

Isles of Scilly Link Project

Option C - Report of Further Investigation

[Freight depot at Longrock and passenger facilities within the Trinity House depot]



*Photo: The Quay. Looking North from South Pier to Trinity House depot
July 2009*

Version	Reason for Issue	Approved
1	Summary of all work undertaken to investigate the Penzance out-of-town freight option to serve the Isles of Scilly sea link	TW

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Isles of Scilly Link Harbour Works

Penzance Harbour - Option C

Background

On 16 September 2009 the Cornwall Council Cabinet decided to further investigate Option C at Penzance – an out of town freight depot and a passenger terminal located at the vacant Trinity House depot, in Penzance Harbour.

The Trinity House depot is close to the South Pier from where a ferry to and from the Isles of Scilly has traditionally sailed (in centre of photograph on the front of this report).

Previous Work

During the Planning application consultation period Andrew George MP convened a series of meetings between officers of Cornwall Council and the Council of the Isles of Scilly (on behalf of the Route Partnership) and the Friends of Penzance Harbour (FoPH) to consider the concerns about reclaiming the foreshore south of the sea wall towards Battery Rocks. It was agreed to consider alternatives, using existing buildings for the freight and passenger facilities, to avoid the need for the reclaimed land. The FoPH consider that no rock armour should be placed alongside the sea wall nearest the Barbican to save the shingle beach area.

Those involved in one or more of the meetings were:

- Andrew George MP, St Ives constituency
- Philip Hygate, Chairman of Route Partnership & Chief Executive of the Council of the Isles of Scilly
- Tom Flanagan, Corporate Director, Cornwall Council
- Nigel Blackler, Head of Transportation, Cornwall Council
- Tim Wood, Project Director, Cornwall Council
- John Maggs, Spokesperson, Friends of Penzance Harbour
- Charlie Cartwright, Friends of Penzance Harbour
- Mike Sagar-Fenton, Friends of Penzance Harbour
- John Moreland, Friends of Penzance Harbour, Chairman of Penzance Civic Society and Penzance Town Councillor

Initial investigation was undertaken by Halcrow from May–August 2009 with freight logistics input from LV Shipping Ltd and construction cost estimates by Birse Coastal. The report 'Penzance Harbour - Appraisal of Alternatives' was issued on 24 August 2009.

That report considered two alternative options. The Council's preferred scheme, used as a datum, was referred to as Option A. The alternatives were:

- Option B: using the vacant Trinity House depot for freight operations and the site of the Waterside Meadery restaurant and the Penwith Marine Services (green sheds) for passenger facilities
- Option C: using an out-of-town freight depot at Longrock Industrial Estate and the same passenger facilities as Option B.

The report concluded:

'although both options agreed by the Friends of Penzance Harbour and the Route Partnership (Options B and C) are workable solutions to the requirement to upgrade the harbour facilities at Penzance, the findings of this outline appraisal support the continued adoption of Option A, due to the lower ongoing operational costs and the simpler operation of the single site solution.'

Compared to Option A the additional freight operating costs were reported as being 21% and 26% higher for Options B and C respectively.

On 16 September 2009 the Council's Cabinet committee decided that it was appropriate:

- to further investigate Option C to see if its lower capital construction cost (requiring lower loan repayments) could balance the higher revenue costs of its operation, and
- for the Council's Procurement Assurance Scheme (PAS) Panel to advise on the procurement and financial aspects of the options.

Further Investigation

The investigations were undertaken between September and December 2009.

