Initial Scoping Report – The Third Harbour, Torquay

April 2012

V7 DRAFT

www.torbaydevelopmentagency.co.uk

Torbay Development Agency

This document can be made available in other languages and formats. For more information please telephone 01803 208973

Executive Summary

The three harbours within Tor Bay have changed considerably over the last 200 years reflecting the needs of the local economy and its population.

As part of the Council's response to the economic challenges of Torbay and specifically with regard to the development of the marine economy and the tourism sector the Mayor of Torbay has requested that the Torbay Development Agency (TDA) investigates the feasibility and economic impact of expanding Torquay's existing harbour facilities, which comprise of an inner and outer harbour presently. The outcomes expected from this project include securing growth and job creation through supporting the key marine and tourism sectors. Attracting inward private sector and indigenous investment are crucial to encouraging growth and higher paid quality jobs.

This Initial Scoping Report does not seek to categorically identify whether the proposal is financially viable or whether it is feasible to construct it in the location proposed, that requires commissioning of a feasibility report with greater resourcing than presently mandated.

<u>This initial report seeks to:</u>

1. Outline the economic benefits
2. Provide an initial draft business case
3. Suggest how the proposal could be progressed and identify the likely key issues
4. Provide estimated budgets for future actions

A concept drawing has been provided (see Appendix 1) showing where a new third harbour could be located and how it might be laid out. This involves constructing a number of large piers / breakwaters to create a new marina and cruise ship facility on the seaward side of the existing Haldon Pier. Alternative options have also been considered.

<u>It is envisaged that the expansion of Torbay Harbour would:</u>

1. Enable cruise ships to berth alongside (as opposed to having to drop anchor in the Bay and ferry passengers ashore)
2. Protect a new (approximately) 500 berth marina for pleasure boat owners
3. Provide improved facilities for maritime events
4. Provide improved facilities for the sailing clubs, youth clubs and disabled members, including sailing, rowing, Scouts, diving etc.
5. Provide new shored based leisure facilities, including a hotel, bars and restaurants
6. Enhance the vessel / boat maintenance facilities, including fuelling and craning

<u>Key Benefits of the Third Harbour Proposal:</u>

1. As a major cruise ship destination, the wider economic benefits to the Bay could be considerable, estimated to be several million pounds per year to the local economy.
2. The potential direct revenue from the new harbour alone could be in the region of £2,687,500 pa. This includes projected income from the marina of £787,500 pa and cruise ship income of £600,000 pa.
3. It is estimated that over 150 direct jobs could be created following completion as well as some 200 – 300 jobs during the construction period. The value of the new jobs to the local economy is estimated at £1,400,000 - £2,400,000 pa.

4. The project has the potential to greatly improve the harbour's recreational facilities and enhance Torbay's reputation as an international destination, deriving maximum benefits from existing tourism, new water based events and activities which will appeal to new markets.
5. Increasing the port infrastructure and attendant facilities leading to an increase in cruise ship and leisure market operations will provide the opportunity for the expansion of other marine activity such as marine engineering. This growth could lead to more opportunities for young people to find skilled employment which can be supported by the skills being delivered through the award winning South Devon College.
6. Provide necessary infrastructure for the development of a fast ferry operating across the Bay which will considerably reduce travelling times for commuters.

Key Issues of the Proposal:

The following issues have been identified:

1. The project will significantly impact upon the marine and land environment, and the site proposed lies within a Special Area of Conservation. In due course a full Environmental Impact Assessment and Habitats Survey will be needed, in addition to an Access and Design Statement.
2. The costs of construction will vary immensely depending upon the final layout e.g. the scale of the harbour and the amount of reclaimed land that is included. Based on the limited information available and other projects completed, the likely construction costs are in the region of £125,000,000 to £175,000,000.
3. Site investigation works are needed to accurately assess the depth and nature of the underwater silts which, due to the nature of working at sea, could cost up to [redacted] depending upon the extent of the harbour expansion and the number of options evaluated. In due course a Harbour Revision Order (the maritime equivalent of a planning consent) would be required and could take 3 years to obtain.
4. [redacted]
   Torbay Council could consider leasing the seabed, which it partly controls with the Crown Estate, to a private developer but there is a likely viability issue. A Public Private Sector Joint Venture, with Heart of the South West Local Enterprise Partnership (LEP) backing, is arguably the most probable of the funding options identified to date.
5. The economic benefits of the proposal to the wider South Devon economy will need to be established together with a comparison of alternative schemes. It should be noted that the LEP's predecessor, the South West Regional Development Agency, strongly favoured the construction of a northern arm in Brixham and contributed significant public funds to progress that project which is at Business Planning Stage.
6. From a Spatial Planning perspective much needs to be done as to date the possibility of expanding the harbour has not been formally consulted upon and it is not embedded in current planning policy. The on-going development of the Core Strategy, Neighbourhood Plans, Port Master Plan and the Marine Economy Action Plan is therefore helpful.

Recommendation

This scoping report identifies the key components for further evaluation. It is proposed that the most appropriate way to progress the proposal would be to work in partnership with the LEP and other local authorities, to further assess the economic benefits to the wider South Devon economy and to test the feasibility and viability of the proposal.

It is recommended that the LEP be asked to commission an Outline Feasibility Report (including Preliminary Business Plan) with clear milestones.

A complete Outline Feasibility Study (including business plan with basic surveys and legal opinion), sufficient to warrant major expenditure thereafter, is likely to cost in the region of [redacted]

Contents

1. Introduction and Overview

1.1 Introduction

A new 'Third Harbour' has been proposed for Torquay by the Elected Mayor which offers the potential for significant maritime, economic and recreational benefits to the town, Torbay and South Devon. The new harbour would especially create employment and increase tourism via more cruise ship visits, maritime events and increased number of marina users.

The likely benefits and challenges need to be identified in order that Torbay Council and potential funding partners can decide whether to progress the proposal.

1.1.1 Summary of the Proposal

An indicative layout, commissioned by the Mayor directly, is shown in Appendix 1. The proposal involves constructing a number of large piers / breakwaters to create a new harbour and marina on the seaward side of Haldon Pier in Torquay. It is appreciated that this is a schematic drawing only, which serves to illustrate the possible size and layout of a new harbour.

It is proposed that the Third Harbour will:

- Enable cruise ships and 'Tall Ships' to berth alongside a pier (as opposed to having to drop anchor in the Bay and ferry passengers ashore)
- Provide a new (approximately) [redacted] berth marina and associated facilities
- Provide improved facilities for the sailing clubs, youth clubs and disabled members, including sailing, rowing, Scouts, diving etc.
- Provide new shored based leisure facilities e.g. a hotel, bars and restaurants
- Incorporate new shore based maritime retail outlets
- Enhance maritime maintenance opportunities e.g. fuelling and craning facilities
- Provide improved facilities for maritime events e.g. slipways

Collectively the above will significantly add to the local economy and increase the gross value added (GVA) of Torbay, as well as neighbouring South Devon.

1.1.2 The Aims of this Report

This Initial Scoping Report aims:

1. To identify the economic benefits and the key deliverability issues

   This will allow the funding partners to appreciate the economic benefit and key issues.

2. To provide an estimated budget for producing an outline feasibility study

   This report does not purport to offer advice on whether the proposal is feasible or viable and no external consultants have been employed in its preparation. It seeks to give the Mayor and Torbay Council an appreciation of the issues, costs and timescales involved so that they can decide whether or not to proceed to the next stage of commissioning.

An Outline Feasibility Study in due course (which is likely to comprise of various technical reports prepared by external specialist consultants) will accurately determine the likely costs, benefits and time scales involved in building the Third Harbour. It is these reports that should form the basis of whether the proposal is feasible.

3. To provide an initial draft business case for a new harbour

   The report offers estimated and approximate costs for constructing the Third Harbour. It also identifies some potential income levels. By using these figures it is possible to construct a very simple assessment of the potential viability of the proposal. However it is important to appreciate that this is not a detailed business case: it is a high-level assessment of the likely financial viability of the proposals excluding Government Grants.

   The potential income levels identified have been assumed in the absence of detailed plans or layouts. The reader will appreciate that the figures are therefore purely indicative and will require substantial due diligence.

4. To suggest how the proposal could be progressed

   The report suggests a number of actions, including the necessity to carry out appropriate levels of consultation. The aspiration and the project will have to be incorporated into key strategic documents. The funding for the project may require a South Devon-wide economic assessment and co-operation with other local authorities, possibly incorporating the Local Enterprise Partnership.

   The above items are covered in the suggested way forward section outlined in Section 4.4

1.2 Internal Report

This is an internal document intended for sole use by Torbay Council. It has been produced by the TDA incorporating advice from key Torbay Council officers within the following departments and other agencies:

- Tor Bay Harbour Authority
- Spatial Planning
- Residents and Visitor Services
- Commercial Services
- Homes and Communities Agency
- English Heritage

The report is commercially sensitive, for internal use only and is not intended for wider publication.

Note: All costs and timescales included in this report are estimates only and are included purely to illustrate the potential magnitude of the project. They should not be relied upon and further investigative work is needed to obtain accurate information.

1.3 Format of the Report

The indicative layout for the Third Harbour commissioned by the Mayor is shown in Appendix 1. Although it is indicative, it illustrates some of the potential elements associated with a new harbour and its general location.

Appendix 2 refers to the Special Area of Conservation.

The benefits of the proposal are detailed in Section 2 while Section 3 looks at the key issues of deliverability. Each issue is described and its potential impact outlined.

A conclusion is provided for each issue and, where appropriate, an indicative cost for obtaining further information.

The conclusions from Section 3 are summarised in “Section 4 - Conclusions and What Next?” which also summarises the costs involved in producing an outline feasibility study.

Section 4 also includes a high level viability assessment.

As an alternative to the full proposal illustrated in Appendix 1, an alternative option is shown in Appendix 3. This involves building a single pier, on piles, continuing out from Haldon Pier. This option is significantly smaller and less expensive. An Initial Scoping Report for this option is provided in this appendix, including a very high level assessment of viability.

Separately the Torbay Development Agency has been asked to investigate the possibility of creating a new sailing dinghy platform off Haldon Pier. As this lies within the vicinity of proposals for a Third Harbour this is included in Appendix 4.

In producing this report the TDA has looked at a number of proposals and completed harbours and ports in the UK and elsewhere i.e. Port of Falmouth. There are plans to expand Falmouth, which also incorporates cruise ship facilities and a marina, and a Port Masterplan for Falmouth has been produced. As such there are various references to the Falmouth Port Masterplan in this document and the TDA is grateful for their assistance.

2. Economic and Recreational Benefits

2.1 Economic Benefits

2.1.1 Generally

There are without doubt significant economic benefits associated with the proposal and these are outlined within this report.

The expansion of Torquay's Harbour presents numerous opportunities for economic activity, ranging from physical regeneration, the creation of new employment, increasing local spend on supplies, and the generation of additional tax revenues for the local authority and Harbour Authority.

The precise benefits of this proposal will be determined by the type of development that proceeds. Commercial Ports will generate broader economic benefits than those orientated towards marina and leisure activities.

> *For example, according to the Port of Falmouth Masterplan (page 27), the 2009 the cruise ship sector produced just 1% of the total number of jobs at the Port of Falmouth. By comparison the ship repairs sector amounted to 46% of jobs and yatch building 27%.*

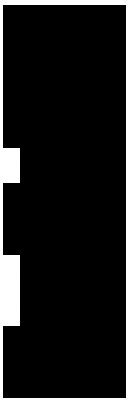
2.1.2 Potential Revenue Income Generation

This report identifies a number of potential income streams per annum based on the limited information available and the plan shown in Appendix 1.

The levels are purely indicative and require extensive due diligence.

In the fullness of time such due diligence may result in the figures being substantially different to those provided below:

- Net ground rent / business rates from a large hotel
- New Marina Berths (see Section 2.1.3 below)
- Rent from 4 x concessions e.g. fuel, water, etc.
- New harbour bar and restaurant rent
- Income from new beach huts and concessions
- New business rates
- Berthing fees from cruise ships (see Section 2.1.4 below)
- Berthing fees from other large ships
- Ferry terminal and local taxes
- Income from 2 major maritime events
- Additional car parking income



Total potential annual income **£2,687,500**

Please note the above is not an exhaustive list of income streams associated with the development, nor a list of the economic benefit of the economy. For instance, it does not include the likely increased spend in the existing local shops, especially chandlery, or the

various suppliers to the cruise ships. These economic benefits are accounted for in Section 2.1.5.1.

2.1.3 Marina Berths

As shown in Appendix 1 the area enclosed is not dissimilar in size to the existing outer harbour at Torquay and could therefore comfortably accommodate a new [redacted] berth marina. The eastern side of the drawing shows a separate enclosed area below the Imperial Hotel, possibly able to accommodate 25 small berths.

For the purposes of this report it has been assumed that the new marina will be funded and operated by the Harbour Authority or a private operator.

