonably be carried out within harbour authority waters. **This will apply to the majority of transfer operations.**

A1.2 However certain types of transfer, including but not limited to those below may be exempted on a case by case basis.

a) as part of seismic survey operations
b) as part of cable laying / pipe laying operations
c) operations involving offshore support vessels
d) bunker fuel transfers outside of statutory harbour areas for ships of restrictively deep draft
e) transfers operations in situations of *force majeure*

In the case of a, b, & c, a vessel involved in such operations may be exempted from the regulations, in the form of a waiver letter valid for (x) years. In the case of d & e a specific transfer operation may be exempted from the regulations.

Exempting a Vessel from the Regulations

A2.1 To exempt a vessel from the regulations, in the form of a waiver letter valid for [x] years, the following information will need to be supplied, in the form of a letter addressed to MCA Counter Pollution Team (address below):

a) Vessel Name
b) IMO number
c) Type of Vessel / Nature of Operations

By Post: MCA Counter Pollution Team, Spring Place, 105 Commercial Road, Southampton, SO15 1EG

By Email: meor.meor@mcga.gov.uk

By fax: 02380 329485

A2.2 Specifically, the type of vessel / nature of operation will need to be one of those listed in Para A1.2(a-c), or similar, so as it can be proved that regular transfers between ships at sea (cargo or bunker fuel) are a necessary and ongoing aspect of the vessels operations.

A2.3 A waiver letter will be issued if appropriate, confirming the relevant vessels exemption, a copy of which is to be held on board.

Exempting a Transfer Operation from the Regulations

A3.1 An application to an exempt a transfer operation should be received:

- At least 72 hours in advance of the operation if it is a planned operation, such as a bunker transfer at sea due to restrictive draft
- As soon as is possible where the operation is due to *force majeure* (in such a circumstance contact should also be made with HM Coastguard who will cascade information in line with the National Contingency Plan)

A3.2 For a transfer operation to be exempted from the regulations, it is essential that the MCA is given as much information as possible about how a transfer of cargo between ships

will be conducted and what safeguards and contingencies will be put in place to guard against the risk of any resultant pollution. The application to carry out a transfer operation must, where appropriate include the following details:-

a. the ships involved (Name, IMO number, type of vessel) and their safety certification, including a signed declaration by the owner or master that each ship is fit and equipped for the purposes of a transfer operation;

b. the manning of those ships during the operation, including details of manning certificates;

c. the qualifications and relevant experience of those overseeing the transfer (Chapter 1 of the ICS/OCIMF Guide);

d. the properties of the cargo or fuel to be transferred;

e. the area of operation;

f. the expected duration of the operation;

g. the detailed safety precautions to be taken (Chapter 3, ICS/OCIMF Guide);

h. the communications arrangements (Chapter 4, ICS/OCIMF Guide);

I. the operational preparations (Chapter 5, ICS/OCIMF Guide);

j. the manoeuvring, mooring and fendering arrangements (Chapter 6, ICS/OCIMF Guide);

k. the procedures alongside (Chapter 7, ICS/OCIMF Guide);

l. the management of the transfer operation itself (Chapter 8, ICS/OCIMF Guide);

m. the unmooring arrangements (Chapter 9, ICS/OCIMF Guide);

n. the equipment to be deployed (Chapter 10, ICS/OCIMF Guide);

o. the limiting weather criteria to be applied before mooring and during the transfer, noting that the MCA will not approve any transfer in more than a 2 metre sea or wind speeds greater than 27 knots;

p. a Contingency Plan setting out the steps to be taken in the event of:-

i. deteriorating weather;

ii. mooring rope failure;

iii. pollution following damage, such as a collision;

and

iv. fire;

q. an Oil Spill Contingency Plan (including pollution resources commensurate with the risk, both at sea and on shore) to guard against the threat of oil pollution; and

r. where appropriate (see below), the equipment, manning and operation of a suitable oil recovery vessel.

These details may be sent to via the following:

By Post: MCA Counter Pollution Team, Spring Place, 105 Commercial Road, Southampton, SO15 1EG

By Email: meor.meor@mcga.gov.uk

By fax: 02380 329485

A3.3 Details of such an application will be sent for information to the relevant Local Authority Emergency Planning Officers and to the appropriate MCA HM Coastguard Station.

Attendance of an MCA Official

A3.4 Attendance of an MCA Official at an exempted transfer operation may be deemed necessary by the MCA. This may involve a preliminary ship inspection and / or may be followed by attendance throughout all transfer operations (although each aspect may be overseen by different Officials). The MCA's attendance will be at the expense of the transfer operator and the relevant fee (calculated in accordance with the latest Merchant Shipping (Fees) Regulations) must accompany the application.

Oil Recovery Vessel

A3.5 Because they are not readily amenable to dispersants, a suitably equipped oil recovery vessel must be in attendance during an approved transfer operation involving oils with the following properties:

- a kinematic viscosity greater than 1,500 centistokes at 15° Celsius; or
- a pour point greater than sea temperature at the time of transfer; or
- an asphaltene content greater than 0.5% by weight.

A3.6 The oil recovery vessel must meet the requirements of Merchant Shipping Notice M.1663 and must have:-

- the capability to take oil recovered from the sea into its tanks;
- a system capable of recovering the transferred oil in seas up to 2 metres;
- enough boom to contain a spill between the transferring ships until it can be recovered; and
- personnel trained to operate the oil recovery system and boom.