Halcrow (via Birse Coastal) were instructed to undertake the further investigation with inputs as follows:

Marine design	Halcrow (Manchester)
Architectural design	Trewin Design Partnership (Holsworthy, Devon)
Freight building review	LV Shipping Ltd (Hull)
Highway design	Cornwall Council (Redruth)
Traffic surveys	Cornwall Council (Redruth)
Property valuations	Cornwall Council (Penzance)
Building cost estimates	Kier Western Ltd (Truro)
Marine and civil engineering estimates	Birse Coastal (Preston)
Operating cost estimates	Red Funnel Ferries (Southampton)
Procurement advice	Cornwall Council and Bevan Brittan

There were several key strands to further developing this option, these were:

- Investigation into the viability of purchasing and converting Trinity House (Grade 2 listed) into a passenger terminal
- Identification of a suitable, available out of town freight depot at Longrock
- Confirmation of works required to South Quay to facilitate the introduction of the new ferry, and protection of the existing Quay without the need for the reclaimed land approved by the Harbour Revision Order¹.
- Design of highway improvement works to aid the functionality of Trinity House, being landward of the harbour road
- Freight surveys to gauge likely usage of an out of town facility
- Compilation of comparative capital construction cost of Option C versus the preferred Option A
- Examination of the running costs of Option C
- Preparation of programme for the delivery of Option C
- Consideration of the procurement and commercial merits of Options A and C by the Council's Procurement Assurance Scheme – comprising senior officers of the Council

Out of Town Depot

For this option to be deliverable within a sensible timescale to secure project funding it was recognised from the outset that any facility would already need to have planning consent for use as a freight handling (warehouse) facility. The principal area where a vacant facility was likely to be located was on Long Rock Industrial Estate, although other locations were briefly considered including sites at Hayle and Crowlas.

¹ Penzance Harbour Revision Order 2009, SI No.2325/2009



Photo: Unit 18 Longrock Industrial Estate

Two potential units were identified at Long Rock: Unit 18 (as identified by Mr Cartwright, FoPH) at the western end of the Estate owned by the South West Regional Development Agency (SWRDA) and temporarily occupied for storage, and a unit on the Questmap Business Park development site at the eastern end of the Estate. Both options were investigated, but during the process planning permission for the latter was refused, so efforts concentrated on Unit 18.

Meetings with officers in the Planning Service confirmed that Unit 18 already had consent for warehouse use, B8. Initially SWRDA stated that Unit 18 was going to be marketed as part of a larger package to rationalise the western end of the Estate (to include the bus depot and other Units) and could not be sold separately. However, SWRDA later conceded that it would be possible to sell Unit 18 to the Council as a separate lot. The building was inspected by the Project Team including LV Shipping and a schedule of required works was compiled to refurbish it and to bring it into use for the project. The required works were then priced by LV Shipping and confirmed with a check by Kier Western.

Two other locations for the freight facility were considered and dismissed. These were included Guildford Road Industrial Estate at Hayle because of its distance from Penzance (c.10 miles by road) and the Crowlas site at Rospeath again due both to distance and the severely restricted width of the highway access to the site.

Freight Surveys

In order to ascertain the likely level of usage of an out-of-town facility, in June 2008 surveys were carried out in the harbour at both the North Arm and at South Quay over two days. Follow up surveys were undertaken in October and November 2009 to further inform and develop the Option C proposals.

The principal conclusion of the analysis of this information was stated as:

"The provision of an out of town freight depot has the potential to reduce HGV flows on Wharf Road by approximately 16% and to reduce the total traffic flow by approximately 1%."

The results of the 2009 surveys also found that over 50% of the deliveries to the Quays had other deliveries to make in Penzance on the same delivery round. A delivery to an out-of-town depot would therefore not prevent 50% of the delivery traffic continuing into Penzance.

It has been widely recognised that a large percentage of freight has to go directly to the vessel because it could not be easily or safely handled or re-packed. Examples might be bulky building materials, livestock, gigs and gas containers.

Trinity House

This former depot for Trinity House and later Lighthouse Museum was closed in 2005 and has remained unoccupied. In mid 2009 Trinity House made it known that they were considering placing the property on the open market. The building still houses a number of lighthouse/lightship related exhibits from its days as a museum. There is also office space at one end of the building with sitting tenants: Allied Healthcare (upstairs) and Silver Dolphin Marine (downstairs).



As a museum and Grade 2 listed structure, both a change of use and listed building consent applications would need to be made. Further it was indicated by the owners that the building would be offered for sale on the open market early in 2010.