Assuming that the existing demand and rent received from MDL at Torquay and Brixham is sustainable, the likely profit should be similar. Presently the rent from the Torquay Marina is based upon a percentage of the marina turnover. This equates to an income to Torbay Council of approximately £250,000 per annum. However, the business case assumes that the actual cost of operating an enlarged facility should be much lower through the economies of scale. As such the income should be proportionately higher.

The proposal also assumes to provide berthing facilities suitable for larger vessels in the new harbour.

Overall it is assumed that the proposal might be able to generate an income of up to [redacted] per new marina berth per annum. Therefore the likely income to the council from leasing the marina berths would be in the region of [redacted] per annum.

The income from the proposed smaller berths in front of Beacon Cove, assuming [redacted] berths, would be an additional [redacted] per annum.

The potential total income from the marina berths is therefore in the order of [redacted].

The marina will also contribute to the Gross Value Added (GVA) of Torbay. As a comparison the 290 berth marina planned for Falmouth is expected, by 2015, to result in additional Net GVA of £1.2m pa when taking into account the benefits to the wider economy / visitor spend. Over the following 15 years (to 2030) the Net GVA is estimated to remain at £1.2m pa. Please see Table 5.6 on page 82 of the Port of Falmouth Masterplan.

Further research will be needed in order to assess the increase in Torbay's GVA as a result of developing the Third Harbour. See Section 2.1.8 below.

For details of the job creation associated with the marina please see Section 2.1.5 below.

2.1.4 Cruise Ships

Cruise ships present an opportunity for additional income to the council or the developer of the harbour. As identified in the Port of Falmouth Masterplan (page 30 there of),

> *"Growth in the European cruise sector has been exceptional in recent years and the United Kingdom has been one of the main beneficiaries."*

There is, however, stiff competition from the various ports along the South West's coastline.

As drawn, the proposed main deep water berth is shown in approximately 7.0 metres of water at chart datum (+ or – 0.5m). Set out below is a table showing passing cruise ship calls scheduled between 2008 and 2012. Ships highlighted in grey would not have been able to safely berth alongside.

YEAR	CRUISE SHIP	DRAFT
2008	EUROPA	6m
2009	DELPHIN VOYAGER	6.8m
2009	PRINSENDAM	7.0m
2009	ATHENA	7.9m
2010	ATHENA	7.9m
2010	DELPHIN VOYAGER	6.8m
2010	ALBATROSS	7.3m
2011	MV FUNCHAL	6.8m
2012	MV ARTANIA	7.8m
2012	PRINSENDAM	7.0m
2012	Delphin	6.8m

The success of a cruise ship port will depend on a number of factors. These factors include, inter alia, the following:

- Access to suitable shore based excursions and "unique selling points" / attractions
- Proximity to other transport infrastructure i.e. mainline railway, international airport and motorway
- Competition from other south coast ports. Cruise ships like to sail early evening and arrive early in the morning, with typically 12 hours overnight sailing. Ports should ideally be placed some 170 to 240 mile apart. Falmouth, Portland and Southampton offer obvious and immediate competition
- For turn-around ports baggage handling and security facilities will be required

The above views are supported by the findings in the Port of Falmouth Masterplan which, on page 30 of that report, states:

> *"Falmouth is an attractive port for cruise operators as it:*
>
> 1. *provides deep water access to Falmouth Bay and alongside berths for smaller vessels;*
> 2. *is close to the Eden Project and other visitor attractions,*
> 3. *the town is an attractive destination in its own right;*
> 4. *is well placed geographically for roundtrip (call-in) cruises; and*
> 5. *is located one day or one nights steaming from the cruise ports at Dover, Southampton and Portsmouth."*

The above provides an indication of what cruise operators seek from the ports that they visit and the relative strengths and weaknesses of Torquay and Torbay will need to be assessed to ascertain the likely demand from cruise operators.

It is understood that the Isles of Scilly attract the greatest number of cruise ships in the south west. The irony here is that the cruise ships anchor-up as opposed to docking into a harbour. The Isles of Scilly are deservedly very popular but this demonstrates that having a unique selling point may be of equal / more importance to cruise operators than alongside berthing facilities.

2.1.4.1 Income from Cruise ships

The TDA is aware that Destination South West promotes the south west's ports, including the English Riviera and research suggests that the cruise ship industry does not need to enter into long term commitments. As such any investment to build a new harbour will possibly be without any commitment from the cruise ship operators to visit.

However, "alongside" berths are more attractive to the cruise operators. A well established cruise ship berth and terminal facility could expect to achieve up to £30,000 from the visit of a 200m ship. The drawing in Appendix 1 only shows berthing without the passenger terminal and therefore the income could drop to £20,000 per visit.

As a guide the Port of Falmouth receives approximately £12,000 per cruise ship visit (2005 to 2008). The number of visits it receives varies significantly year on year, as the table below illustrates:

Port of Falmouth number of cruise ship visits

Year	Number of visits
1996	13
2000	10
2005	40
2006	60
2007	37
2008	35
2010	32

As shown in Appendix 1 the new harbour could allow two 200m ships to berth alongside the harbour wall at the same time (please note the ships shown on the plan are indicative only and are not 200m cruise ships).

Assuming a price per cruise ship visit of £20,000 and 30 visits per year, then this would produce an income of £600,000 per annum to the council.

The cruise ship sector will also contribute to the Gross Value Added (GVA) of Torbay. As a comparison the cruise ship expansion planned for Falmouth is expected, by 2015, to result in additional Net GVA of £0.41m pa when taking into account the benefits to the wider economy / visitor spend. Over the following years the Net GVA is expected to increase to £2.04m pa by 2020 and £2.92m pa by 2025.

Further research will be needed in order to assess the increase in Torbay's GVA as a result of developing the Third Harbour. See Section 2.1.8 below.

For details of the job creation associated with the marina please see Section 2.1.5.

2.1.5 Jobs

It is estimated that the direct economic benefits of the proposal will include:

- Short term jobs in construction, estimated at 200 – 300 (see 2.1.5.1 below)
- Restaurant jobs, estimated at 39
- Hotel jobs, estimated between 31 and 76
- Marina jobs, estimated between 9 and 15
- Harbour related jobs, estimated between 28 and 46
- Increased spending on the items above

Please see the tables in Section 2.1.5.1 below for a more detailed explanation of the assumptions surrounding job creation.

2.1.5.1 Estimated Jobs Created by the Third Harbour Proposal

The two tables below shows the number of jobs that the Third Harbour proposal could potentially deliver, assuming both an optimistic and pessimistic scenario. Both direct and indirect jobs have been accounted for. The number of jobs has been calculated using accepted industry assumptions as described below.

Gross Direct New Jobs: the number of gross jobs has been calculated using industry assumptions, as well as evidence from Falmouth and elsewhere. Deductions are made from the gross number of jobs to allow for “deadweight” (jobs that would have been created in the economy anyway) and “displacement” (allowing for the fact that the new development will take jobs from other existing companies).

Net Direct New Jobs: the net number of jobs after allowing for “deadweight” and “displacement” (as defined above).

Value of Net New Jobs: the number of net new jobs multiplied by the average Torbay salary of £21,400. This is accepted as being too optimistic for some salaries (some catering and hospitality positions are, for example, normally lower than the average salary) and may overstate the benefits. However, we believe, at this juncture, it illustrates the potential economic benefit.

Indirect multiplier (impact on suppliers): is the number of indirect jobs that are created in the supply chain.

Induced multiplier (impact on incomes): the number of indirect jobs created in the economy as a result of the increased spend from the net direct new jobs.

Overall jobs: the total number of jobs created in the economy, being the net direct new jobs plus the jobs created in the supply chain and those as a result of increased spend in the local economy.

NB. Construction Jobs:

Please note that the construction jobs mentioned in 2.1.5 above will be temporary. Much of the work would be specialised construction and many of these roles would be fulfilled by people brought in (from outside of the Bay) by the specialist contractors. Similarly there will be specialised plant associated with some aspects of the construction (eg. under water

piling) and similarly the contractors will bring their workforce with them. There will, of course, be many jobs that can be carried out by people within Torbay. It is estimated that these will be in the order of 200 – 300 per annum and for the construction period only.

Estimated Jobs Created by the Third Harbour Proposal – Optimistic and Pessimistic Scenarios

Optimistic	Gross direct new Jobs	Net direct new jobs	Value of net new jobs (jobs * median workplace salary)	Indirect multiplier (impact on suppliers)	Induced multiplier (impact on incomes)	Overall jobs impact (net + multiplier)
Restaurant	52	29	£536,616	4	6	39
Hotel (4 star)	100	56	£1,036,224	8	11	76
Marina jobs	20	11	£203,544	2	2	15
Harbour jobs	60	34	£629,136	5	7	46
Total	232	153	£2,405,520	20	26	176

For the restaurant and hotel, employment density figures have been used. The marina and harbour estimates are based on evidence from Falmouth and elsewhere.

Pessimistic	Gross direct new Jobs	Net direct new jobs	Value of net new jobs (jobs * median workplace salary)	Indirect Multiplier (impact on suppliers)	Induced multiplier (impact on incomes)	Overall jobs impact (net + multiplier)
Restaurant	52	29	£536,616	4	6	39
Hotel (budget)	40	23	£425,592	3	5	31
Marina jobs	12	7	£122,126	1	1	9
Harbour jobs	36	20	£377,482	3	4	28
Total	140	79	£1,461,816	12	16	107

Please note the above figures are estimates only. In order to better assess the number of jobs created as a direct and indirect result of a new harbour and marina, as well as the gross value added (GVA) further research is required.

2.1.6 Comparisons with the Port of Falmouth

The following comparable information has been extracted from the Port of Falmouth Masterplan (pages 73 and 81):

Marina

> *The new 290 berth marina (which is planned for Phase 1 of the Falmouth masterplan) as well as the new car park will cost £10m to build and secure 16 new jobs by 2015. Indirectly it will bring increased visitor spend to Falmouth and would help to attract and support marine related events within the Port. The forecasted direct and indirect jobs associated with the marina will result in a total Net Additional FTE (full time equivalent) of 30 jobs being created by 2015. There is not forecast to be any increase in the number of jobs between 2015 and 2030 as a result of the new 290 berth marina.*

Cruise Ships

The following comparable information has been extracted from the Port of Falmouth Masterplan (page 81):

> *The forecasted direct and indirect jobs associated with the cruise ship sector will result in a total Net Additional FTE (full time equivalent) of 12 jobs being created by 2015. The report forecasts that the cruise sector will expand with the enlarged port and will create in excess of 60 jobs by 2020-2025 and 88 jobs by 2025.*

2.1.7 Marine Economy Action Plan

The TDA has commissioned a study of the potential for growth in the marine economy in Torbay, entitled the Marine Economy Action Plan. This study has identified the sub-sectors of the marine economy and explored how they can be developed and their potential maximised. The sub-sectors explored include tourism and leisure, science, engineering, fishing, renewable energy and shipping / ferries. Key findings of this study include:

- There is an urgent need for further investment in the harbour infrastructure of Torbay to create the right environment for growth in particular for the further development of the fishing, marine leisure and tourism uses but also for the growing demand for marine engineering facilities which could also put Torbay in a strong position to support the marine energy park.
- there is a need to provide the right infrastructure and facilities to attract cruise ships and fast ferry services which is considered a high priority
- there is a need to create compelling water based experiences and packages to maximise the tourism and leisure offer

An increase in these facilities and activities will in turn support the growth of the marine engineering sector which could provide improved employment opportunities for young people. In addition the report identifies the need for the development of a port master plan, the main purpose of the plan is to:

- Clarify the port's own strategic planning for the medium to long term;

- Assist regional and local planning bodies, and transport network providers, in preparing and revising their own development strategies;
- Inform port users, employees and local communities as to how they can expect to see the port develop over the coming years, typically within a 25 or 30 year time horizon.

The plan also identifies the need to encourage greater networking between marine related businesses to enable them to deliver higher levels of productivity, develop partnership opportunities and explore access to funding.

2.1.8 Conclusion

There are potentially significant economic benefits from the proposed Third Harbour depending upon the uses and the density of development. Unfortunately these can only be quantified by the production of a detailed business case. This report sets out the indicative benefits in revenue terms and job creation.

2.2 Recreational Benefits

There are numerous recreational benefits including, but not limited to, new facilities for sailing, kayaking, rowing, sub aqua and fishing clubs, as well as various youth groups such as the sea scouts. This report does not try to pre-empt all of the recreational benefits that may form part of the final proposal, but recognises the substantial potential that exists.

3. Key Issues

3.1 Maritime Issues

3.1.1 Generally

As a title for this concept it is suggested that the phrase “Third Harbour” is confusing. Torquay has an inner and outer harbour and Tor Bay Harbour has three enclosed harbours i.e. Brixham, Torquay & Paignton. The council’s Executive Head of Harbour of Tor Bay Harbour Authority has suggested that a more appropriate working title might be the “Torquay Harbour Extension Plan”.

The principle of extending Torquay’s harbour has been raised previously, and the Tor Bay Harbour Maritime Strategy 2007 – 2017 identifies the need to consider expanding the existing harbour infrastructure to create additional sheltered waterspace. This report is a publicly available document and is linked to the Torbay Economic Regeneration Strategy (2006 – 2016).