Navigational Warnings

A3.7 Immediately before commencing an approved transfer operation, a navigational warning should be broadcast on VHF in accordance with the procedures described in Section IV of Article S33 of the International Telecommunication Union (ITU) Radio Regulations. The warning should be preceded by the appropriate safety signal (SECURITE) and should be broadcast on VHF Channels 6, 8, 72 or 77 following an initial announcement on Channel 16. The VHF/DSC installation should also be used to transmit an "ALL SHIPS SAFETY ALERT" on VHF Channel 70, indicating the Channel to be used for the subsequent voice broadcast. The navigational warning should include:-

- the names of the ships involved;

- details of the area where manoeuvres will take place and the precise position of the transfer operation; and

- the estimated start and finish times.

A3.8 Once the transfer is complete, a further advisory broadcast should be made, again following a short announcement on VHF Channel 16 and use of the DSC facility on VHF Channel 70. The message should not be preceded by the safety signal (SECURITE).

Approval of Exemption

A3.9 A certificate will be issued confirming the exemption of a transfer operation from the regulations where appropriate.

Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: **Engineering Manager - Ports**

Report No: **P&H-11-09-F**

Subject: **West Pier, Scalloway**

1 Introduction

1.1 The purpose of this report is to advise the Harbour Board on the current condition of the West Pier in Scalloway Harbour.

2 Link to Council Priorities

2.1 Further improve and develop port facilities and services to attract vessels serving the new oil and gas fields west of Shetland.

3 Background

3.1 The original structure was constructed in 1959 – 1960, to serve as a fishing quay with general cargo berths for coasters. In recent years, the outer face has been used for oil related shipping, whilst the inner face accommodates smaller vessels involved in aquaculture activities.

3.2 Over the years, progressively larger ships have been moored to the pier, some of which have exceeded the structures capabilities.

3.3 During a period of heavy weather, around 7/8 March 2009, whilst the Shetland Islands Ferry “Filla” was moored to the pier, movement of the whole structure was observed, resulting in a significant crack between the structure and the shore being opened.

3.4 Following these events, a structural inspection of the pier was carried out by local Civil Engineering Consultants, Arch Henderson and Partners. On inspection, it was noted that other than some cosmetic damage to the concrete copings and rubber fenders, there was no significant damage or signs of distress to the structural elements of the pier. Given the significant movement reported by Harbour staff and users, coupled with the crack which had opened up between the pier and the shore, there is little doubt that the whole structure was moving on its concrete support caissons.

3.5 In 1988, a design load analysis was carried out on the structure in accordance with marine code BS 6349: Part 1 1998. The results of this analysis indicate that the pier should be capable of withstanding displacement energy from a vessel of 750 tonnes displacement. The SIC ferry "Filla" has a displacement weight of 560 tonnes.

3.6 Following the structural analysis in 1988, proposals for strengthening the structure to accommodate larger vessels were investigated. These proposals and their costs were re-examined in 2006:

1000 tonne capacity - £725,000.00 (2006 cost)

Method proposed was to break out small sections of the deck and provide additional raking piles with rock anchors. A reinforced concrete spine beam would be constructed to stiffen the structure.

5000 tonne capacity - £1,950,000.00 (2006 cost)

Method as above, plus new concrete copes, vertical piles and a new in-situ concrete deck over the existing, with larger "V" fendering.

The report goes on to say that the overall structure of the pier is in generally good condition for its age, but some concrete repairs will be necessary to halt the ingress of chlorides, which weaken the reinforcement.

3.7 There is little doubt that large vessels cannot continue to be moored to the jetty, without further damage being sustained. However, the pier can continue to offer mooring to smaller aquaculture type craft for some years to come.

4 Proposals

4.1 It is proposed that the West Pier is no longer used for the mooring of large vessels on its seaward face. Smaller vessels cannot be accommodated on this side due to the fender type, and the lack of protection from swell etc would discourage small boat users from using this face. The inner face can continue to be used by the aquaculture industry.

5 Financial Implications

5.1 There are no financial implications arising from this report, however, the inability to use the pier for large vessels will have an impact on total potential income for the Harbour.

6 Summary

6.1 The West Pier in Scalloway Harbour can no longer be used for the mooring of large vessels on its seaward face. Should additional quay space for large ships become necessary, the options for strengthening

the present structure, or replacing it with a new one can be presented to the Harbour Board for consideration.

8 Policy and Delegated Authority

8.1 The Harbour Board has full delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations. There are no Policy and Delegated Authority issues to be addressed.

9 Recommendations

It is recommended that: -

9.1 The Harbour Board notes the contents of this report.

Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: **Harbour Master / Head of Service**

Report No: **P&H-16-09-F**

Subject: **New Business**

1. Introduction

1.1. This report is to brief and inform Members of the New Business within Ports and Harbours Operations.

2. Link to Council Priorities

2.1. The report promotes the ideals from the Corporate Plan of sustainable economy.

3. New Business

3.1. The port of Sullom Voe has enjoyed the arrival of two shipments for the Aurora project over the Construction Jetty.

3.2. Work is progressing in partnership with Development to secure new business for Shetland Islands Council Ports and Harbours Operations in relation to the proposed Total gas plant. This includes work involved with facilitating the build process, use of Ports and Harbours land and offices and into the future with the provision of services for supplies and standby boats. Much of this is at a very early and sensitive stage.

3.3. There have been no Ship-to-Ship (StS) transfers since the last Harbour Board. Work continues to attract StS business to the port, however it is unlikely that StS operations can be facilitated until Jetty 4 is back in action.

3.4. There have been two enquiries to use the services of the tugs outside of Shetland. However the opportunity was lost due to lack of available personnel on one occasion, and the unavailability of a tug due to dry-docking on the other. Work continues to promote the short-term hire of the tugs when they are available.