Photos: Trinity House from front and rear

Trinity House was visited by local Councillors, and inspected by Planning officers, the local Conservation officer and members of the Project team including the architect. A detailed internal survey of the building was carried out in order that drawings suitable for planning and listed building consent applications could later be prepared.

From these visits and discussions, a design was produced and concept drawings were prepared for the works that would be required to carry out the conversion. The broad scope of works was agreed with the relevant Planning and Conservation officers at a further meeting held at Trinity House.

Kier Western inspected the facility and built up a budget estimate and indicative programme for the works.

The architect also considered the external space and the needs for passenger arrival/departure and the luggage handling requirements from the yard behind the building.

Concept sketches are included in Appendix B1.

Design of Highway Improvement Works

Trinity House is separated from South Quay by a busy public highway carrying approximately 13,000 vehicles per day, and hundreds of passengers would be crossing the road before and after sailings especially in the peak season.

In early discussions between the Council's Highway Development Control Manager and the Project Team measures were agreed to calm the traffic environment between Jubilee Pool and Ross Bridge, and to facilitate passenger movements both along and across the carriageway. Traffic surveys and a topographical survey of the road were carried out, and existing vehicle speeds were monitored.

From this information a detailed scheme was developed which included:

- An extension of the existing 20 mph speed limit from Trinity House to the eastern end of the Promenade at the junction with St Anthony Place
- A new footway alongside the Waterside Meadery towards the North Arm
- A new passenger drop-off lay-by adjacent to Trinity House for coaches
- Narrowing of the road/widening of the footways between Trinity House and the eastern end of the Promenade at the junction with St Anthony Place
- Widening of footway between Ross Bridge and Trinity House with minor road realignment
- Making Quay Street one way uphill towards St Mary's Church
- Creation of a pedestrianised area between the Weighbridge and Trinity House with an adjacent passenger drop-off zone for cars
- Provision of a zebra crossing next to the south east corner of Trinity House to facilitate passenger movements

A highway layout plan is included in Appendix B7.

Confirmation of Works to South Pier

Whilst the principal objectives of Option C were to use an out of town freight depot and convert an existing building close to the harbour as a passenger terminal, works to the harbour would still be required in order to accommodate the new vessel. The elements common to Option A that are still required are the pier extension and rock armour.

Under Option A, the reclaimed land was to be built from the west side adjacent to Jubilee Pool, and the rock armour placed by land based plant, located on the newly created reclaim area. Under Option C access for the installation of the rock armour from the land would not be possible (to save adverse impact on the shingle beach area) so rock armour and infill material would have to be placed by marine plant on jack-up barges with a consequent significant increase in cost and risk due to the additional cost of marine plant and the susceptibility of the operation to adverse weather.

The logistics of building the pier extension would be the same for both Option A and Option C.

South Pier – Effects and Limitations on Access

In this proposal smaller freight loads would be delivered to the out-of-town depot and be transferred to heavy goods vehicles to reduce the number of freight movements in the harbour. Whilst this would be beneficial to traffic flow generally all those heavier delivery vehicles would have to travel the full length of the South Pier to deliver to the ship.

The Listed South Pier will experience a larger number of heavier vehicle axle loads than in the current situation (or under Option A) which would cause more wear to the heritage fabric. The relationship between axle weight and damage is not linear but exponential, to the fourth power². [A 10 tonne axle does 10,000 times more damage to the surface and underlying structure than a 1 tonne axle. A 10 tonne lorry axle will do 123 times more damage $(10/3)^4$ than the 3 tonne axle of a loaded forklift.]



² Equivalent axle loads <http://pavementinteractive.org/index.php?title=ESAL>

With no rock armour or new outer sea wall to protect the landward section of South Pier there will be no additional protection to harbour or highway users nearest the Barbican area.



Photos: Force 8 gale on 12 January 2010

Freight is currently delivered to the North Arm of the harbour so whilst there would be a beneficial reduction in vehicle/pedestrian conflict on that arm there would have to be more restrictions on South Pier to avoid that same conflict.

