



## **Development & Infrastructure Services**



### **Rothesay Pier – Outer Harbour Pontoons**

#### **Outline Business Case**

**November 2019**

## Revision History

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### **1.0 Introduction**

#### **1.1 Purpose of Document**

**1.1.1** This document has been prepared to an outline Business Case to help inform the need for additional investment including the options available to ABC in developing the Outer Harbour Pontoons, Rothesay. The options are to be considered to allow an informed decision to be made on the level of additional investment sought (Ranging from a Minimum of £98k, to a Maximum of £150k).

#### **1.2 Background**

**1.2.1** The Outer Harbour Pontoons were installed circa 1992 and are operated by Bute Berthing, on behalf of Argyll and Bute Council. The current arrangement consists of a single row of pontoons with walkway fingers on both sides, accessed by a bridge from the Mid-Pier. The existing pontoons are essentially reaching the end of their design life and require replacement. The Council is working in partnership with Bute Berthing in developing this project.

### 2.0 Strategic Fit

2.1 Argyll and Bute Council operates and owns Rothesay Harbour with Bute Berthing Company operating the inner and outer berth pontoons. The Council has invested a considerable capital sum in upgrading and maintaining Rothesay Harbour for the primary purpose of operating a ferry port and facilitating the visits of additional vessels, including leisure craft and fishing vessels. The harbour has limited capacity to facilitate visits from cruise ship tenders and the condition of the existing outer pontoons system is currently considered to be in a poor condition in terms of its appearance and functionality. The Council has invested in step ashore facilities in Campbeltown and in Oban which has attracted additional visitors to both communities. It is considered that improving Rothesay Outer Berth Pontoons to a similar standard which enjoy the same level of success helping to boost the Rothesay and ultimately the Bute economy.

### 2.2 The Need for Investment

2.2.1 The existing outer berth pontoons are reaching the end of their useful life and have resulted in a negative customer experience that detracts from the wider offer of Rothesay and ultimately Bute. As part of an economic enabler it is proposed that the pontoons are replaced with a new piled system, as the preferred option, which will be more attractive and reliable for visiting vessels and more cost effective to maintain over the life of the asset. It is therefore forecast that a piled system will provide a safer structure, easier to maintain than a chain and anchor system, help attract more visitors to the harbour and ultimately generate additional income directly from berthing fees and indirectly additional income for local business as a consequence of additional visitors to the area.

#### 2.3.1 Key Benefits

The key benefits in taking forward a piled solution rather than using a chain and anchor system is the creation of a more stable structure that will help deliver an increase in visitor numbers and users of the pontoons together with a reduction in ongoing maintenance costs.

#### 2.4.1 Success Factors

The project's success will be measured on the number of visiting vessels and the income generated by the project both directly from

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berthing and indirectly from additional economic activity on Bute. This type of investment has already proved highly successful in both Campbeltown and in Oban where the council has already invested capital funds in either improving or creating dedicated step ashore assets.

### **3.0 Options Appraisal**

#### **3.1 General**

**3.1.1** As always in any option appraisal, the “do nothing” option should be mentioned. This is very rarely a realistic option simply because in undertaking the preparation of a Business Case, an organisation recognises that investment in a particular asset is necessary otherwise they risk that that asset’s value, not simply in financial terms but in general economic terms also, is considerably reduced. In the case of the Outer Harbour pontoons, the Council recognises that by undertaking this Business Case, works of some form or other are likely to be required and that doing nothing risks the existing structure deteriorating to such an extent that the pontoon facility becomes unusable and in time a liability that will have to be disposed of at cost to the council. Such an option is therefore not considered as being viable and will form no further part of this Business Case

**3.1.2** The options outlined below have been produced by the in-house design team, developed from the original submission by Solent Marine Ltd (Ref Appendix A), which comprises the following pontoon system:-

- 1 no. Access Bridge
- 1 no. Landing pontoon (11m long x 3.85m wide)
- 3 no. Pontoons (11m long x 2.5m wide)
- 12 no. Fingers (7.5m long x 0.75m wide)

All Options require the disconnection and removal of the existing pontoon arrangement and dredging.