3.5. Work, in partnership with Development, is also progressing to produce a potential development zone plan for the port of Sullom Voe.

3.6. This will be the subject of a separate report presented to the Harbour Board.

3.7. The Operations Manager – Ports and the vice chair attended Fishing 2009 in Glasgow in May of this year to promote Scalloway Harbour and the small harbours. The exhibition reported an increase in visitors of 11% on the previous year.

3.8. Work progresses on a potential development zone plan for Scalloway Harbour. A report on this matter will be presented to the Harbour Board next cycle.

3.9. The Harbour Master and Engineering Manager – Ports visited Fair Isle on 16 May. On talking to the residents it became apparent that there are a large number of yachts and cruise ships that call at Fair Isle each year which go unrecorded due to the lack of Harbour representation to confirm visits. It was also noted the difficulty for older cruise passengers to safely land at Fair Isle as previously reported to the Harbour Board by the previous Harbour Master. Plans for a suitable landing area and boarding area for the tenders are currently being investigated. An advertisement for a Harbour Assistant for the port has also been placed and discussed with some of the local harbour users.

4 Financial Implications

4.1 This report is for noting only. There are no financial implications arising from this report.

5 Policy and Delegated Authority

5.1 Harbour Board has full-delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations. However, this report is for information only and there are no policy and Delegated Authority issues to be addressed.

6 Recommendations

6.1 I recommend that the Harbour Board note the contents of the report.

Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: **Harbour Master**

Report No: **P&H-14-09-F**

Subject: **Ports Project Monitoring Report**

1 Introduction

1.1 The most up to date information on all projects is incorporated in this report.

1.2 Budget Information is attached as Appendix A.

2 Links to Corporate Plan

2.1 Projects in this report would make contributions to the Council's priorities of strengthening rural areas and supporting the local economy.

3 Reserve Fund Programme Areas

3.1 Dock Symbister – RCM 2309

Work continues on a design incorporating the use of a temporary cofferdam to drain the dock. This will allow stonemasons to rebuild the dock walls in a similar fashion to the existing construction. Detailed surveys of the dock and surrounding seabed are in progress, to ensure that the cofferdam system can work. Once this has been established, indicative costs can be drawn up and presented to the Board. Architects Groves Raines have confirmed that their report is at an advanced stage, and it is hoped that a copy will have been received by the date of the Board meeting.

Work on different options for the ferry service to / from Whalsay is also being considered at this time by Ferry Services and Capital Programme Service. Drawings of the indicative layouts are attached. The most likely layout will be either option 2 or option 4. Some of these options, should they be successful, may have an impact on the layout of the harbour. Should options 4 or 5 prove successful a temporary movement of the marina within the harbour would be required. An additional impact, should option 4 prove successful, would be the infilling of the Peerie Dock. However it is important to stress that the process is not yet complete, consultations on the new options are at a very early stage and no capital budget has yet been approved.

Ports & Harbours are involved in the consultations and have met with Capital Programme Services, Zetrans, Ferry Service, Members and representatives of the pelagic fishing fleet. A report will be presented to the Infrastructure Committee on 16 June. Updates will be provided to the Board as the project progresses.

3.2 Tug Replacement Programme - RCM 2313

Meetings were held in Valencia on 05 and 06 May 2009. It was attended by representatives from BMT, UNV, Sener and from the SIC by two Tug Masters and the Engineering Manager – Marine.

3.2.1 The main points discussed were: -

3.2.1.1 The planned maintenance system.

3.2.1.2 The towing winch was discussed at some length. Full winch design, materials details and control systems are expected shortly.

3.2.1.3 Funnels were discussed at length. The current design restricts visibility from the wheelhouse to port and starboard. Re-design was discussed and an agreement in principle was made to crop the funnels off at the bridge deck and for exhausts to continue as bare pipes.

3.2.1.4 Wheelhouse windows size and thickness was discussed.

3.2.1.5 Launch calculations and details discussed. Sener, the yards architects, is confident that all is correct.

3.2.1.6 Stability discussed at length. Current calculations predict a 0.8° stern trim on departure condition.

3.2.1.7 Windlass foundation discussed at length.

3.2.1.8 Delivery crew to be UK registered.

3.2.5 The design mock up of the bridge was examined. The Tug Masters suggested some minor adjustments. These were accepted and the layout adjusted accordingly.

3.2.6 Stage payments for the completion of 50% of the steelwork for both hulls was authorised 27 May 2009.

3.2.7 Technical Supervision has now been awarded to Comet Services and on site supervision has commenced.

3.2.8 The main engines are due for delivery at the yard on 01 June and 07 July for each tug.

3.2.9 The competition for naming the tugs closes on 01 June. Some responses have already been received at the time of complying this report.

3.2.10 The project remains on time and on budget.

3.3 Uyeasound – RCM 2314

The new facility was officially opened on 25 April 2009.

Work on site is complete on both the pier and backup area. Minor snagging items will be sorted during the 52 week defects period.

Additional costs associated with the cathodic protection, have resulted in the need to use some of the contingency allowance in the tender sum to be used. The final account has been agreed with the contractor at approximately £10k below the tender sum.

The project therefore remains both on schedule and on budget. A budget carry forward of the balance from 08/09 will be dealt with in the CPS out-turn report to Council on 1st July. The balance of grant funding (approx. 146.5K) is anticipated from H.I.E during 09/10.