3.1.2 Weather

Tor Bay Harbour is exposed to the east where the fetch is some 200 miles before land is reached on the French coast just south of Boulogne. Consequently prolonged easterly winds generate a significant and uncomfortable swell within the Bay which will penetrate all of the enclosed harbours including any expansion at Torquay. The drawing by the architect Malcolm Kingdon shows the main entrance exposed to the west and south west. As drawn this will allow wind driven waves from these directions to enter the extended harbour area but the fetch is limited by the land mass between Hollicombe and Corbyn Head. Although the prevailing wind is from the south west Torquay is particularly exposed from the south south east (SSE) where the fetch extends just over 100 miles towards St. Malo.

The new arm south of Haldon Pier will take the full force of the weather from the SSE but would also help protect the ageing Haldon and Princess Piers. However, as drawn the new southerly arm has also become directly exposed to the easterly weather and this is not currently the case with the existing infrastructure.

In any event the layout of any new port facilities will need to be subject to mathematical wave modelling to ensure that an acceptable wave climate can be achieved. For marina style pontoon and pile structures this means a wave height not exceeding 0.3m. Larger craft such as Tall Ships and Cruise Ships could tolerate a higher maximum wave height. After the completion of mathematical wave modelling it is always recommended that a physical model is constructed within a wave tank.

For further information on hydrodynamics and wave modelling please refer to Hydrology in section 3.6.2 below.

3.1.3 Quayside Access

Vehicular access to the extended harbour is expected to be along Beacon Quay. Ideally Beacon Quay should be widened to improve the access and to address the un-repaired quay walls under the D-Day embarkation ramps. Both of the D-Day embarkation ramps are Grade

II* listed and Beacon Quay is currently a designed as an area of public realm / space with a relatively low level of traffic density.

3.1.4 Marine Licensing

All construction works that are to be undertaken within coastal waters below mean high water spring tide level requires a marine licence. Originally this was a Food and Environment Protection Act 1985 (FEPA) licence however this has now been replaced by the Marine and Coastal Access Act 2009 (MCAA). Licences under this Act are arranged through the Marine Management Organisation (MMO) and there are a number of requirements that have to be complied with in order to obtain a licence. The application will be subject to assessment under the Habitats Regulations and Water Framework Directive, as well as a detailed Environmental Impact Assessment due to the numerous environmental designated sites in the vicinity of the proposed works.

Please see Sections 3.3.3.1 and 3.3.3.2 below regarding a habitats survey and environmental impact assessments.

3.1.5 Harbour Revision Orders

The creation of a new harbour will require a Harbour Revision Order (HRO) by virtue of The Harbours Act 1964. HRO's are needed for development to the seaward side of the mean low water mark. In essence they are the marine equivalent of planning applications which only relate to development on the landwards side of the mean low water mark. HRO's are dealt with by the Marine Management Organisation (MMO).

The MMO operate a fixed scale of charges for processing harbour orders. The fees are payable when a formal written application for an order is made. At the moment, the fee is £10,000.

The MMO are happy to meet applicants prior to formal application to discuss procedures. They strongly advise that any proposal is, as far as is practical, the subject of extensive consultation locally. If the proposed order consists of works then the applicants are advised to consult with their standard consultees. The consultees at present are:

- Natural England
- Environment Agency
- The Crown Estate
- English Heritage
- Maritime and Coastguard Agency
- Trinity House
- Department for Transport
- Centre for Environment, Fisheries and Aquaculture Science (Cefas)
- Highways Agency
- Network Rail
- local authorities
- neighbouring harbour authorities

Due to the nature and scale of harbour developments, it is likely that an order to authorise works will require an environmental statement, including whether a proposal is likely to have a significant effect on a European site.

The MMO are willing to comment on draft orders but they may not be able to provide a definitive response before the applicant is ready to proceed to formal application. Applicants should seek their own legal advice as the MMO cannot offer definitive legal advice on draft orders.

Once submitted the applicant must publish an advert inviting anyone to write to the MMO with objections or representations within 42 days of the date the order was first advertised. If there are any objections that cannot be resolved then a public inquiry will most likely be held. However, it is important to note that if amendments are proposed which in turn are likely to meet objections, then it may be necessary to resubmit supporting documents (eg. a new environmental impact assessment) or reopen an inquiry.

In the event of receiving objections, applicants should consider whether they want to take time to negotiate with objectors with a view to getting the objections withdrawn or immediately ask for an inquiry.

The MMO will recover the costs of holding an inquiry from the applicants. The costs of a public inquiry and report can vary considerably.

The only statutory period is the 42 days allowed for receipt of public comments following formal application. As a guide only, applicants can expect a screening and scoping opinion in respect of an environmental statement to be given within 12 weeks of request and an inquiry to be set up within 4 to 6 months of request. A period of around nine months from the date of inquiry should be expected before a final decision is made by the MMO, although this can vary depending on the complexity of the issues involved. Experience would indicate that a Harbour Revision Order with no issues and no objections would take a minimum of 3 years.

It is recommended that in due course legal advice is sought on the likely costs of obtaining an HRO. This advice may cost [redacted]

3.1.6 Conclusion

Torquay is particularly exposed to wind from the south south east (SSE). The proposed new arm south of Haldon Pier will take the full force of the weather from the SSE but would also help protect the ageing Haldon and Princess Piers. However, as drawn the new southerly arm has also become directly exposed to the easterly weather and this is not currently the case with the existing infrastructure.

Any new port facilities will need to be subject to mathematical wave modelling.

A marine licence from the Marine Management Organisation (MMO) will be required, which will be subject to assessment under the Habitats Regulations and Water Framework Directive and a detailed environmental impact assessment (EIA). See sections 3.3.3.1 and 3.3.3.2 for further information and cost implications.

The creation of a new harbour will require a Harbour Revision Order (HRO). The application fee is currently £10,000. A public inquiry will be needed and paid for by the applicant. It is recommended that legal advice is sought on the likely costs of obtaining an HRO. This advice may cost [redacted]

Although the only statutory period is the 42 days allowed for receipt of public comments following formal application, experience would indicate that a Harbour Revision Order with no issues and no objections would take a minimum of 3 years.

3.2 Planning Issues

It is important to understand what the planning status is of the area proposed for the Third Harbour and understand whether or not planning consent will be required.

3.2.1. Is Planning Consent Needed to Build a Third Harbour?

Based on the indicative plan shown in Appendix 1 most of the works fall below the mean low water mark and as such are outside the Local Planning Authority's jurisdiction. Consequently consent for the new harbour will not technically be needed from the Local Planning Authority. However, consent would be needed from the Marine Management Organisation (MMO) in the form of a Harbour Revision Order (HRO). See 3.1.5 for further information on HROs.

As part of the HRO, a traffic impact assessment (TIA), Environmental Impact Assessment (EIA) and possibly a Habitats Regulations Assessment (HRA) will be needed.

However, planning consent will be required for the land based elements of the proposed works, such as the infrastructure (connection to the existing pier, car parks, highways improvements etc) and shore-based facilities (hotels, club facilities etc), as well as listed building consent where these works affect the listed pier.

Furthermore, as part of the planning consent for the land based works, a TIA, EIA and HRA will undoubtedly be required. These reports will need to be holistic in their nature and look at the total affect of the proposed works ie. the sea based works and the land based works. For example, in determining the land based EIA, the EIA will need to encompass the whole project in its evaluation, likewise for the TIA and HRA.

As such, indirectly, planning consent from the Local Planning Authority will undoubtedly be needed, as well as the Harbour Revision Order.

In its capacity as a Harbour Authority the council does have certain permitted development rights, which allow it to carry out certain marine / harbour related development. However, such rights will not include the comprehensive development envisaged by the Third Harbour proposals.

3.2.2 The Planning Status of the Area Proposed for the Third Harbour

In determining the land based works referred to above, that form part of the proposal, it is important to see how they fit in with the council's planning policies.

<u>Strategic Planning Policy Context (as at June 2011)</u>

The **Adopted Torbay Local Plan 1995-2011** sets out the current planning framework for Torbay. All of these policies will remain in force until superseded by the Local Development Framework (and in the future by Neighbourhood Plans).

Policies for Tourism are set out in Chapter 5. The overarching tourism **Policy TUS** stresses the need for the local tourism industry to be developed in a sustainable and competitive manner having regard to environmental resources. It acknowledges the need for investment in new facilities and for development to be mindful of any impacts it may have on heritage assets.

Policy TU1 provides more detail regarding the planning context for Torquay and Brixham harbour sides and the surrounding waterfront areas. Both Torquay and Brixham are identified as a focus for regeneration and enhancement.

TU1 seeks to maintain the attractiveness of both harbours and their surroundings for visitors and shoppers and sees these areas as continuing to pursue a multi-functional role related to economic regeneration, maritime use, tourism and retail.

Policy TU4 provides more detail regarding the criteria for the development of water-based tourist facilities within any of Torbay's three harbours. Proposals should enhance the range and attractiveness of facilities whilst avoiding adverse effects on environmental quality (including marine wildlife), pedestrian safety or highway capacity.

In 2004 the council commenced work on the Local Development Framework, which is intended to replace the Adopted Local Plan. Two documents of particular significance are the Core Strategy and Torquay Harbour Area Action Plan (THAAP). Both of these documents would form part of the new development plan and serve as a material consideration in determining planning applications.

The Core Strategy Strategic Objective SO13 'Promoting High Quality Tourism' supports the modernisation and enhancement of the tourist industry through the upgrading and provision of new accommodation and facilities.

The **Core Strategy Vision** sees the New English Riviera as being one of the most beautiful seafront cities in Europe, providing a high quality of life, an outstanding natural and built environment and a thriving economy. The proposal for a new harbour is of such magnitude that it will need to be incorporated into the Core Strategy. The Core Strategy is, amongst other things, an evidence-based document, supported by specialist reports.

It is important to appreciate that there is, however, a risk associated with incorporating the Third Harbour proposal into the Core Strategy. This is because its inclusion may not (at present) satisfy the tests of soundness that the Core Strategy is required to meet when it is subject to the Independent Examination. The Planning Inspectorate is unlikely to be satisfied that the Third Harbour proposal is based on a sound evidence base that demonstrates that the scheme has a reasonable chance of being delivered during the Core Strategy plan period. In such circumstances there is a risk of an Inspector recommending the removal of this scheme from the Core Strategy. This could therefore result in a considerable amount of abortive work for officers, and possibly Members, as part of the formal public participation and consultation stages.

The **Torquay Harbour Area Action Plan (THAAP)** is a key policy document and sets out a range of development proposals for the harbour area. It is important to note that work on this document has now halted following concerns about the level of regeneration proposed on various sites with the Plan area. The most recent consultation on the THAAP were undertaken in November 2010 and January 2011.

3.2.3 Conclusion

Indirectly, planning consent from the Local Planning Authority will undoubtedly be needed, as well as the Harbour Revision Order.

The proposed works, sea-based and land-based, would need to accord with the above policies if planning consent is to be obtained. It would appear that the environmental issues

are a potentially significant issue but the broad principles of the Third Harbour seem to accord with the overall Vision and Objectives of the (now halted) THAAP.

However, only following detailed design and environmental assessments will it be possible to determine whether the works accord with the above planning policies.

The cost of the more detailed design (excluding the EIA and habitats survey, see 3.3.3.2 [redacted] This is not the cost for producing plans that would form the final planning application.

Consideration needs to be given to the inclusion of the Third Harbour proposal in the emerging Core Strategy. There are risks associated with this, in that the Planning Inspectorate may recommend the removal of the scheme from the Core Strategy, resulting in abortive costs for the authority.

The council may wish to consider developing a port master plan (like the Port of Falmouth), as encouraged by the Department for Transport. A port master plan would set out how Torbay expects its maritime functions to develop and grow over the life of the plan, including looking at supply and demand, proposed land use changes, public consultation and environmental issues. The plan may take 6 months to develop and could be done in-house.

3.3 Environmental Issues

3.3.1 Generally

Currently Torquay Harbour is mainly used for leisure craft, although there is some low level fishing and commercial activity. The current level of activities in the harbour area has not been identified as causing significant damage to biodiversity, air quality, water quality and climate change. The Third Harbour however is likely to increase recreational uses which will result in a cumulative impact in combination with the existing Harbour and the proposed level of growth in the Torbay's Local Development Framework (LDF).

The following environmental issues will be considered as part of any planning application. As stated above in section 3.2.1 a planning application will be needed for any land-based development and any reports triggered by the land-based assessment will need to look holistically and incorporate the sea-based development (which is not subject to planning consent), including, an environmental impact assessment (EIA)

Section 3.3.3 below gives an outline of the environmental controls that exist in and around the site of the proposed new harbour.

3.3.2 Likely Environmental Impacts of the Third Harbour

3.3.2.1 Impact on Ecology

Increased water-based recreation could have an impact on the marine environment. Without mitigation measures the Third Harbour proposal could have an adverse ecological impact on the site's habitats and species.

