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Penzance Town Council

Penzance Harbour Improvements

Option Technical Review

Addendum – Option 6A (#2)

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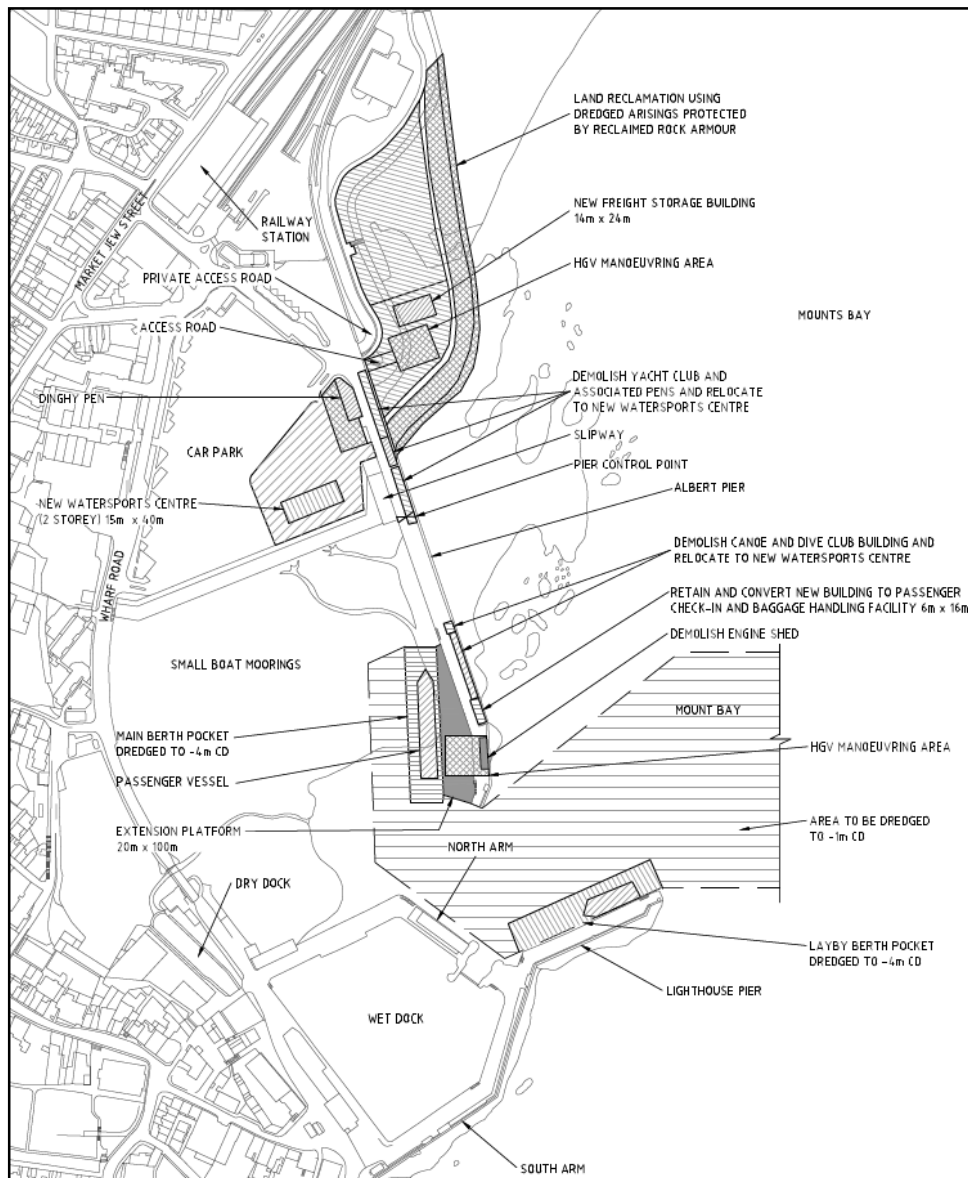
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4.5 Option 6A: Wharfside Car Park + Land Reclamation with Albert Pier for Freight & Passengers