3.4 Walls – RCM 2316

A decision is required from the Investment Decision Maker as to how the recent allocation of £100K is used. Clarification of who will hold this role has yet to be confirmed.

Capital Programme Service have advised that there are two options:

- Progress the project to detailed design stage, based on assumed ground conditions. This would introduce significant cost risk to the project at the construction stage.
- Use the funds to carry out a comprehensive marine site investigation. This would largely eliminate site risk but would leave very little. If any, funds for detailed design work this financial year.

Capital Programme Service have recommended that the latter option be pursued as the financial and programme implications of proceeding without adequate site investigation information could far exceed the cost of the survey works. Much of the cost of such survey work is in mobilising the specialist equipment required, so by coordinating this work along with the imminent surveys associated with the Whalsay link project, there would be a significant saving to the Council. Expressions of interest for the Whalsay surveys have been obtained and tender documents are due to be issued in early May. The scope makes provision for addition sites to be added or removed from this contract, however this must be defined by time of tender award.

3.5 Water Main Scalloway RCM 2315

Local Consultants Arch Henderson and Partners have accepted the design element of these works, and will prepare preliminary designs and costings. Once these are agreed, formal construction plans and tender documents will be created, to allow the works to be tendered and construction carried out in 2010.

4 Harbour Account

4.1 Plant, Vehicles and Equipment – PCM 2101

Standby Generator, Port Admin Building

The generator has been delivered to Shetland, and Ness Engineering will carry out the installation work.

All necessary method and risk assessments have been received and approved by the Engineering Manager - Ports, and the programme is as follows:

Connect Temporary set:	17 June
Disconnect existing set:	18 June
Install new set:	19 June
Commission new Set	25 June

During the connection and disconnection of the temporary set, there will be two very short periods where there will be no standby power available to the building. These tasks will not be undertaken when ship movements are being made.

Vehicle Replacement

A request for a replacement transit flat-bed type vehicle has been passed to the Fleet Management Unit, to allow quotations to be sought. It is intended that the existing flat-bed and a four-wheel drive pickup will be traded in against this purchase, reducing the financial impact on the budget.

4.2 Navigational Aids – PCM 2104

Despite numerous promises, ADT Engineers have still not fitted the CCTV system in Scalloway Harbour. However, they have now stated that an Engineer will travel to Shetland on 7 June to complete the works. If this date is not honoured, a formal complaint will be sent to their Head Office, detailing the delays and lack of service that has been experienced on this job.

New technology has recently been released onto the market, which guarantees that self-contained solar powered lanterns can operate at this latitude all year round. Therefore, it is proposed that a large number of navigation buoys are updated with the new self-contained navigation lights this summer. This will greatly reduce the maintenance time and reliability of the out-dated electrical systems on board the buoys at present.

A new style buoy and lantern has been placed in the No.5 position in Sullom Voe Harbour. Feedback is being sought from sea staff, to ascertain the new equipments suitability.

5 Revenue Projects

5.1 Sullom Voe Terminal Jetty Maintenance Contract

As reported verbally to the Board at the last meeting, Malakoff Limited was the successful contractor for the 2009 – 2011 Jetty Maintenance Contract. Works have begun on site to address the 2009 work scope.

The Jetty Four access tower was successfully lifted into place on Wednesday 20 May. Works continue with the fitting of the gangway and crane to the tower. A commissioning engineer is due to arrive from the manufacturers Verhoef on Sunday 7 June, to allow the tower systems to be checked and commissioned.

The project continues to meet set deadlines and programmes.

The programme for the Jetty Two tower replacement is as follows:

Delivery to Sella Ness:	25 June
Removal of existing tower:	12 July
Installation of new tower:	14 July
Tower in service:	02 August

6 Other Business

6.1 Warehouse, Scalloway
No further progress from last report.

6.2 Scalloway Dredging – RCM 2208

All survey work is now complete and consents under the Food and Environmental Protection (FEPA) Act 1985 and the Coast Protection Act 1949 are being progressed.

SNH have accepted that further modelling and survey work will not be required at this stage but reserve the right to recommend to FRS that additional surveys be carried out at the dump site if dispersal of fines is more widespread than anticipated. However no funding has been allocated to this in the 09/10 Capital Programme, therefore a report to full council will be required if further work is envisaged.

6.3 Fetlar Breakwater GCY7214

Design underway and expected to be complete by end of August 2009. The intention is to tender the works following the confirmation of the projects place in the 10/11 Capital Programme.

Currently the project lies with the Transport section. However some level of involvement of Ports and Harbours staff is likely. The breakwater will support a limited berthing facility for small craft that is likely to fall under the remit of Ports & Harbours.

6.4 Ports & Harbours Projects

6.4.1 Projects currently underway – 2009 / 2010 Financial Year

Underway			Annual Capital Budget
Tug Replacement Programme.	RCM 2313	Vessels due to be delivered first quarter 2010.	£11,152,000
Essential Maintenance		**Ports & Harbours – Reserve Fund**	
Water Main, Scalloway	RCM 2315	To be started this summer	£50,000
Peerie Dock	RCM 2309	Slippage from 08/09 to allow preliminary investigation prior to appointment of conservation engineer	£7,000
		Sub Total	£57,000
Service Improvements		**Ports & Harbours – Reserve Fund**	
Uyeasound Pier.	RCM 2314	Project effectively complete. Some minor corrective works to be finished.	£0
Walls Pier	RCM 2316		£100,000
		Sub Total	£100,000
		Reserve Fund Total	£157,000
Maintenance		**Maintenance – Harbour Account**	
Plant, Vehicles & Equipment.	PCM 2101	Maintenance – Harbour Account	£150,000
Navigational Aids.	PCM 2104	Maintenance – Harbour Account	£70,000
Dredging Consents, Scalloway.	RCM 2208	Surveys completed, consents are being progressed.	£0
		Harbour Account Total	£220,000

6.4.2 Future Years of Capital Programme

The following projects have not yet been approved.