The proposal area is located within Lyme Bay and Torbay Marine candidate Special Area of Conservation (cSAC) which is designated as a cSAC because of its reefs and sea caves. Hope's Nose Reefs and a number of sea caves are present in close proximity to the Third Harbour area. These habitats and species may be threatened by activities such as physical damage in the form of abrasion, removal, anchoring and non-toxic contamination. The extent of the cSAC is shown in Appendix 2.

The marine environment in Torbay provides habitats for a range of other internationally, nationally and regionally protected species including Bottlenose Dolphins, Harbour Porpoises and Spiny and Short Snouted Seahorse, as well as protected seagrass beds. These species are threatened by catches, physical damage caused by boat activity and contaminants. Any intensification of leisure uses in the water will increase this threat, unless mitigation measures are incorporated.

Torbay's seagrass beds are an important eco-system and are home to hundreds of marine animals and plants, including seahorses.

The proposal area also contains a number of national designations include two Sites of Special Scientific Interest (SSSI) at Dyer's Quarry and Daddyhole and small areas of County Wildlife Site (CWS).

3.3.2.2 Impact on Water Quality

It is difficult to predict the overall effect of the proposal on water quality; however increased activities in the Third Harbour could increase water contamination through oil spills and untreated sewage (toilet flushing). Water quality could also be worsened by surface runoff water during the construction phase (notwithstanding that mitigation measures will be utilised by the contractors).

3.3.2.3 Impact on Flood Risk

The Third Harbour proposal is located in a flood risk zone 3. However, it could provide flood defences against tidal flooding in the short-term. Over the long-term the Third Harbour is likely to be vulnerable to an increase in severe storm events and rising sea levels due to climate change and may need to be enhanced to mitigate the risk of flooding in the future. This could results in an increased maintenance of the sea defences.

3.3.2.4 Impact on Air Quality

The proposal is likely to increase road traffic in Torbay and in particular around Torquay harbourside; therefore the impact of local traffic on the air quality for residents living in nearby properties should be investigated, as it would for any proposed development.

3.3.2.5 Impact of Noise and Vibration

During the construction phase an adverse noise impact is likely to affect existing properties in close proximity to the proposal area. Once completed, the noise impact will be due to road traffic. Appropriate mitigation measures should be put in place to ensure noise level will not be significant.

3.3.2.6 Impact on Cultural Heritage

The harbour area is a conservation area, covering 38 ha. Within the conservation area there are 80 listed buildings and key buildings of historical value. Any development should respect and enhance the cultural and historic assets in the area.

3.3.2.7 Socio-economic Impacts

Improvement to the living environment and increased number of jobs would help diversify and strengthen the tourism industry. However, new jobs focused in tourism/recreation would provide largely part-time, low paid and seasonal jobs. Overall it considered that the proposed harbour will be a benefit to the socio-economic circumstances in Torbay, providing new jobs, tourism and recreational facilities.

3.3.2.8 Impact of Waste

Development of the Third Harbour will involve the generation of significant levels of construction waste as well as post-construction operational waste. The proposal needs to address these through sustainable waste management options. All UK ports are required to have a Port Waste Management Plan and one already exists for Tor Bay Harbour.

3.3.3 The Legal Requirement for the EIA and HRA

This Section outlines the legal requirement for the Environmental Impact Assessment (EIA) and Habitat Regulation Assessment (HRA).

3.3.3.1 Environmental Impact Assessment

The EIA Directive requires an assessment of the effects of proposed projects on the environment before development consent is granted. Its main aim is to ensure that an authority giving development consent for a project makes its decision in the full knowledge of any likely significant effects on the environment.

The Third Harbour proposal is considered to be listed under 12 (b) of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) 1999. It is of such a scale that an EIA is essential.

A Environmental Impact Assessment would also be required by virtue of the Harbour Revision Order.

3.3.3.2 Habitats Regulations Assessment

The EU Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (known as the 'Habitats Directive') provides legal protection for habitats and species of European importance. Under regulation 85(B) of the Habitats Directive, the assessment must determine whether or not a plan or project will adversely affect the integrity of a European site. Article 2 of the Directive requires the maintenance or restoration of habitats and species of interest to the EU, at "a favourable condition."

As stated in section 3.3.2.1 the proposed Third Harbour is located within the Lyme Bay and Torbay Marine candidate Special Area of Conservation (cSAC) and therefore a Habitats Regulations Assessment (HRA) is required. The extent of the cSAC is shown in Appendix 2.

The HRA entails doing a "finger tip" search of the seabed by a specialised team of divers who carry out a systematic search of the seabed. They can only carry out the survey during good weather, and importantly light winds, so that visibility at the seabed (some several metres down) is adequate for the survey. Any protected species will need to be captured and relocated, both of which are restricted to certain times of the year and will entail further costs.

As a guide a similar investigation was carried at for the proposed Northern Arm at Brixham. The area was approximately 1 acre and was *inside* the breakwater. The survey took 1 month and cost £30,000. The area for the Third Harbour is larger and appreciably more exposed: the survey could cost [redacted]

It will take some years for the Third Harbour project to move from the feasibility stage to the construction stage, and as such the survey will need to be undertaken again before construction starts.

3.3.3.3 Marine Conservation Zone

In addition to the Habitats Directive which specifies the area as a candidate Special Area of Conservation (cSAC) the area also falls within a proposed Marine Conservation Zone (MCZ) which is designed to safeguard the area's undersea habitats and marine life to ensure long-term sustainability of specific marine resources. The SW MCZ is proposed for the whole of the SW peninsula, from the high water mark to the edge of the continental shelf.

There are two elements to the work on conservation objectives (COs) for each MCZ: firstly defining the list of features for which COs are written, and secondly determining whether the

CO is to “maintain in a favourable condition”, or “recover to a favourable condition”. Identified features need to either be maintained in, or recovered to, favourable condition.

The proposed MCZ site boundary follows the boundary of Lyme Bay and the proposed Torbay cSAC is between Oddicombe Beach and just south of Berry Head. The areas within Brixham and Torquay’s existing harbours are not included.

The fundamental assumption about human activities within MCZs is that activities can continue (under current licensing regimes where applicable), as long as they do not prevent the conservation objectives from being achieved. This *may* result in activity restrictions or management measures in the MCZs.

3.3.4 Marine Licence for Construction Works

In addition to the requirements under planning, all construction works that are to be undertaken within coastal waters below (seawards of) the mean high water spring tide require a marine licence. In order to obtain a licence it is necessary to carry out a detailed EIA. See section 3.1.4 above on Maritime Issues.

3.3.4 Conclusion on Environmental Issues

The breadth of environmental impacts described above highlight the potential impact a new harbour will have on the environment. These impacts will have to be mitigated if the Harbour Revision Order and planning consent is to be granted and included in an Environmental Impact Assessment (EIA) for both land and sea based elements of the proposal.

The proposed Third Harbour is located within the Lyme Bay and Torbay Marine candidate Special Area of Conservation (cSAC) and therefore a Habitats Regulations Assessment (HRA) is required. It is believed that there are a number of legally protected species in the waters around the site of the proposed Third Harbour.

The habitat survey could cost [redacted] plus and may need to be done twice.

The Marine Conservation Zone, if established, will place further controls on protecting marine wildlife and habitats.

All of the above elements will need to be considered as part of the Harbour Revision Order and planning application and unless it can be demonstrated that the environmental impacts have been mitigated and are acceptable, and that they will not adversely affect the integrity of the candidate Special Area of Conservation or maintain it in a “favourable condition,” then it is considered that planning consent could be refused.

3.4 Transport Issues

3.4.1 Generally

As stated in section 3.2.1 a Traffic Impact Assessment (TIA) would need to be considered as part of a planning application for the proposed new harbour. Before the scheme progresses to a planning application stage it would be necessary to carry out a Transport Assessment to ensure that the scheme is viable in this location.

3.4.2 Transport Assessment

A Transport Assessment would examine the likely impact the proposal would have on the transport network not just around the existing Torquay Harbour and town centre area, but on Torbay as a whole. The Assessment would entail the following:

- Traffic surveys to assess the existing traffic baseline in the area
- Calculating the number of trips the scheme would generate, to predict the likely additional movements the transport network would have to cope with
- An assessment of the current network capacity and public transport capacity
- Traffic modelling to make an accurate assumption on additional traffic generated and its impact on the network

3.4.3 Construction Access

It is necessary to investigate the likely construction works needed to build the harbour and how any over-sized vehicles would gain access to the site (not just at the harbour but through Torbay). The number of vehicle movements generated during construction and the impact to the existing transport network would also need to be quantified.

3.4.4 Other Transport Issues

After the Transport Assessment has been carried out, the council's highways engineers will be looking at various issues on everyday and strategic transport operation, including:

- An appropriate level of off-road car parking will need to be provided, based on the likely number of trips generated to the development (it is noted that there doesn't appear to be space for this on the current drawing)
- A drop-off area is likely to be needed depending on the location of the main car parking for people to transfer boating equipment from their cars to their boats, or to pick up passengers generated from the other developments (e.g. Sea Scouts)
- Improved access and turning facilities are mentioned. These should ensure that no reversing movements would be necessary to turn and include a separate coach drop off area
- There may be a need, particularly for cruise ships, to look at taxi stand provision and access
- Where the cruise ships are planned to dock, as shown on the current plan, appears to be approximately 1km from the main bus terminus and town centre. Walking & public transport access would need to be improved to make it acceptable on sustainable transport grounds (developments should be within 200m – 400m of the nearest bus stop)
- Emergency Service Vehicle access will need to be incorporated to all parts of the proposed harbour (this will need discussion with the emergency services)

- Appropriate access will be needed for deliveries (e.g. fuel, food etc.), particularly for cruise ships
- All areas of the development (harbour / marinas / club houses etc.) would need appropriate access for pedestrians that meet current Disability Discrimination Act (DDA) regulations
- The development would require contributions to highway and sustainable transport to mitigate the effects to the existing network and ensure appropriate levels of access

3.4.5 Pedestrianization of the Harbour Area

The harbour area in Torquay has been moving towards a pedestrian priority zone, especially after the works carried out on Victoria Parade recently and the area as a whole is not designed to take the additional traffic likely to be generated by this scheme. On this basis the large scale proposals are likely to have a significant impact on the surrounding area on transport grounds

3.4.6 Vehicular Access

Access is also currently restrained around the Beacon Quay area which is considered unsuitable to take a heavier level of traffic. It is likely that, for instance, access by coaches and lorries would only be achieved by implementing a one-way system via the Meadfoot area unless new turning facilities can be made available at the harbour. This would generate a significant level of additional traffic in a largely residential area.

3.4.7 Conclusion

In summary, such a proposal is likely to raise significant issues in the provision of associated space for servicing and in accommodating the traffic generated by the scheme. The cost of overcoming these difficulties needs to be factored into the business case for the development.

The scheme would need to provide a significant sustainable transport contribution to improve access to the site.

Employing transport consultants to carry out a full transport assessment is likely to cost in the region of [redacted]

3.5 Engineering Issues and Construction

The proposed works present a civil engineering challenge. The depth of the water is typically 7 metres across the site and working in deep water in exposed conditions brings unique challenges.

3.5.1 Site Investigation Works

The most severe storm events experienced at Torquay Harbour occur as a result of easterly storms and in order to withstand these storm events it is likely that the new piers and harbour structures will be substantial and will need to be founded on piles sunk into bedrock. From the site investigation undertaken as part of the Haldon Pier structural repair works the bedrock is located approximately 12m below the seabed. The nature of seabed appears to be largely sand and shells according to the Admiralty chart but rocks exist closer to Haldon Pier and the Mill Stones.

It would be necessary to carry out a site investigation along the lines of the proposed piers to ascertain the depth of the silt and its bearing capacity (how much weight the silt can absorb). Beneath the silt is the bedrock. This will involve a series of boreholes. As a comparison 6 boreholes were drilled along the line of the proposed Northern Arm in Brixham (where the water is sheltered by the Breakwater) and this cost £120,000.

The cost of, say, [redacted] boreholes in a more exposed location could cost in the region of [redacted] The cost could increase if the weather changes as the rig is kept out at sea and the boreholes can not be drilled during inclement weather.

In order to complete the (outline, depending on the depth of the study) feasibility study it is suggested that a reduced number of boreholes could be carried out to provide an indication of the depth and nature of the silts, and this could be achieved for [redacted]

3.5.2 Method of Construction

There are generally 2 methods of creating harbour walls at sea:

1. The first relies on rocks being stacked on top of each other until the required height is reached and then the walkways are finished in concrete. This is referred to as a rock breakwater or rock armour.

   This is the type of construction used at the Breakwater in Brixham. As the rocks are placed on top of each other the height to width ratio of this structure is typically 1:3. This makes it impossible for ships to berth along side. It is possible to berth the ships on “dolphins” and build a walkway extending from the top of the breakwater to the ships. This arrangement would regular maintenance and would typically have a life span of 25 years.