4.5.5 Costs

Design Element	Dredging	Reclaimed Land	Freight	Passengers	Comment
Lighthouse Pier – Berthing Pocket	£ 2,725,000				
Albert Pier – Navigational Access & Berthing Pocket	£ 3,675,000				
Re-claimed Land		£ 7,500,000			
Albert Pier - Freight Access Platform			£ 1,710,000		
Freight Storage Building			£ 480,000		
Passenger Check-in & Baggage Handling Facility				£ 180,000	
Sub-Total	£ 6,400,000	£ 7,500,000	£ 1,565,000	£ 180,000	
Allowance for inflation from Q1 2012 to Q1 2013 – circa 3%				£ 490,000	
Construction (Capital Works) Total				£ 16,760,000	
Site Investigations & Surveys				£ 250,000	
Professional Fees – circa 8.5%				£ 1,415,000	
Statutory Fees & Licences				£ 75,000	
Allowance for Tenant Relocation Costs @, say, £150K per Tenant				£ 600,000	
Allowance for Legal Fees				£ 200,000	
VAT				Excl.	
Estimated Project Cost (exc. VAT)				£ 19,300,000	

In order to complete the proposed it will be necessary to construct a new Watersports Centre. The capital works construction cost of this centre is estimated at an additional **£1,500,000**. However, it is recognised that this will take longer to design and arrange funding for than can probably be contained within the programme for this project (see **Appendix B – B3**). Hence, £275,000 is included within the additional £1.5m to allow for temporary accommodation for the clubs and facilities that will be displaced by the clearance of buildings along Albert Pier. This clearance is a necessary part of the scheme to allow for safe movement of passengers and freight along the pier.

The following assumptions are made in order to provide the above cost estimates:

1. The finished level of the reclaimed land to be 8.0m above chart datum.
2. Rock armour profile will be 20m wide at base with sloping sides at 1 in 2 giving a 4m wide zone at the top.
3. Dredging 1m deep underneath the position of the new rock armour will be required prior to placement of the rock armour.
4. There is sufficient primary rock armour that can be reclaimed.
5. A quantity of imported new core rock armour of 10 - 130kg will be required (Quantity allowed: 10,214m³).
6. The dredged silt will be ameliorated with 10% cement or equivalent stabiliser prior to placement as fill material.

Dredging Costs

- At £13.9m dredging and its use in land reclamation represents a significant cost to the project. Dredging is not eligible for European Convergence funding¹. Much of the cost of dredging is tied up in rock dredging which may not be possible for the technical and risk reasons outlined in Sections 4.5.1 and 4.5.4.
- DfT funding is available for dredging but only to the value of £4m. Hence a further £9.9m would have to be found to complete the dredging.
- Since the use of the Albert Pier is not possible without both soft and rock dredging, no ERDF would be forthcoming unless other sources of match funding could be found.
- In order to provide the area of useable land shown in the Option drawing (156m x 60m = 9,350m²), 29,550m³ of fill would have to be imported to bring the levels up from +4.84mCD to +8.0mCD. If dredged arising (alone) were used to create land at +8.0mCD then the area of useable land created would become 5,565m² (94m x 60m). This reduced area would provide ample room for a Freight Storage depot but would require shared use of the access road to the Chyandour Pumping Station. The reduced area would not compensate for the loss of car parking arising from the building of the new Watersports Centre. Reducing the area would reduce the length of new wave screen protection and the amount of rock armour protection required to prevent the ground from being washed back out into Mounts Bay. This results in a new project cost of £16.3m.
- If the land reclamation was not possible then the dredged arising would have to be removed from the area as in Options 3 & 4A. This turns the option into an option very similar to Option 5 to which Option 6 was highly sensitive when scoring the Freight criteria. The lack of land reclamation would result in further areas of the Wharfside (Harbour) Car Park being required for the Freight Storage depot. This would result in dredging costs rising to £11.5m and an overall project cost of £16.6m.
- In addition to the above (i.e. no land reclamation), if the platform at the end of Albert Pier were to be removed from the scheme, then project cost would reduce to £14.7m. The lack of turning space would result in HGV's having to reverse the length of Albert Pier. This is dangerous and would not be recommended.
- If the land reclamation was not possible and dredged pockets were not provided then the cost of dredging reduces significantly to £6.7m with an overall project cost of £11.2m. This assumes that the navigational approach and berth were dredged to -1mCD. As noted above, the lack of land reclamation would result in further areas of the Wharfside (Harbour) Car Park being required for the Freight Storage depot. However, since all dredging costs

¹ Ian Whale (Department for Communities and Local Government)

would have to come from DfT funding, this variation would not attract European funding and, hence, would not be attractive to the DfT.

- If, in addition to the above, the platform at the end of Albert Pier were to be removed from the scheme, then project cost would reduce to £9.3m. Again, as noted above, since all dredging costs would have to come from DfT funding, this variation would not attract European funding and, hence, would not be attractive to the DfT. Also, as noted above, the lack of turning space would result in HGV's having to reverse the length of Albert Pier. This is dangerous and would not be recommended.