PORTS & HARBOURS - RESERVE FUND & HARBOUR ACCOUNT
PROPOSED FUNDING FOR 2009-2014

PORTS & HARBOURS - RESERVE FUND					
Essential Maintenance					
Project	2010/11	2011/12	2012/13	2013/14	Total Project Costs
Water Main, Scalloway	250,000				250,000
Fish Market Roof, Scalloway			150,000		150,000
Old Breakwater, Symbister			150,000		150,000
Skerries Pier				100,000	100,000
Sub Total	250,000	0	300,000	100,000	650,000
PORTS & HARBOURS - RESERVE FUND					
Service Improvements					
Project	2010/11	2011/12	2012/13	2013/14	Total Project Costs
Scalloway Dredging	3,000,000				3,000,000
West Pier Scalloway			5,000,000		5,000,000
Sella Ness Pier				7,000,000	7,000,000
Walls Pier	1,400,000	2,000,000			3,400,000
Sub Total	4,400,000	2,000,000	5,000,000	7,000,000	18,400,000
Reserve Fund Total	4,650,000	2,000,000	5,300,000	7,100,000	19,050,000

PORTS & HARBOURS - HARBOUR ACCOUNT					
Maintenance					
Project	2010/11	2011/12	2012/13	2013/14	Total Project Costs
Plant, Vehicles & Equip	70,000	70,000	70,000	70,000	280,000
Nav Aids - Sullom Voe	70,000	70,000	70,000	70,000	280,000
Tug Jetty CP System		200,000			200,000
Harbour Account Total	140,000	340,000	140,000	140,000	760,000

6.4.3 Projects Requiring Consideration

Projects Requiring Consideration

Peerie Dock, Symbister	
Administration Building, Sella Ness	Refurbishment of fire doors, lighting, suspended ceilings and flooring.

7 Revenue – Significant Maintenance in Other Areas

7.1 To keep the Harbour Board better informed about smaller revenue works carried out within Ports and Harbours Operations, it is proposed that, commencing next cycle, this new section will list and detail such works.

8 Financial Implications

8.1 This report is for information only. There are no financial implications arising from this report.

9 Policy and Delegated Authority

9.1 Harbour Board has full-delegated authority for the oversight and decision making in respect of the management and operation of the Council's harbour undertakings in accordance with the overall Council policy, revenue budgets and the requirements of the Port Marine Safety Code, as described in Section 16 of the Council's Scheme of Delegations. However, this report is for information only and there are no Policy and Delegated Authority issues to be addressed.

10 Recommendations

10.1 I recommend that the Harbour Board note the areas of progress.

PORTS & HARBOURS - CAPITAL PROGRAMME

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Harbour Account	PCM2101	Plant, Vehicles & Equipment Equipment	150,000	150,000		150,000
		Project Total	150,000	150,000	0	150,000

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Harbour Account	PCM2104	Navigational Aids, Sullom Voe Equipment	70,000	70,000		70,000
		Project Total	70,000	70,000	0	70,000

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Reserve Fund	RCM2309	Peerie Dock, Symbister	0			
		External Consultants		7,000		7,000
		Project Total	0	7,000	0	7,000

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Reserve Fund	RCM2313	Tugs for Sellaness	11,152,000			
		Works		10,972,116	706,159	10,265,957
		Hire/Rent Property			1,986	(1,986)
		Travel			5,309	(5,309)
		External Consultants			4,420	(4,420)
		Recharges		179,884		179,884
		Project Total	11,152,000	11,152,000	717,874	10,434,126

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Reserve Fund	RCM2314	Uyeasound Harbour	0			
		Works			197,537	(197,537)
		Equipment Purchase			15	(15)
		Miscellaneous			35	(35)
		Printing			68	(68)
		Other Government Grant			(47,626)	47,626
		Project Total	0	0	150,029	(150,029)

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Reserve Fund	RCM2315	Scalloway Water Main	50,000			
		Works		50,000		50,000
		Project Total	50,000	50,000	0	50,000

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Reserve Fund	RCM2316	Walls Pier	100,000			
		Works		50,000		50,000
		External Consultants		50,000		50,000
		Project Total	100,000	100,000	0	100,000

Funding Source	Code	Project	2009/10 Original Budget £	2009/10 Revised Budget £	Actual to 17 April 2009 £	Variance (Revised Budget Less Actual) £
Harbour Account	PCM2101	Plant, Vehicles & Equipment	150,000	150,000	0	150,000
Harbour Account	PCM2104	Navigational Aids, Sullom Voe	70,000	70,000	0	70,000
Reserve Fund	RCM2309	Peerie Dock, Symbister	0	7,000	0	7,000
Debt Charges on Harbour Account	RCM2313	Tugs for Sellaness	11,152,000	11,152,000	717,874	10,434,126
Reserve Fund	RCM2314	Uyeasound Harbour	0	0	150,029	(150,029)
Reserve Fund	RCM2315	Scalloway Water Main	50,000	50,000	0	50,000
Reserve Fund	RCM2316	Walls Pier	100,000	100,000	0	100,000
SUMMARY		**Projects Total**	**11,522,000**	**11,529,000**	**867,903**	**10,661,097**

Shetland
Islands Council

REPORT

To: **Harbour Board** **10 June 2009**

From: **Head of Service**

Report No: **P&H-12-09-F**

Subject: **Port Operations Report**

1 Introduction

1.1 This report provides an overview of port operations since the issue of the last Port Operations Report.

2 Pilotage

2.1 Sullom Voe

2.1.1 Since the issue of the last Port Operations Report, pilotage operations have been mainly routine with no major incidents.