2. The second method creates a vertical sea wall from the concrete walkway down to the sea bed. The vertical wall can be either steel sheet piling or concrete block. Sheet piling could not be used in this location due to the depth of the water. As such the concrete block method would be used. This requires the building of a large hollow concrete construction which is lowered onto the seabed, which has been dredged to provide a level platform. The concrete box is then back filled with material to create a solid structure.

This method of construction allows ships to dock against the sea wall but it is significantly more expensive than the former method. There is an additional need to protect the sea-facing solid wall from wave action due to its exposed location. This is done by placing rock armour (boulders) on the sea facing wall, which means that boats can *not* dock along this side of the pier as is shown in the proposal shown in Appendix 1.

3.5.3 Cost of Construction

The following table shows the range of construction costs for a new pier. The costs are per liner metre and exclude design fees, supervision fees, dredging costs, piling into bedrock and contingencies.

Rock Breakwater	£30,000 - £45,000
Steel Sheet Piling	£58,000 - £65,000
Concrete Block	£62,000 - £70,000

The range depends upon the depth and nature of the silts and how exposed the construction works will be.

Based on the indicative plan shown in section Appendix 1 the proposed structure is shown as a solid wall capable of accommodating cruise ships on both sides. It is assumed that cruise ships will only dock on the inside face of the pier (see 3.5.2 Method of Construction above).

Based on the above figures the likely cost of the Third Harbour is in the region of £125,000,000 to £175,000,000.

The above cost excludes the cost of the marina. By comparison the 290 berth marina in Falmouth is estimated to cost [redacted] However there will be economies of scale associated with building a 500 berth marina, especially if done as part of the building of the new harbour. As such the cost of the marina is assumed to be included within the above construction cost for the purposes of this Initial Scoping Report.

3.5.4 Comparison with Other Port Projects in the UK

If Torbay Council decides to progress to the next stage of carrying out an in depth business case and outline feasibility study then it is recommended to discuss the proposal with the authorities at Falmouth, Southampton and Great Yarmouth where extensive works of this nature have recently been completed (or are being investigated), as well as large contactors experienced in this field.

Whilst the TDA has looked at these ports whilst in compiling this Initial Scoping Report no direct contact or cost comparisons have been made (apart from the marina referred to 2.1.3 and 3.5.3 above) as all of the projects vary immensely. However the table of construction costs in 3.5.3 has been compiled from other external sources.

3.5.5 Conclusion

Of the 2 methods of construction the rock breakwater method is the cheapest but this will require the design and construction of a bridge / walkway to carry passengers from the ships

to the pier. As such the concrete block method is the most appropriate method of construction.

In the absence of detailed drawings and a site investigation report it is impossible to accurately state what the build cost would be. However, the cost is likely to be in the region of £125,000,000 to £175,000,000. This figure has been estimated by the TDA but subsequently supported by (free) estimates from external consultants working on limited information and based on a number of assumptions.

Preliminary site investigation works as part of a feasibility study would cost approximately [redacted]

3.6 Hydrology

In order to ascertain whether the proposals to construct the Third Harbour at Torquay are feasible from a hydrology aspect, the following areas will require further investigation:

- Flood risk
- Hydrodynamic modelling
- Marine consents

3.6.1 Flood Risk

The area of Torquay around Torquay Harbour and Torre Abbey have a history of coastal flooding. Both Haldon and Princess Piers were constructed in the mid 1800's to form Torquay Harbour. In addition to being harbour structures both piers act as flood defence structures reducing the risk of coastal flooding around the harbour.

Detailed wave modelling works have been carried out on both piers, which indicates that both piers provide significant coastal flood protection to the area around Torquay Harbour. In addition due to the wave direction during the most severe storm events the piers also provide some coastal flood protection to the area in front of Torre Abbey.

Any new structure associated with the proposed Third Harbour will have an impact on the flood protection provided by the existing harbour structures and therefore detailed wave modelling works will be required to assess the impact of the new harbour on flood risk.

It should be noted that the wave modelling works referred to above have utilised the existing marine hydrodynamic model of the bay. This hydrodynamic model would need to be updated to incorporate all works associated with the construction of the Third Harbour prior to the wave modelling works and flood risk works being undertaken.

All modelling works associated with coastal flooding will need to be checked with the 1 in 200 year return period storm events and should include 100 years of climate change.

3.6.2 Hydrodynamic Modelling

In addition to using the hydrodynamic model for the flood risk assessment the model should be used to assess the impact of the new harbour structures on scouring of the sea bed. This hydrodynamic modelling together with the wave action model will be used to identify the design criteria for the new harbour structures.

The hydrodynamic and wave modelling woks will identify the wave action design criteria for the new harbour structures.

3.6.3 Conclusion

Wave modelling is a specialised science and expensive to commission. Initially 2D, computer based wave modelling is carried out. This could cost [redacted]. To verify the findings 3D wave modelling is then required which could cost [redacted] These figures are based on the work done at Brixham for the proposed Northern Arm. The Third Harbour proposal is much bigger in scale and the costs could therefore be significantly higher. However only preliminary wave modelling advice will be required for the outline feasibility study and is it suggested that these works could be obtained for [redacted]

3.7 Legal Issues

3.7.1 Issues relating to the Legal Title of the Sea Bed

The fundus (sea bed) of the area proposed for the Third Harbour is owned by Torbay Council. The majority of the land was acquired on 21 January 1890 by the Local Board of Health for the District of Torquay (which the council is the successor in title to).

There will be other legal and title issues which will need to be investigated.

3.7.2 Conclusion

A full legal title report should be commissioned, which could be done by the council's own Legal Services.

3.8 Issues Relating to Beacon Cove

Consultation on the future of Beacon Cove was carried out in the summer of 2010 and in the beginning of 2011, to discuss ways in which this under performing asset could be returned to its former glory. The TDA gave an undertaking to keep the public informed regarding any proposals for this beach.

The Third Harbour will impact upon Beacon Cove and it is suggested that the public be made aware of the potential impact and that work on improving and investing in Beacon Cove is being postponed pending the consideration of a Third Harbour.

An extract from the THAAP, Policy TH12 Beacon Cove notes (para. 5.70): *"There has been a history of interest in marine leisure / watersports uses and a possible extension of Torquay Harbour has been mooted. These proposals accord with the overall Vision and Objectives of the THAAP but it remains to be demonstrated whether the water conditions are appropriate for such uses and what impact would result on the nearby seagrass beds (a protected habitat)."*

3.8.1 Conclusion

The public should be advised that work on Beacon Cove is being postponed pending the Third Harbour review.

3.9 Procurement Issues

The project will need to adhere to the European Procurement Regulations. Two elements of the project may need to be tendered in accordance with these regulations, being the consultancy fees and appointing a contractor.

3.9.1 Consultancy Fees

Torbay Council's Standing Orders and Financial Regulations require that three or more proposals are sought for all commissions and consultancy appointments over £10,000.

At the time of writing, under the European Procurement Regulations consultancy fees likely to be in excess of £173,934 need to be advertised in the Official Journal of the European Union (OJEU) and the full European procurement regulations will apply. Appointing consultants in accordance with the regulations would take approximately 3 to 6 months from the date that the advertisement is placed in the OJEU.

Before any such advertisements are placed in the OJEU it is necessary to do some preparatory work to decide a remit. Some of the consultants' appointments may exceed, or get close to, this threshold, and as such they will need to comply with the EU regulations. However, to save time and money, the various reports and specialist advice needed for the outline feasibility study could all be procured under the same OJEU advertisement.

Several Consultancy Frameworks exist to shorten the procedure. However, much of the work is specialized and some of the consultants required may not be registered with a framework.

3.9.2 Appointing a Contractor

As the construction cost will exceed the EU threshold of £4,348,350 the council will need to advertise in the OJEU and it can take approximately 12 months from advertising to appointing a contractor.

Before council can place an OJEU advert for the contractor it will need to have identified the funding and completed many of the elements identified within this report, including most of the activities and assessments referred to in this Initial Scoping Report. The likely cost of reaching this stage will be in the region [redacted] assuming some element of 'design and build 'within the Main Contract. Please see Section 4.2.1 below.

3.9.3 Conclusion

Commissions and contracts will need to comply with the European Procurement Regulations. However, it should be possible to appoint all of the consultants via one OJEU process, which will cost [redacted] The appointments will take 3 – 6 months from the date of advertising in the OJEU.

The funding partners will need to run an OJEU advertisement in order to appoint a Main Contractor,. Before advertising it will need to have concluded a range of investigation reports and obtained critical consents which will most probably cost in excess of [redacted] See Section 4.2.1 below.

3.10 Funding Issues

As highlighted in Section 3.5 the cost of developing the Third Harbour is substantial and unlikely to be delivered through either the Public or Private Sectors alone. The main funding options are discussed below.

3.10.1 Government and European Grants

Based on its research the TDA has not yet identified any substantial funding opportunities for the Third Harbour. Other ports have been delivered with varying degrees of success but all of these have been underwritten either by a robust business plan together with Government or European Funds which are no longer available. Invariably Local Authorities and Regional Agencies have heavily contributed and Torbay alone is unlikely to be able to make a substantial contribution in percentage terms.

The above statement is based on the assumption that a leisure orientated development is the likely preferred option for the Third Harbour. Public funding for investment in harbour infrastructure is only made available in limited circumstances which might include an expansion in facilities for handling cargo freight or to make port infrastructure suitable for supporting the renewable energy industry.

Similarly, based on the assumption that it will be a leisure orientated development, the European Union grant funding programmes which Torbay is able to access would not support investment into the proposed Third Harbour. The European Investment Bank would be a possible source of investment but that would be on the basis of a commercial loan for a project which support the European Union's cohesion agenda rather than a grant.

3.10.2 Prudential Borrowing

If Torbay Council wished to develop the Third Harbour itself it could consider using 'prudential borrowing'. The current rate of prudential borrowing is 4.75% per annum. This equates to an annual payment of £75,000, including interest and the repayment of the loan, for each £1m that is borrowed. This repayment plan lasts for 25 years.

An Initial Draft Business Case is included in Section 4.3 and, for the smaller harbour option, in Appendix 3. These Initial Draft Business Cases have estimated the level of prudential borrowing needed to fund the developments and assessed the estimated level of prudential borrowing that the revenue could support. Both Initial Draft Business Cases highlight a significant annual deficit (income less expenditure) which would require support from other sources.

The level of prudential borrowing required may well beyond Torbay Council's ability to support such borrowing.

3.10.3 Third Party Development

Instead of developing the Third Harbour itself, Torbay Council could lease the land and fundus to a third party who in turn will carry out the development. The developer would then fund the construction, but also retain the revenue. The Council might be able to negotiate a modest ground lease.

However, the Initial Draft Business Cases in Section 4.3 and Appendix 3 suggests that the Return on Investment (ROI) required would not make this opportunity attractive to the private sector. The investor would need to dramatically reduce costs, including the cost of finance, and substantially increase the revenue streams in order to produce a profit over the long term.

3.10.4 Wider Economic Business Case

The economic benefits to Torbay have briefly been assessed in Sections 2.1.5.1 and 2.1.8 above. Based on the assumptions outlined in Section 2.1.5.1 the value of the net new jobs to the local economy is estimated at between £1.4 and £2.4m per annum.

A detailed business case for the Third Harbour proposal would need to look at the economic benefits, not only to Torbay but the surrounding areas, if it can be demonstrated that the wider economy would benefit from the scheme.

Introducing different uses, for instance cargo or passenger transport, into the scheme would alter the economic benefits but these have not been tested at this point.

Inevitably a wider appraisal would be required to demonstrate that this proposal was the most cost effective economic intervention for the sub region. This may not be case.

It is understood that an approach could be made to the Heart of the South West Local Enterprise Partnership (LEP), to seek funding for the initial stages of the outline feasibility study. This is discussed further in Section 4.4

3.10.5 Conclusions

The TDA has not yet identified any significant funding opportunities available to 'pump prime' the Third Harbour through either UK central government or the European Union grants. Similarly, prudential borrowing alone does not appear to be a viable way of financing the project.

The information contained in Section 4.3 and Appendix 3 indicates that the private sector alone is unlikely to find the proposal attractive.

Without conducting a full business case and development appraisal it is not possible to state definitively if the proposal is financially viable through a public / private sector approach. There will be a cost associated with producing a full business case, if it is decided to test the viability further. This option is included in Section 4.4 "What Next?"

It is therefore suggested that to be attractive to others a business case which looks primarily at the wider at the economic benefits, not just for Torbay but for the wider South Devon economy (as opposed to assessing the financial viability of the proposal alone) would be beneficial. National and Regional grant funding is likely to require the full co-operation of the LEP and several Government Departments.

4. Conclusions and What Next?

4.1 Generally

The proposal for a new harbour in Torquay is clearly ambitious and has the potential to produce a range of significant benefits for Torbay, but there are inevitable risks and issues associated with a project of this scale. The benefits and issues are summarised in Section 4.2 below.

As stated in Section 1.1 this report is not a feasibility study. Further work will need to be carried out to produce a satisfactory business case and an outline feasibility study before the Mayor and Torbay Council will have the necessary information to be able to make an informed decision. Section 4.2 includes an estimated cost of producing an outline and full feasibility study.