#### **3.2 Option 1: Utilise Existing Chains and Anchors**

**3.2.1** The new pontoons and fingers will be secured using the existing ground anchors/mooring system. This option will be subject to a full survey of the existing arrangement, with associated risks and costs given the age and condition of the existing infrastructure.

**3.2.2** Annual inspection of the chains and anchors/mooring system will be required, including repair/replacement of component parts. Costs for this are moderate to high.

**3.2.3** Additional cost will be incurred during future maintenance dredging due to presence of chains/anchors.

### **3.3 Option 2: Replace Existing Chains and Anchors**

- 3.3.1** The new pontoons and fingers will be secured with the installation of new ground anchors/mooring system attached to new chains.
- 3.3.2** Annual inspection of the chains and anchors/mooring system will be required, including repair/replacement of component parts. Costs for this are moderate.
- 3.3.3** Additional cost will be incurred during future maintenance dredging due to presence of chains/anchors.

### **3.4 Option 3: Piled System**

- 3.4.1** The new pontoons and fingers will be secured with a tubular piled mooring system and pile guide arrangement, similar to Campbeltown Transit Berthing Facility and Oban Transit Berth (Partial).
- 3.4.2** Less frequent inspection of the piles will be required and ongoing maintenance is reduced. Costs for this are low.
- 3.4.3** Future maintenance dredging can be undertaken with greater ease and less cost with the piled system.

### 4.0 Commercial

#### 4.1 Revenue and Economic Impact

4.1.1 The projections below are based on the following assumptions:

Confirmed berthing price - Rothesay £2.20 per meter

Figures based on average boat size of 10m = £22.00 per night (revenue/income)

Figures (revenue) based on £22.00 x number of boat nights

Figures based on average 3 visitors per boat

Figures based on £47.00 spend per head (British Marine Federation 2018)

Figures based on 3 persons at £47,00 per head = £141 per boat per night

Figures based on estimated information supplied by Rothesay Harbour Master

Option	existing	Forecast additional boat nights	Forecast additional visitors (PAX)	Forecast additional cruise vessels	Est direct economic impact (revenue/income) (Boat nights x £22.00)	Est indirect economic impact (visitor spend in Rothesay) PAX x £47.00
<b>Outer Harbour</b>						
Do nothing	3000	3,000 but reducing due to condition	9,000	none	66K	423K
Chains and anchors	N/A	Total including additional boat nights 4,500	13,500	10	99K	634K
Piles	N/A	Total including additional boat nights 5,500	16,500	20	121K	775K
<b>West arm</b>						
Do nothing	Not in use	zero	Info not available			
Chains and Anchors	Not in use	500	Info not available			
Piles	Not in use	1,500	Info not available			

### Maintenance Savings

#### Option 1: Utilise Existing Chains and Anchors

Annual dive inspection = £4k

5 Yearly dredging by vessel including licensing and consents at £4K per day for 5 days = £20K

3 Yearly Lifting cleansing of chains anchors etc. = £15K

Therefore £20k x 6 times + £15K x 10 times (every 5 years for 30 years) + £4K x 30 years = **£390K\*** excluding inflation, increments, and replacement parts.

\*Provisional figures only as the existing infrastructure will be subject to survey and potentially need replaced sooner.

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#### Option 2: Replace Existing Chains and Anchors

Annual dive inspection = £4k

5 Yearly dredging by vessel including licensing and consents @ £4K per day for 5 days = £20K

3 Yearly Lifting cleansing of chains and anchors etc. = £15K

Therefore £20k x 6 times + £15K x 10 times (every 5 years for 30 years) + £4K x 30 years = **£390K** excluding inflation, increments, and replacement parts.

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#### Option 3: Piled System

Annual dive inspection = £2K

5 yearly dredge by vessel including licensing and consents @ £4K per day every 5 years = £20K (the requirement is the same but method is different due to not working around chains and no preparatory works needed)

Therefore 6 x £20K + 30 x £2K = **£180K** excluding inflation, increments, and replacement parts.