2.2 Scalloway

2.2.1 During April/May there were 13 acts of Pilotage.

2.2.2 There are eleven authorised pilots for Scalloway. These are the eleven pilots who are also authorised for Sullom Voe.

2.2.3 Details of ship visits to Scalloway are shown in Appendix A. Up to date figures will be provided to the next meeting.

2.3 Small Piers and Harbours

2.3.1 Appendix B shows the current actual income for small piers and harbours.

3 Staffing – Port Operations

3.1 Appendix C gives the staffing position as at 31 May 2009 showing a total of 133 staff.

4 Port Operations

4.1 Sullom Voe

4.1.1 Appendix D shows the exports and imports at the Port of Sullom Voe.

4.1.2 Appendix E is an abstract of weather delays for April and the cumulative totals for 2009.

4.2 Scalloway

4.2.1 Appendix F shows the fish landing statistics for Scalloway.

4.2.2 Appendix G shows the cargo statistics for Scalloway.

4.2.3 Appendix H shows the summary management accounts for Scalloway.

4.3 Small Piers and Harbours

4.3.1 Appendix I shows the summary management accounts for other small piers and harbours.

5 Shipping Standards

The following incidents have occurred since the last report.

5.1 Ship Incidents

5.1.1 On 2 May 2009, the Cypriot tanker Sea Dweller made contact with the Loch Rannoch, which was berthed on Jetty 3, when coming alongside for a bunker transfer. There was some damage to the rails on the Sea Dweller while there was a superficial scrape to the Loch Rannoch's paintwork.

5.2 Pollution Incidents

5.1.2 There were no incidents during this period.

6 Policy and Delegated Authority

6.1 The Harbour Board has full delegated authority for oversight and decision making in respect of the management and operation of the Council's harbour undertaking in accordance with overall Council policy and the requirements of the Port Marine Safety Code as described in Section 16 of the Council's Scheme of Delegation. The purpose of this report is to inform members on port operations which fall within the responsibility of the General Manager of Ports & Harbours Operations and does not seek any decision. However, this report is for information only and there are no Policy and Delegated Authority issues to address.

7 Financial Implications

7.1 There are no financial implications arising from this report.

8 Recommendation

8.1 This report is for noting.

Our Reference: JBE/SM RO-PO P&H-12-09-F Date: 02 June 2009

SCALLOWAY 2009
Number of Vessels and GT Totals

APPENDIX A

		UK COMM VISITS	UK COMM GT	FOREIGN COMM VISITS	FOREIGN COMM GT	STANDBY/ OIL RELATED VISITS	STANDBY/ OIL RELATED GT	COMMERCIAL (DISC RATE) VISITS	COMMERCIAL (DISC RATE) GT	UK FISHING VISITS	UK FISHING GT	FOREIGN FISHING VISITS	FOREIGN FISHING GT	CRUISE SHIPS VISITS
JANUARY		2	14	1	803	3	2923	2	4128	4	892	1	204	0
FEBRUARY		2	299	9	7914	1	680	1	2064	1	145	4	2196	0
MARCH		2	153	4	1965	2	1353	1	2064	13	2543	0	0	0
APRIL		2	142	1	1785	2	1341	0	0	4	1117	0	0	0
MAY														
JUNE														
JULY														
AUGUST														
SEPTEMBER														
OCTOBER														
NOVEMBER														
DECEMBER														
		8	**608**	**15**	**12467**	**8**	**6297**	**4**	**8256**	**22**	**4697**	**5**	**2400**	**0**

SCALLOWAY 2009
Number of Vessels and GT Totals

APPENDIX A

CRUISE SHIPS GT	SALMON CAGES VISITS	UK YACHT VISITS	UK YACHT GT	FOREIGN YACHT VISITS	FOREIGN YACHT GT	SIC VESSEL VISITS	LIFE BOAT VISITS	L/HOUSE TUG& MISC VISITS		TOTAL VISITS		TOTAL GT
0	11	0	0	0	0	0	0	2		**26**		**8964**
0	12	0	0	0	0	0	0	2		**32**		**13298**
0	5	0	0	0	0	0	0	4		**31**		**8078**
0	0	0	0	0	0	0	0	3		**12**		**4385**
										0		**0**
										0		**0**
										0		**0**
										0		**0**
										0		**0**
										0		**0**
										0		**0**
										0		**0**
0	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**11**		**101**		**34725**