The Initial Scoping Report has included a very high level view of likely income streams. These, along with the construction costs identified in Section 3.5 have been used to produce the Initial Draft Business Case in Section 4.3 below

4.2 Summary of Conclusions from Sections 2 and 3

The table below summarises the key issues and conclusions identified in Sections 2.1 to 3.10 of this report. It also summarizes what reports are needed to complete an outline feasibility study, along with a budget cost for obtaining these.

Section / Issue	Conclusion	Proposed Action	Cost Implication
Economic Impact Assessment	Potential for £2,687,500 income pa to the council, including £787,500 from the marina and £600,000 from cruise ships. Further investigation is needed to quantify this accurately	Carry out economic impact assessment, investigating fully the potential income streams and costs	[redacted] or [redacted] to include options appraisal and evaluation of alternatives
Jobs	200 – 300 local jobs during construction; 28-46 harbour related jobs; 9-15 marina related jobs; 31-79 hotel related jobs;	Including within the economic impact assessment referred to above.	Included above
Marine Economy Action Plan	The report to take the Third Harbour proposals into account, and to be completed	Torbay Council to adopt the report	Already underway
Marine Licence	This will require a habitats survey and environmental impact assessment	See “Environmental” below.	See “Environmental” below

Harbour Revision Order (HRO)	An uncontested HRO will take 3 years	Seek legal opinion	[redacted]
Planning	Local Planning Authority Consent will be needed as well a Harbour Revision Order		TBC
Planning	The principles of the Third Harbour accord with the strategic policies, but only following detailed design and environmental assessments can this be confirmed	More detailed design needed to assess if accords with planning policies.	[redacted] to produce illustrative plans in sufficient detail to determine probability of success
Planning	The Core Strategy will need to be amended to incorporate the proposals, which may delay its delivery. The Third Harbour proposals may then be removed by the Planning Inspector unless they are evidence based	Core Strategy being amended. Evidence based documents may be needed for the Third Harbour proposal.	By Torbay Council but potentially abortive if the Planning Inspector is not satisfied with the evidence based reports
Planning / Harbour Authority	A port masterplan would help create a blue print for Torbay's maritime functions	Develop a port masterplan	[redacted]
Environmental	Significant impact on the environment. The site lies within a Special Area of Conservation, giving legal protection to species. EIA and HRA will be needed. A MCZ is proposed	Carry out a habits assessment. Produce EIA to show mitigation measures in place and limited impact	[redacted] for the habitats survey and it may need to be done twice given likely programme. The EIA is separate exercise.
Transport	Traffic generation, servicing and parking need to be addressed	Transport assessment needed	[redacted] Note: a full TIA will be needed as part of the planning application
Engineering / Construction	Building a flat-sided pier will be more expensive than a rock breakwater. Need to assess nature of the silts	Carry out a preliminary site investigation to assess the depth and nature of the silts	[redacted] (the total cost of construction could be in the region of £125,000,000 to £175,000,000)
Hydrology	New structures will impact upon flood modelling	Carry out preliminary hydrodynamic (wave) modelling	[redacted]

Legal Issues	Need to investigate legal titles of all neighbouring properties	Request Legal Services to investigate	Torbay Council or [redacted]
Legal Issues	Haldon Covenants and rights in favour of the Duchy of Cornwall	Obtain legal opinions	Torbay Council or [redacted]
Legal Issues	The enforceability of MDL's non-competing clause	Obtain further counsel's opinion	Torbay Council or [redacted]
Beacon Cove	Investment in this site now stalled	Inform constituents	
Procurement	Consultancy fees / reports that exceed £154,000 will need to be procured via the OJEU process	Place advert in the OJEU and select / appoint multidisciplinary team	Torbay Council and [redacted]
Funding	The Initial Draft Business Cases suggest funding will be difficult	Further assessment incorporating the wider economic benefits needed	[redacted]

4.2.1 Summary of Costs and Time for Producing an Outline Feasibility Study

- The cost of commissioning all of the reports necessary and overarching feasibility study will be in the region of £500,000 to £600,000 and will take a minimum of one year to prepare. This excludes the resources implications placed on the council's support services including Torbay Development Agency, Tor Bay Harbour Authority, Commercial Services, Residents and Visitor Services and Spatial Planning.
- In order to obtain a quick assessment it would be prudent to carry out several interim reports, and commission other reports sequentially to avoid the possibility of incurring abortive costs. It is likely that the environment issues are going to be of paramount importance and as such interim research into the likely environment impact is recommended. Please see Section 4.4 below for further suggestions regarding interim reports.
- The cost of commissioning a selective Outline Feasibility Study is in the region of [redacted] depending upon content and take [redacted] months to prepare.
- The total cost to process this project up to and including the advertising of the building contract in the OJEU could be in excess of [redacted]
- Experience in Brixham suggests that the reports and assessments for a full feasibility study will take between 2 and 4 years to produce. These will be needed before an OJEU notice is advertised seeking a contractor to do the works.

4.2.2 Summary of Costs for Construction

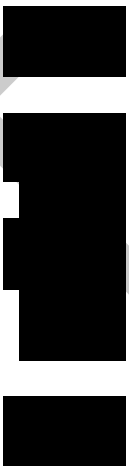
In the absence of detailed drawings and any site investigations it is impossible to accurately state what the build cost might be with any degree of certainty. However, the cost is likely to be in the region of £125,000,000 to £175,000,000.

4.3 Initial Draft Business Case

As noted in Section 1.1 this Initial Scoping Report is not a feasibility study and is not intended to provide a detailed business case for the Third Harbour proposal. However, some indicative income streams and construction costs have been noted in the report and the purpose of this section is to summarise them.

Income

- Rent from a large hotel
- Marina Berths (see Section 2.1.3)
- Rent from 4 x concessions to service cruise ships, eg. fuel, water, etc.
- Rent, new harbour bar and restaurant
- Income from new beach huts and concessions
- New business rates
- Berthing fees from cruise ships (see Section 2.1.4)
- Berthing fees from other large ships
- Ferry terminal and local taxes
- Income from 2 major maritime events (eg. concessions and advertising)
- Additional car parking income



Total potential annual income **£2,687,500**

Expenditure

Assumed costs of construction (see 3.5.4)	£150,000,000
Cost of prudential borrowing per £1,000,000	£75,000

Annual cost of prudential borrowing **£11,250,000**

Annual Shortfall (income less expenditure) **-£8,562,500**

Based on the assumptions referred to in this report the above shows a shortfall of £8,562,500 per annum if prudential borrowing rates of 4.5% were to be applied. It is accepted that longer terms would normally apply for such much major infrastructure projects but the borrowing rate might also be significantly higher.

NB.

1. It is understood that every £1,000,000 of prudential borrowing equates to an annual payment of £75,000 for 25 years. Thus, assuming a construction cost of £150,000,000 the cost of the prudential borrowing would be £11,250,000 per annum for 25 years.
2. The annual income of £2,687,500 would support prudential borrowing of £35,830,000
3. This leaves a capital shortfall of approximately £114,000,000
4. The above income is before costs, including management, staff and overheads.
5. Please see Section 3.10 Funding for further information

4.4 What Next - How to Progress the Proposal

This report has highlighted the potential shortfall in the financial viability and outlined the key issues that need to be addressed. However, the proposal offers the potential for significant long-term benefits to the Bay and as such the Council or other bodies may decide to further investigate the proposal. If the project is to be advanced then we suggest the following are carried out.

1. Obtain Further Information from Other Authorities

Further investigation is needed in order to better assess whether the proposal is feasible and how the viability of the project could be positively affected. In the fullness of time there will be costs associated with obtaining this information but in order to obtain some information in a cost efficient manner we suggest that the TDA be authorised to discuss the proposal, and this report, with other authorities that have been involved in a harbour / port extension, such as Great Yarmouth, Southampton and Falmouth. We would also talk to some of the major contractors that have experience in such construction. This exercise could be carried out with limited cost to the authority.

2. The Core Strategy

The Third Harbour proposal will need to be included in the Core Strategy, and continued liaison with the Spatial Planning Department is required to prevent delays in getting the Core Strategy adopted. As detailed in Section 3.2.2 the Core Strategy is an evidence-based document and as such it will be necessary, at the appropriate time, to produce supporting documentation to demonstrate that the proposal could be implemented.

3. Port Master Plan

Central government is encouraging harbour authorities to produce a port masterplan to identify how there ports will expand and operate in future years. We would recommend that the Third Harbour proposal be included in a port masterplan. It could be produced internally, by the Harbour Authority. The option of producing a port masterplan has already been identified by Tor Bay Harbour Authority and is included in the Harbour Authority's business plan for 2012 – 2013. We understand that the Harbour Authority is seeking funding to assist with the cost of producing a port masterplan.

4. Marine Economy Action Plan

The TDA is commissioning the Marine Economy Action Plan. It is recommended that this Action Plan takes into account the proposed Third Harbour.

5. Produce a Detailed Business Case

In due course it will be necessary to commission a detailed business case based on accurate information. The Initial Draft Business Case contained in this report is based on limited information and a number of assumptions. In order to produce a more robust business case it will be necessary to interrogate the assumptions, produce a more detailed architectural design and investigate further the costs and income potential of this detailed design.

The TDA would be happy to undertake the necessary tasks and assess the economic benefits further. The budget for this will be proportionate to the level of detailed required. It is accepted that the more detailed the investigation the more robust the business case.

As identified in Section 3.10, in order to fund the Third Harbour it may be necessary to produce a business case which assesses the economic benefits of a new harbour to the wider South Devon economy, as opposed to assessing the financial viability of the project in a traditional manner. The cost of producing a South Devon wide business case will be proportionately higher and will most probably need to make a comparison with other regeneration projects.

6. Liaise with South Devon Local Authorities and the LEP

As identified in Section 3.10.4 there may be benefits in adopting a South Devon wide view of the economic benefits. This wider approach will involve liaison with other authorities. Again, in the initial stages, there should only be a limited cost associated with this. If in-principle support is obtained then a detailed South Devon wide business case would be needed (see point 5 above).

The Heart of the South West LEP could be approached to ascertain if it will be willing to fund some of the interim feasibility reports and investigative costs. See point 7 below.

7. Commence the Outline Feasibility Study and obtain Interim Reports

The really significant costs associated with the proposal arise when a feasibility study is produced. As detailed in 4.2.1 an outline feasibility study would comprise a number of reports and cost in the order of £500,000 to £600,000. We would only recommend that all of these reports be commissioned if the aforementioned business case(s) suggest that the project is preferred and deliverable.

The TDA recommends that interim reports are obtained for the key issues in order to assess of the project's feasibility. This report identifies that the environmental impact is a key risk and should be investigated at a very early stage.

4.4.1 Summary of the Next Steps

In summary, the TDA would suggest the following course of action:

1. Consult more widely and obtain further information and support from other local authorities
2. Complete the Marine Economy Action Plan
3. Complete a Port Masterplan for Tor Bay
4. Commission an Outline Feasibility Study, including business case and economic impact assessment to demonstrate value for money
5. Incorporate the Third Harbour proposals into the Core Strategy, providing supporting reports and evidence base as necessary
6. Obtain interim reports on the key issues, prior to commissioning a Full Feasibility Study, including an early Environmental Impact Assessment.

In deciding whether to proceed with the project and carry out the above steps, Torbay Council may wish to consider at this time:

- Is the proposal *likely* to be financially viable?
- Is the proposal *likely* to technically possibly?
- Are the necessary consents *likely* to be forthcoming?
- *Could* another proposal deliver greater economic benefit?

4.4.2 Public Consultation

If the proposal progresses to the outline feasibility study stage then it is recommended that Torbay Council working with Tor Bay Harbour Authority, initiate public and stakeholder consultations, including but not limited to the following bodies:

- The Harbour Committee
- Harbour Liaison Forum
- The Marine Management Organisation
- Natural England
- The Inshore Fisheries and Conservation Authority
- Torquay Town Centre Community Partnership (with all residents of Torbay invited)
- Torquay Town Centre Company
- The Environment Agency
- English Heritage
- The Community Partnerships

It is anticipated that other stakeholders will be identified once the outline feasibility study is commissioned. Presently there is limited public awareness of the proposal.