Options 1 and 2 are considered to be the same estimate of costs because of the system, i.e. chains and anchors. Consequently the **saving is £210K over the lifetime of the products using option 3**. It should also be noted that when considering option 1 there could be additional capital costs or accelerated replacement costs depending on the state of existing equipment.

## 4.2 Commercial Opportunities

**4.2.1** The improved facilities will be attractive to cruise ship passengers, with improved safety and stability for those disembarking at Rothesay Pier when dues of approximately £500 are paid direct to the Council by each visiting ship.

**4.2.2** The West Arm pontoon will be utilised for short stay visitors, thus releasing berths in the Outer and Inner Harbours for overnight stays with enhanced revenues.

### **5.1 Available Funding**

**5.1.1** It is estimated that additional revenue from the piled option will be £55k per annum with £210k estimated in maintenance savings. Prudential borrowing may be made available to cover the additional costs of option 3 up to £150k. It is estimated that the cost of this will be £10k per annum over the next 30 years which is the lifetime of the new asset.

### **5.2 Cost Estimates**

**5.2.1** The works under consideration in all options are straightforward in nature in terms of Marine Civil Engineering and are considered to be low-medium risk rather than medium-high risk, with exception of the piling operation which is dependent on ground conditions. As the ground conditions around Rothesay Harbour are reasonably well understood, in addition to letting a Ground Investigation contract the risk of unknown ground conditions impacting on progress of the pile design/installation are similarly reduced. That said, the risk associated with unknown obstructions or poorer than expected condition of the existing infrastructure remains. As it is likely the works will be carried out with marine based plant, there is a risk of weather delay however given the works will be undertaken in spring and within a relatively sheltered location, the impact of bad weather is similarly reduced.

#### **5.2.2 Option 1: Utilise Existing Chains and Anchors**

Construction Costs  
(Including Prelims and Contingency) = £230,010

Total Project Costs  
(Including Design, Supervision & Optimism Bias)= £248,149

TCF Fund = £150,000

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**Total Shortfall £98,149**

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### 5.2.2 Option 2: Replace Existing Chains and Anchors

Construction Costs  
(Including Prelims and Contingency) = £261,580

Total Project Costs  
(Including Design, Supervision & Optimism Bias)= £282,209

TCF Fund = £150,000

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**Total Shortfall** **£132,209**

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### 5.2.3 Option 3: Piled System

Construction Costs  
(Including Prelims and Contingency) = £278,492

Total Project Costs  
(Including Design, Supervision & Optimism Bias)= £300,455

TCF Fund = £150,000

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**Total Shortfall** **£150,455**

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### **6.0 Future Operation of The pontoons**

- 6.1** The Bute Berthing Company currently operate the pontoons. The award of substantial grant funding by the council to renew the outer berth asset will have to done on the basis of a re-negotiation of the operational contract between the Company and Argyll and Bute Council. This re-negotiation will need to reflect the full costs of the construction and maintenance of this important economic facility to ensure that its condition is maintained to a satisfactory condition, for all parties, over the lifetime of the asset. Having a well maintained asset is also critical to secure additional revenue from future users of the pontoons facility.

### **7.0 Conclusion**

- 7.1** This business case puts forward three options for Members of the Harbour Board to consider. It concludes that subject to being able to assemble the required additional funding through either prudential borrowing, or Crown Estate grant funding (subject to a December Policy and Resources Committee decision), or a combination of the two, the piled option (3) should be progressed on the basis of forecast increased visitor numbers, forecasted additional income of circa £55k per annum and crucially the reduced future maintenance of the asset in the medium and longer terms amounting to £210k over the lifetime of the asset. The estimated cost of prudential borrowing is £10k per annum over the next 30 years. The lifetime of the asset. It should be noted that given the substantial capital investment recommended by the business plan that officers of the council will need to re-negotiate the contract with the Bute Berthing Company to ensure that the facility is maintained to a satisfactory condition for the life time of the asset.



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## Appendix B – Programme