Small Piers/Harbours - Income Received
April 2009 to March 2010

APPENDIX B

	Baltasound	Collafirth	Cullivoe	Fair Isle	Hamnavoe	Mid Yell	Out Skerries	Symbister	Toft	Uyeasound	Walls	West Burrafirth	Scalloway
Metered Water Charge	0	0	0	0	0	0	0	0	0	0	0	0	(1,465.16)
Equipment and Plant Hire	0	0	0	0	0	0	0	0	0	0	0	0	(103.46)
SalmonTender Dues	0	0	0	0	0	0	0	0	0	0	0	0	0
Comp Annual Dues	0	0	0	0	0	0	0	0	0	0	0	0	0
Fish Landing Dues	0	0	(6,603.37)	0	0	(201.24)	0	(28.29)	0	0	0	(353.97)	(9,882.36)
Salmon Landing Dues	0	0	0	0	0	0	0	0	0	0	0	0	0
Hire of Net Bins	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage Charges	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Storage on Pier	0	0	0	0	0	0	0	0	0	0	0	0	0
Wharfage Charges	0	(6.50)	0	0	0	0	0	(57.73)	(16.22)	0	(6.50)	(6.50)	0
Other Staff Time Charge	0	0	0	0	0	0	0	0	0	0	0	0	0
Pleasure/Fishing Boat Dues	0	0	0	0	0	0	0	0	0	0	0	0	(535.94)
Ship Commercial Dues	0	0	0	0	0	0	0	0	0	0	0	0	0
Yacht Period Dues	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmon Cages Dues	0	0	0	0	0	0	0	0	0	0	0	0	0
Cruise Ships	0	0	0	0	0	0	0	0	0	0	0	0	1388.80
Dues on Shellfish Landings	0	0	0	0	0	0	0	0	0	0	(234.50)	0	0
Metered Electricity	0	0	0	0	0	0	0	0	0	0	0	0	(922.02)
Income Harbour Activities	**0**	**(6.50)**	**(6,603.37)**	**0**	**0**	**(201.24)**	**0**	**(86.02)**	**(16.22)**	**0**	**(241.00)**	**(360.47)**	**(11,520.14)**
Phone Call Reimbursed	0	0	0	0	0	0	0	0	0	0	0	0	0
Sale of Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0
Finance Lease Income	0	0	0	0	0	0	0	0	0	0	0	0	(2,362.50)
Miscellaneous Income	0	0	0	0	0	0	0	0	0	0	0	0	0
Income - Other	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**(2,362.50)**
TOTAL INCOME	**0**	**(6.50)**	**(6,603.37)**	**0**	**0**	**(201.24)**	**0**	**(86.02)**	**(16.22)**	**0**	**(241.00)**	**(360.47)**	**(13,882.64)**

Staffing Position – 31 May 2009

Post	Established Posts	Actual	Comments
Harbour Master	1	1	
Marine Officer/Pilots	11	11	
VTS Operators	2	2	
Operations Manager – Ports	1	1	
Port Safety Officers	2	2	
Launch Crew Skippers	9	9	
Launch Crew Deckhands	13	12	
Tug – Masters	13	13	2 Temp Contact
Tug - Chief Engineers	12	11	
Tug - 2nd Engineers	8	8	
Tug - Mates	12	12	5 Temporary contracts
Tug – Mate	1	1	Long Term Sick (TUPE)
Tug - GPRs'	4	4	3 Temp contracts
Assistant Pier Masters (Scalloway)	3	3	
Full Time Harbour Assistant	1	1	
Part Time Harbour Assistants	9	8	
Administration Manager	1	1	
Finance Assistants	5	5	
Clerical Assistant	3	3	
Cook	1	1	

Engineering Manager – Marine	1	1
Engineering Manager – Ports	1	1
Maintenance Planning Engineer	1	0
Engineering Supervisor	1	1
Electrical Engineer	3	2
Marine Engineer	3	3
Welder/Fabricator	2	2
Maintenance Engineer	1	1
Engineering Assistant	4	4
Apprentice – Electrical	1	1
Apprentice – Mechanical	1	1
General Assistant	2	2
Store Keeper	1	1
Storeman	1	1
Senior Stores Assistant	1	1
Stores Assistant	1	1
Driver	1	1
Total	138	133

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Brent Exports													
No of Vessels	7	6	8	5									**26**
GT	434518	345334	473289	394712									**1647853**
Cargo C/Wise	228515	75695	398358	163333									**865901**
Cargo Foreign	374978	405652	236243	245589									**1262462**
Schiehallion Exports													
No of Vessels	1	2	2	2									**7**
GT	56204	123123	116192	121462									**416981**
Cargo C/Wise	0	89574	0	89392									**178966**
Cargo Foreign	85548	66476	179324	89562									**420910**
Joint Exports													
No of Vessels	0	0	0	0									**0**
GT	0	0	0	0									**0**
Brent C/Wise	0	0	0	0									**0**
Brent Foreign	0	0	0	0									**0**
Schiehallion C/Wise	0	0	0	0									**0**
Schiehallion Foreign	0	0	0	0									**0**
													0
Schiehallion Imports													
No of Ships	1	6	5	4									**16**
GT	72245	453156	374349	302104									**1201854**
Schiehallion C/Wise	43105	249488	166188	214450									**673231**
Clair Exports													
No of Ships	2	2	3	3									**10**
GT	117818	116999	186643	170443									**591903**
Cargo Coastwise	180931	90473	90900	271734									**634038**
Cargo Foreign	0	90668	180430	0									**271098**
Ship to Ship Imports													
No of Ships	0	0	1	0									**1**
GT	0	0	42661	0									**42661**
STS Crude C/Wise	0	0	0	0									**0**
STS Crude Foreign	0	0	58870	0									**58870**
													0
Ship to Ship Exports													
No of Ships	0	0	1	0									**1**
GT	0	0	42010	0									**42010**
STS Crude C/Wise	0	0	0	0									**0**
STS Crude Foreign	0	0	58870	0									**58870**
													0
Ship To Ship Joint Exp													
No of Ships	0	0	0	0									**0**
GT	0	0	0	0									**0**
STS Crude C/Wise	0	0	0	0									**0**
STS Crude Foreign	0	0	0	0									**0**
Brent C/Wise	0	0	0	0									**0**
Brent Foreign	0	0	0	0									**0**
Schiehallion C/Wise	0	0	0	0									**0**
Schiehallion Foreign	0	0	0	0									**0**
Propane Exports													
No of Vessels	0	1	0	0									**1**
GT	0	11822	0	0									**11822**
Propane C/Wise	0	0	0	0									**0**
Propane Foreign	0	8534	0	0									**8534**
													0
Butane Exports													
No of Vessels	0	0	0	1									**1**
GT	0	0	0	11822									**11822**
Butane C/Wise	0	0	0	0									**0**
Butane Foreign	0	0	0	8810									**8810**
													0
Joint Exports													
No of Vessels	0	0	0	0									**0**
GT	0	0	0	0									**0**
Propane C/Wise	0	0	0	0									**0**
Propane Foreign	0	0	0	0									**0**
Butane C/Wise	0	0	0	0									**0**
Butane Foreign	0	0	0	0									**0**