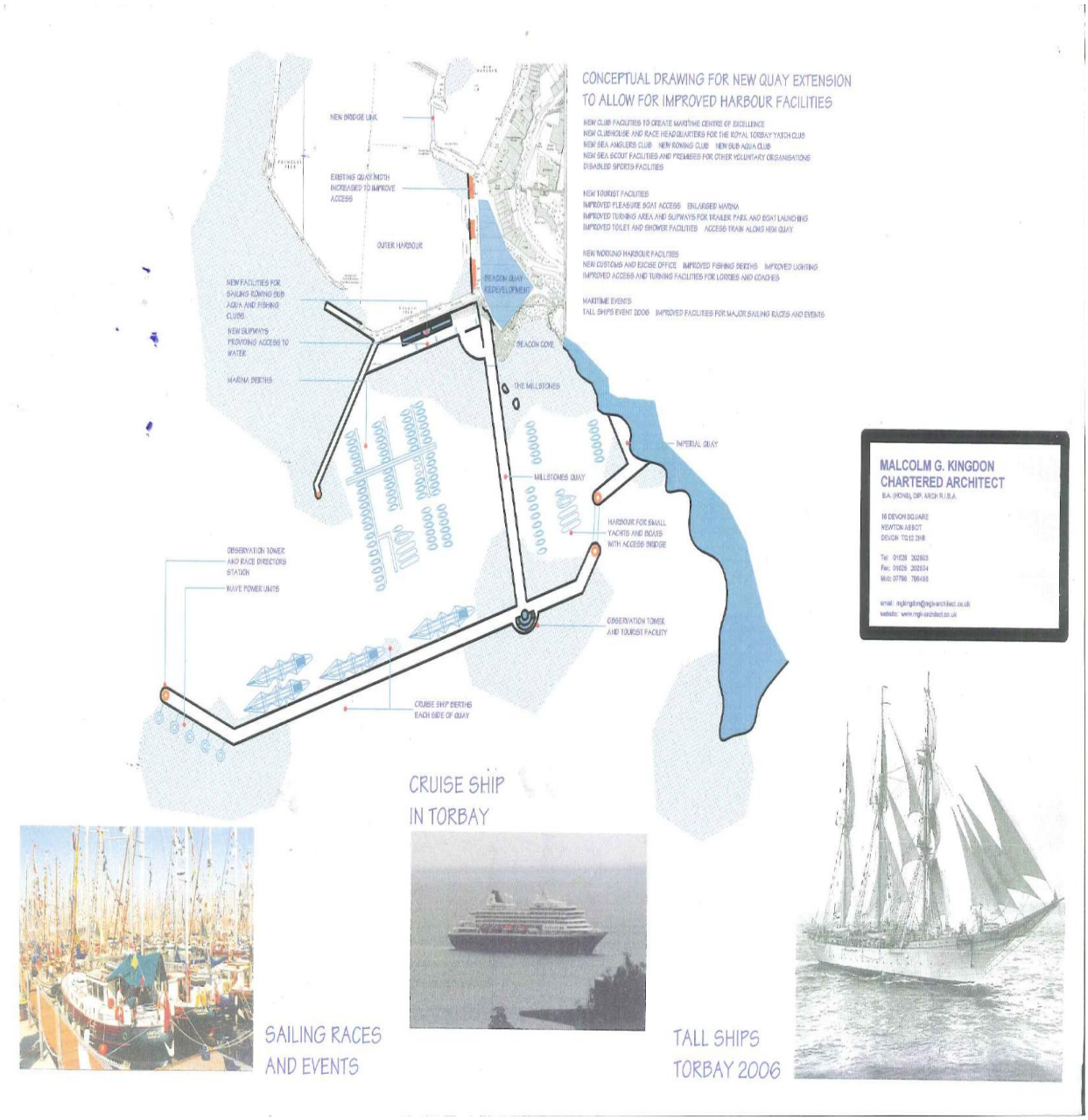
4.4.3 Alternative Options

The justification for exploring the new harbour proposal in Torquay is recognised: it would create jobs and boost the local economy in many ways. However, at this early juncture, it is not clear whether the likely £150,000,000 investment would represent 'best value' for the likely funding partners. It is possible that greater economic benefits for Torbay could be delivered at a lower cost and without the inherit risks. Several alternatives are listed in Torbay Council's Inward Investment Plan.

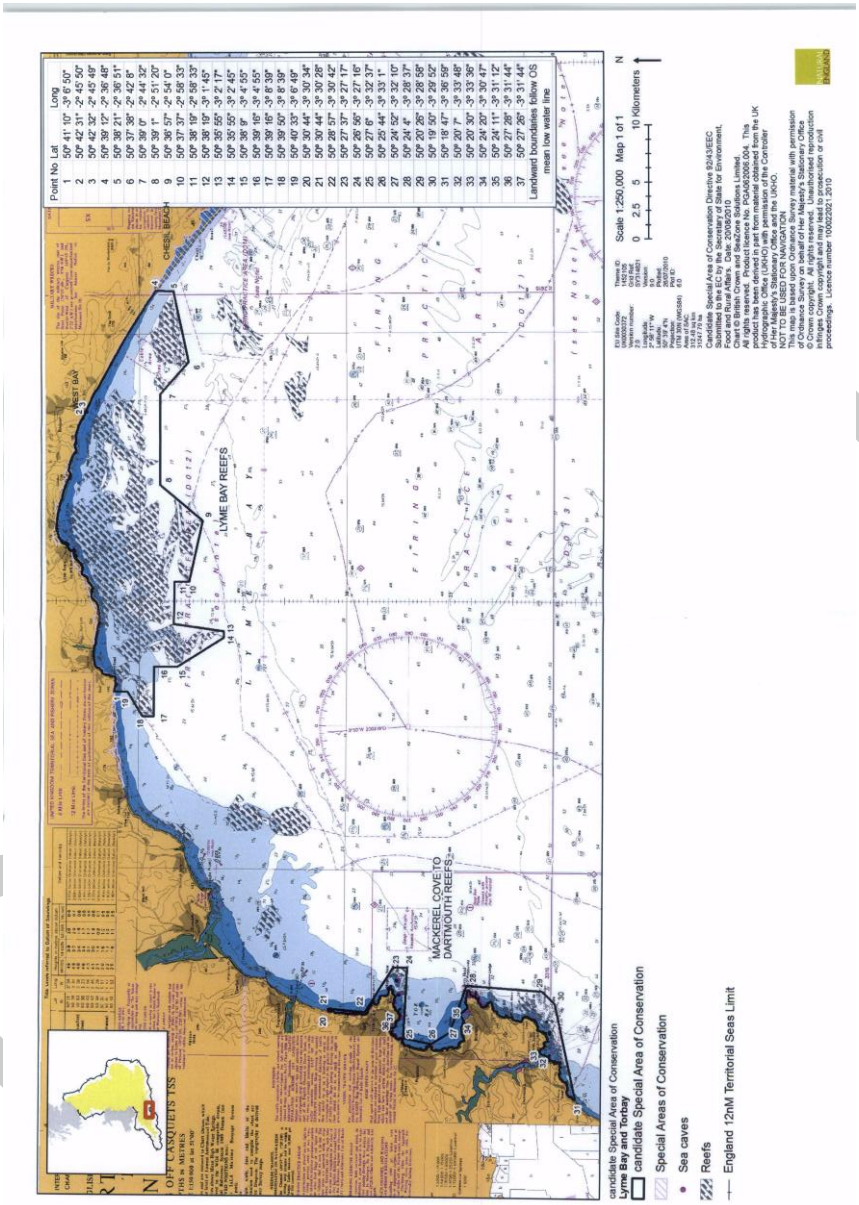
It is proposed that the Third Harbour should provide 'alongside berths' for cruise ships which will increase the appeal of Torquay as a destination, but it is understood from the cruise ship operators that they are looking for a range of attractions in and around the locations that they dock. It is possible that a number of alternative investments within the Bay could significantly enhance its appeal as a cruise ship destination, without having to build an alongside cruise ship berth.

It is recommended that the next phase of research and feasibility also explores the alternative options in more detail.

Appendix 1 – Indicative Layout for The Third Harbour



Appendix 2 – Special Area of Conservation



Appendix 3 – Alternative Option, a Pier on Piles / Stilts

As an alternative to the larger Third Harbour as shown indicatively in Appendix 1, the Torbay Development Agency has been asked to consider a reduced scheme, being a pier built on top of piles and stilts.

It is understood that the pier would be a single arm extending south from the intersection of the existing quay and Haldon Pier. The approximate line of the pier is shown below at the end of this appendix. *Please note that the line and extent of the pier shown is purely illustrative.*

The purpose of the pier is to allow cruise ships to berth along side. As recognised earlier in this Initial Scoping Report (see 2.1.3 and 2.1.6 above) cruise ships represent a source of economic prosperity, and cruise shop operators prefer to berth alongside as opposed to dropping anchor at sea and arranging “ship to shore” trips.

Therefore the pier needs to extend far enough to find deep water. The table in 2.1.3 illustrates that the depth of water should exceed 8 metres if all of the ships identified are to be able to berth alongside. It should be appreciated that the length of the pier as drawn above is purely indicative, but it is believed to terminate where the water is below a depth of 8 metres.

Construction of the Pier

The pier would be supported on piles. The piles would need to be drilled, or socketed, approximately 3 metres into the bedrock. The depth of the silts is understood to be 12 metres. If we assume the water is 8 metres deep and the cruise ships will sit 5 metres out of the water, then the length of the piles will be a minimum of 28 metres. Piles of this length would therefore need to be in the order of 2 metres in diameter. This would make the piles considerably large.

The bedrock is understood to be fissured limestone. This means the rock has naturally occurring fissures in it. Piles that fall over a fissure would need to be lengthened or repositioned so that they rest in solid rock. Furthermore it should be appreciated that there are pockets of soft limestone and harder limestone. Soft limestone will require the piles to be driven deeper or possibly repositioned and harder limestone will most likely require the piles to be repositioned.

A redesign of the cross-head, or structure connecting the piles, is needed every time that a pile has to be repositioned. Essentially moving the location of a supporting pile means that the cross-head above needs to be redesigned to carry the loads correctly. The uncertainties with a piled structure mean that contingencies for this type of construction need to be higher than those for building a solid stone pier.

The pier would need to be designed to withstand the large horizontal forces that would result if a cruise ship failed to slow down or stop in time, causing it to accidentally hit the pier. Such forces can be designed out by increasing the diameter of the vertical piles, but this would result in a significantly increased cost. A more efficient and economical way of dealing with these horizontal forces is to provide raking piles. These are piles that are installed at an angle running back from the cross-head, or deck, to the bed rock and provide a more efficient path for the applied loads to be transferred to the underlying rock.

The piling rig will need to be moved for the drilling of each pile or sets of piles. Over-water construction works, such as piling, is very much weather dependant and to allow for delays, etc. large contingencies need to be allowed. As such, for all of the above reasons, savings in construction costs when compared to a solid stone pier, may not be as much as anticipated.

Environmental Issues

The finger tip search of the sea bed referred to in 3.3.3.2 would still be needed for the area to be affected by the piling. If the search is restricted to just these areas then it would be cheaper than the searches needed for the solid stone pier option.

The piled pier will have less of an impact on the environment when compared to the solid stone wall alternative. As such, whilst it will still be necessary to comply with all of the environmental concerns outlined in 3.3 above, compliance with some of them should be easier.

Transport Issues

There will be a need to have vehicles running the length of the pier to transport passengers between the ship and Beacon Quay. As such the width of the pier may need to be in the order of 10m wide, and provide a turning circle for vehicles.

Operating Issues

Any pier, either piled or stone, will need to have vertical sides to allow alongside berthing. It should be appreciated that the pier option will not provide the same level of defence from the waves as the solid stone wall option.

Summary and Indicative Cost of Construction

Whilst this option is not as difficult or as expensive to deliver as the larger proposed Third Harbour, all of the issues outlined in Section 3 of this report will apply.

The proposed pier will still require a harbour revision order and planning consent; it must comply with all environmental concerns and checks; satisfy transport issues; overcome legal issues and procurement issues; and will require specialised engineering, hydrology and construction advice.

The process for obtaining all of the consents is exactly the same as that for the larger Third Harbour proposal. The feasibility works and approvals process will still take the same length of time, approximately 2 – 4 years (see page 31, Section 4.1 above).

Without having a detailed specification for the pier it is not possible to provide an accurate build cost. However, based on the above assumptions, and subject to further consideration and design, the cost is likely to be in the region of £35,000,000 to £45,000,000.

A summary of the income and costs is provided below.

Income

- Rent from a large hotel
- Rent from 2 x concessions to service cruise ships, eg. fuel, water, etc.
- Rent, new harbour bar and restaurant
- Income from new beach huts and concessions
- New business rates
- Berthing fees from cruise ships (see Section 2.1.4 below)
- Berthing fees from other large ships
- Ferry terminal and local taxes
- Income from 2 major maritime events (eg. concessions and advertising)
- Additional car parking income

Total potential annual income **£1,300,000**

Expenditure

Assumed costs of construction	£40,000,000
Cost of prudential borrowing per £1,000,000	£75,000

Annual cost of prudential borrowing **£3,000,000**

Annual Shortfall (income – expenditure) **-£1,700,000**

Based on the assumptions referred to in this report, the above shows an annual shortfall of approximately £1,700,000.

NB.

1. It is understood that every £1,000,000 of prudential borrowing equates to an annual payment of £75,000 for 25 years. Thus, assuming a construction cost of £40,000,000 the cost of the prudential borrowing would be £3,000,000 per annum for 25 years.
2. The annual income of £1,300,000 would support prudential borrowing of £17,330,000.
3. This leaves a capital shortfall of approximately £22,500,000
4. The above income is before costs, including management, staff and overheads.
5. It is assumed that there is no income from marina berths with this construction option.
6. The potential income stream includes the other items detailed in 2.1.2, as per the full Third Harbour proposal. However some of the income streams have been reduced to reflect the fact that the proposed operation would be smaller. Importantly the cruise shop income is assumed to be the same.
7. The cost of construction has been identified as possibly being between £35,000,000 and £45,000,000. This draft business case assumes £40,000,000.
8. Please see Section 3.10 Funding for further information

Appendix 4 – Dinghy Platform off Haldon Pier

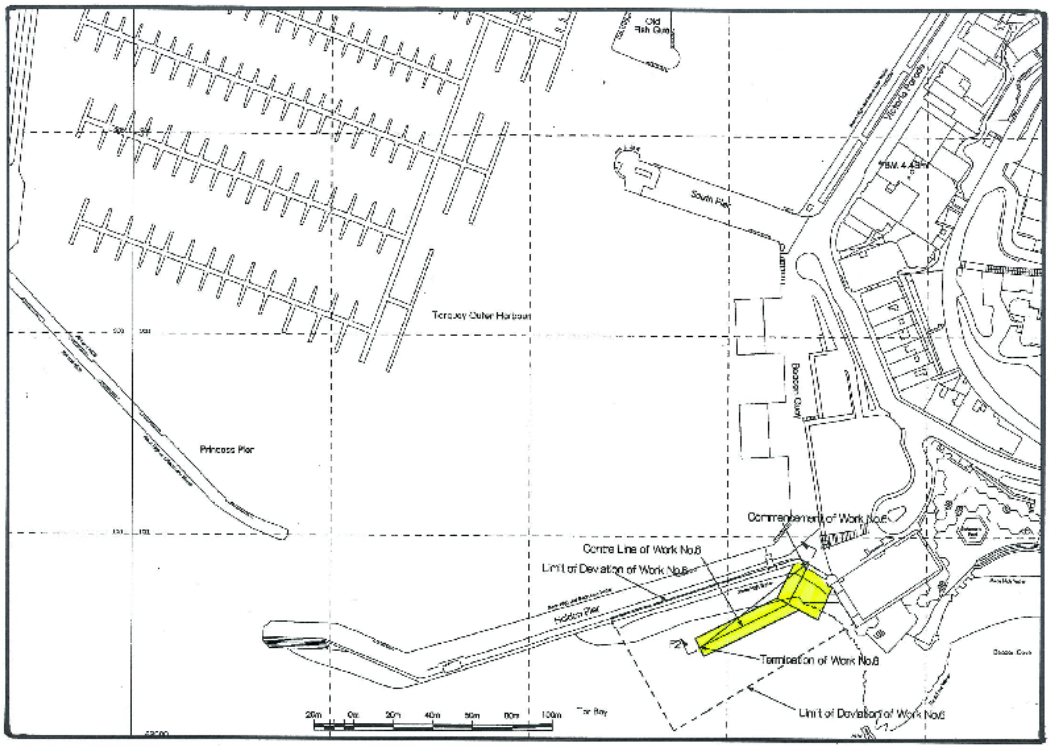
Torbay Development Agency has been asked to consider the outline feasibility of positioning a dinghy platform off Haldon Pier. An initial scoping report for this option was considered in July 2011. As this proposal is in the vicinity of the Third Harbour, a copy of this report is provided below for completeness. It was prepared in conjunction with the Harbour Master.

Dinghy Platform – adjacent to Living Coasts & Haldon Pier, Torquay Harbour

Background

In the late 1990s Torbay Council applied for a Harbour Revision Order (HRO) to gain consent for various works in support of the Torquay harbour regeneration project. The application and granting of an HRO is an expensive and time consuming process. It was therefore decided, at the time, to include a number of other development opportunities that had the support of harbour managers and harbour users. Consequently the Tor Bay Harbour Revision Order 2000 includes consent for various works including Works No.6 described below :-

"The construction of a solid dinghy platform by means of the reclamation and infilling of the bed of the sea adjoining the south-eastern side of Haldon Pier (comprising an area of approximately 1,100 m² and incorporating a slipway) commencing at reference point SX 9184163088 and terminating at reference point SX 9178663045."



Consents

The Tor Bay Harbour Revision Order 2000 already grants consent for these works. However, a marine licence may also be required. The Marine Management Organisation (MMO) is responsible for most marine licensing in English inshore and offshore waters. A marine licence is required for many activities involving a deposit or removal of a substance or object below the mean high water mark. Discussions with the MMO will be necessary to establish the extent of any additional consents. In particular an updated Environmental Impact Assessment may well be required.

Layout

In constructing the works the council may deviate laterally from the lines shown on the above plan to the extent of the limits of deviation. They may also deviate vertically from the levels of those works shown on the plans deposited with the Tor Bay Harbour Revision Order 2000, to any extent not exceeding three metres upwards. Subject to further legal clarification it seems that the general layout shown above is for indicative purposes only and it can therefore be assumed that the slipway element is probably optional.

Construction Options

Knowledge of the existing ground conditions indicate that bed rock (fractious limestone) can be found some 12 metres below the current base level of Haldon Pier. The material below sea bed level and above the bed rock is made up of sand, shells & marine deposits, although a large part of the surface area is a man made wave protection for Haldon Pier, comprising boulders encased in a cementitious crust.

- A suspended deck structure would not be practical or a viable solution as waves would pass beneath the platform and the wave energy would cause significant damage to the underside of the structure and to the adjacent pier.
- A solid structure can be achieved using sunken precast reinforced concrete caissons around the perimeter of the proposed structure, resting on suitable marine deposits, with a reinforced concrete surface apron. The apron may need to be supported by driven piles resting on the bed rock.
- An alternative solution may be constructed from Larson-type sheet piles with the surface apron comprising a reinforced concrete slab supported by piles resting on the bed rock.
- With both of the above options the chosen structure would need wave impact protection by the use of granite rock armouring, in keeping with the remainder of Haldon Pier, as it is exposed to severe weather conditions from the south east.

Feasibility

A feasibility study is strongly recommended using external consultants. Such a study is needed to assess the risks particularly those associated with the construction and programme and to obtain greater accuracy over the likely costs. Specifically the feasibility study should cover the following points:-

- Additional ground condition investigation works
- Revised/updated Environmental Impact assessment
- Mathematical wave modelling
- Informal discussions with approving bodies – Marine Management Organisation, Natural England, etc.

Costs **

Feasibility study	[redacted]
Dinghy platform (1,100m²)	£2m
Slipway 8 ~ 10 metres wide (optional)	£1m
Rock armouring (essential)	£1m
Total	[redacted]

***** All costs are estimates only and are given to show order of magnitude only.***

Business Case

Dinghy storage will not typically generate significant income. Indeed the current boat park charges are seen by some as a barrier to dinghy sailing and access to the waters of Tor Bay. The Harbour Authority enjoys full occupancy of its existing boat park capacity but this only amounts to some 60 dinghy spaces.

A dinghy platform measuring 36 x 34 metres (1224m²) will create approximately 56 spaces. If we allow 50% additional capacity for racking we can deliver 84 x 5.2m new spaces.

[redacted]

[redacted]

As a new income stream these figures can support prudential borrowing over a design life of 40 years, as follows:-

[redacted]

A new dinghy storage area could also be used to help support maritime events and/or serve as a storage area for larger craft i.e. a boatyard. Maritime events generate little or no direct income but clearly they have wider economic benefits, which are not insignificant. Making use of the area as a dedicated boatyard is difficult to quantify in income terms without inviting bids by open tender. However, such a facility is lacking in Torquay harbour.

Timeframe

Approximately 12 months lead time after completion of a Feasibility Report.
At least 12 months construction period covering both winter & summer.

Other issues

Ownership – the sea bed in this area is owned by Torbay Council. However, a dinghy platform in this area does not need to be owned or operated by the council as the Harbour Authority. New harbour infrastructure can be owned and operated by a third party and the nearest existing example of this concept would be the MDL marinas, which are privately owned. Given the strategic location of this site all ownership options should be carefully considered.

Funding – there may be several match funding sources available presently e.g. Olympic legacy funding. Please see Section 3.10 Funding for further information.

Disruption – a 12 month construction period will give rise to some significant disruption to local businesses (i.e. Living Coasts) and to the hosting of maritime events.

Living Coasts – apart from the disruption issue the works may well impact on their extraction/discharge pipes and this may result in the need for temporary/permanent relocation of the inlet/outlet.

Appendix 5 –Other Ports in the UK

Generally

In producing this Initial Scoping Report the TDA has looked at the following ports:

1. Port of Falmouth
2. Great Yarmouth
3. Southampton
4. Ilfracombe
5. Hayle Harbour Phase 1
6. Port of Workington
7. Porthcawl Harbour

1. Port of Falmouth

Cornwall Council cabinet has unanimously approved exciting proposals for the development of the Port of Falmouth that will create and protect thousands of jobs. The Masterplan has been developed after full consultation with the public to ensure Falmouth is maintained and developed as a successful and viable operational port which brings economic growth to Falmouth, Cornwall and the South West. One of the proposals included in the Masterplan is the dredging of a new approach channel to the Docks, which would be of great economic benefit as larger ships including cruise ships would then be able to access the port.

The Port of Falmouth Development Initiative (PoFDI) was formed in 2008 to prepare and progress proposals for the development of the port, particularly focussed on proposals for the docks area. The Port of Falmouth Masterplan, drawn up by Tibbalds Planning and Urban Design, is the result of this work.

The proposals, which centre around Falmouth Docks, set out projects for the next five years, as well as for the longer term up to 2026. These include:

- modernising ship repair facilities
- upgrading wharves at the docks
- improving bunkering services and providing a new super yacht basin, workshops and associated facilities.

The Port of Falmouth has some interesting and relevant information, especially in its port masterplan. This can be viewed at:

http://www.cornwall.gov.uk/default.aspx?page=27541

2. Great Yarmouth

Significant marine works have been completed at Great Yarmouth's port (in excess of £100m). These works cater for commercial vessels. Further information can be found at:

http://www.great-yarmouth.gov.uk/business/offshore-energy/outer-harbour-development.htm

3. Southampton

For information relating to Southampton port:

http://www.southamptonvts.co.uk/Home/

4. Ilfracombe to Swansea Ferry

The much discussed ferry between Ilfracombe and Swansea has drawn to a halt. It was due to be operational from spring 2010 but to date is still not running. It is a passenger ferry service planning to operate catamaran ferries. The service does not include any significant changes to the dock at Ilfracombe or Swansea and as such is not considered comparable. Further information can be found at:

http://severnlink.com/

5. Hayle Harbour Phase 1

The outline ING Masterplan was finally approved at Committee in 2009 and is now the catalyst for the investment of £30 million of new investment in Hayle, which will create new jobs and economic growth. Independent economic research has indicated that the masterplan will deliver over 500 jobs. South Quay has always proved to be a challenge for developers, due to the large costs involved in stabilizing the quay and restoring and preserving the magnificent quay side and harbour walls around South Quay, which are one of the marvels of Victorian marine engineering.

The scheme includes:

- A large amount of public open space, a new feature restaurant, a foodstore, thirty townhouses and apartments
- The restoration of the Harbour walls and the Quayside not including the extensive Flood defence costs will be in the region of £1.67 million. The new flood protection measures will cost £2.22 million
- A new cinema will provide a lively point of entrance to South Quay

In June 2010 ING committed to a legally binding agreement to pay for a large number of high cost items that have been put forward by the Environment Agency, Natural England, The Highways Agency and a number of other statutory bodies to bring significant improvement to Hayle and its surrounding areas. The Financial commitments include over £12 million of benefits payable by ING that relate to North Quay, South Quay and the Harbour. This phase is part of an overall masterplan for the Hayle area

6. Port of Workington

The Port of Workington is one of the largest ports in Cumbria and aspires to be a significant hub for the North West.

In June 2011 over £5.7 million pounds of investment was secured through the Britain's Energy Coast initiative.

The Project includes:

- The arrival of a new harbour mobile crane
- extensive improvements to the Ports facilities, and
- the introduction of a weekly scheduled feeder container service to Rotterdam

The project aims to provide a truly sustainable end to end logistics option for businesses in Cumbria and beyond. The changes will see Workington become a major player in the European multi-modal logistics arena.

7. Porthcawl Harbour

A £3m improvement scheme for Porthcawl Harbour – part of phase two of the town's regeneration – is now underway.

Project includes:

- engineering works to ensure the walls of the new harbour are structurally suitable
- a new lock-gate to be installed to allow a permanent body of water to be retained within the dock basin
- This in turn will allow new pontoons to be installed, increasing the number of available boating berths to more than 50
- The new berths will be designed to support commercial fishing operations, while also providing space for tourists and visitors and encouraging more leisure boating operators to use the harbour.

Subsequent phases include the refurbishment of the Jennings building and a new leisure development in the lower part of Salt Lake car park.

The scheme is being funded by Bridgend Council and the European Convergence Programme and will also see new beach access and outdoor shower facilities installed at Rest Bay.