Ports & Harbours Operations

Abstract of Weather Caused Delays at 30 April 2009

	Monthly Totals			Cumulative Totals		
	Days	Hours	Mins	Days	Hours	Mins
Berthing Suspension	00	13	30	17	10	18
Unberthing Suspension	00	00	00	00	00	00
Loading Suspension	00	00	00	00	13	06
Boatwork Suspension	00	00	00	00	20	00
Pilotage Suspension	00	00	00	00	06	00
Helicopter Usage	00	00	00	00	00	00
Tug/Pilot Standby	00	00	00	00	00	00
Total Disruption - all Causes	00	13	30	17	16	18
Actual Delays Due to Weather	00	06	00	01	05	54

Fish Landing Statistics - Scalloway
2009/2010

FISH LANDINGS - SCALLOWAY		APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH		TOTAL
Fish Landed Through Market (Boxes)		5121	0	0	0	0	0	0	0	0	0	0	0		**5121**
Consigned Fish (Boxes)		440	0	0	0	0	0	0	0	0	0	0	0		**440**
Mackeral Landings		0	0	0	0	0	0	0	0	0	0	0	0		**0**
TOTAL NO OF BOXES - (Boxes)		**5561**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**5561**

DUES PAID ON FISH LANDINGS		PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD		
(Rate = £0.025 per £1.00 Value)		**00/01**	**00/02**	**00/03**	**00/04**	**00/05**	**00/06**	**00/07**	**00/08**	**00/09**	**00/10**	**00/11**	**00/12**		**TOTALS**
LHD Ltd		9882.36	0	0	0	0	0	0	0	0	0	0	0		**9882.36**
Other (Consigned Fish)		0	0	0	0	0	0	0	0	0	0	0	0		**0.00**
Mackeral Landings		0	0	0	0	0	0	0	0	0	0	0	0		**0.00**
TOTAL FOR LEDGER PERIOD		**9882.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**9882.36**

Scalloway Harbour
Wharfage Charges 2009/2010

APPENDIX G

WHARFAGE - Imports		APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH		TOTAL (tonnes)
Inward - Tonnes (Misc)		692.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		692.000
Salmon Nets - Tonnes (In)		40.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		40.000
Fish Feed - Tonnes (In)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
TOTAL CARGO		**732.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**		**732.000**

WHARFAGE - Exports		APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH		TOTAL (tonnes)
Tonnes (Misc)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Ice Loaded		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Gas Oil Bunkers		182.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		182.728
Fish Feed		77.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		77.000
Salmon Nets		6.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		6.000
TOTAL		**265.728**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**		**265.728**

Other Small Piers/Harbours
(Part 2 - Harbours)
Summary Management Accounts - Revenue
April 2009 to March 2010

Appendix I

	Annual Budget 2009/2010	Actual April-09	Variance (Adverse)/Favourable
All Income	(50,340)	(7,492.10)	(42,847.90)
Total Income	**(50,340)**	**(7,492.10)**	**(42,847.90)**
Employee Costs	28,705	2,258.27	26,446.73
Agency Payments	-	-	-
Property And Fixed Plant	77,567	(8,458.56)	86,025.56
Supplies and Services	7,655	313.96	7,341.04
Transport and Mobile Plant	145,660	50,603.83	95,056.17
Administration	-	-	-
Total Expenditure	**259,587**	**44,717.50**	**214,869.50**
Net Revenue Expenditure/(Income)	**209,247**	**37,225.40**	**172,021.60**

NB Financing Costs and Recharges are not included in the above figures, as these are dealt with seperately at the year end. The above is "controllable costs".

SCALLOWAY HARBOUR
Summary Management Accounts - Revenue
April 2009 to March 2010

Appendix H

	Annual Budget 2009/2010	Actual April-09	Variance (Adverse)/Favourable
Fish Landing Dues	(80,000)	(9,882.36)	(70,117.64)
Other Dues/Charges	(234,200)	(4,423.04)	(229,776.96)
Total Income	**(314,200)**	**(14,305.40)**	**(299,894.60)**
Employee Costs	137,699	11,912.15	125,786.85
Administration	23,225	59.01	23,165.99
Agency Payments	2,000	-	2,000.00
Property and Fixed Plant	112,267	(11,889.24)	124,156.24
Supplies & Services	12,300	27.39	12,272.61
Transport and Mobile Plant	57,494	6,758.53	50,735.47
Total Expenditure	**344,985**	**6,867.84**	**338,117.16**
Net Revenue Expenditure/(Income)	**30,785**	**(7,437.56)**	**38,222.56**

NB Financing Costs and Recharges are not included in the above figures, as these are dealt with seperately at the year end. The above are "controllable costs"