Access to boats on the South Pier side of the Wet Dock would be restricted limiting leisure use of this part of the harbour.

Compilation of Comparative Construction Costs (Capital)

In order to evaluate and compare Option C from a capital cost perspective a spreadsheet of the expected costs were tabulated against Option A. This table is included in the appended report – *Penzance Option C Capital Costs October 2009*.

The cost elements were summarised under infrastructure, rock armour revetment, sea wall to reclaim area (including infill), building construction and site overheads.

Under infrastructure, the cost of alterations to the existing pier are tabulated. Under Option C only security gates are required (whereas Option A includes services to the reclaim area for example) giving an Option C saving of £430,000 against the costs anticipated under Option A.

The rock revetment costs of Option C are significantly higher than that of Option A due to the need to place the material from the sea (rather than via the reclaim area under Option A). This gives an expected increase of cost for Option C of £2,579,000 over Option A.

There is no cost for a reclaim area under Option C yielding a saving of £3,043,000.

Building construction under Option C includes the purchase of both Trinity House and Unit 18 at Longrock Industrial Estate plus conversion and/or upgrading works. This gives an additional cost for Option C of £1,294,000 against the cost of building the freight and passenger terminals on the reclaim area.

For site costs and overheads – principally because of the shorter construction period for Option C – there is a reduction in cost of £614,000.

Thus, overall, it is estimated that Option C would have a capital construction cost £213,000 (at Q.3 2009 prices) less than Option A.

Option C Delivery Programme

As with Option A, the Option C construction phase needs to commence in the Spring time as the pier extension works will take up to 8 months. Weather and sea state disruptions must be minimised and are less frequent during the Summer months. Under Option A the reclaimed land would have to be established in a similar time window.

The most likely start date for construction activity is Spring 2011.

The construction of the rock armour revetment is the other major sea dependent activity and this would commence in the second Spring of the construction phase.

The main programme activities have been scheduled and give a completion date about two months earlier than the Project's Option A programme. This is to be expected with the omission of the reclaim area and the buildings atop it from Option C. Clearly the conversion of Trinity House and refurbishment of a freight depot can be carried out in parallel with the harbour works under Option C.

A preliminary programme is included in Appendix E.

Commercial and Procurement Issues

A legal review of the operator procurement identified that the Option A tender process (ongoing at that time) would have to be concluded before the Council could seek a price from operators to tender for Option C. It was reported that once it was decided not to progress Option A the competitive dialogue stages of the tender would have to be repeated (taking approximately 6 months). The legal opinion was supported by the Council's Corporate Procurement team.

The vessel tender was due to lapse on 31 January 2010. Legal advice confirmed that extensions to that tender could be sought before 31 January and thus avoiding a re-tender.

A project such as this has to be developed on a sound business case basis to ensure that the financial risks are fully understood at the outset. The project aim is also to provide a sustainable long-term solution for the sea link.

The Council's work in this regard is overseen by Internal Audit. As part of the Council's Procurement procedures, any project involving Council monies has to be taken to its Procurement Assurance Scheme Panel, which comprises senior officers, including the Corporate Director for Corporate Support, Head of Legal Services, Head of Corporate Procurement and Head of Internal Audit.

The decision from the Cabinet meeting of 16 September 2009 was to seek the Panel's views on both Option A and Option C. At a special meeting of the Panel, the Project Team reported on commercial issues, together with implications on funding, risk management, affordability, and potential delays in awarding the associated contracts.

The minuted resolution of this Panel was as follows:

*"**AGREED** that the Cabinet be notified that this Panel unanimously supports Option A and recommends that the related contracts be awarded."*

Examination of Running/Operating Costs

As part of the preparation of the contracts for the project, the Project Team have been in dialogue with potential vessel operators to secure a company who would pay an annual fee to charter the new vessel and operate the new shoreside freight and passenger facilities.

Legal advice was that we could not ask tendering operators to undertake a review of Option C. At the final stage of tendering one of those operators withdrew and so the Project Team was able to seek their input.

The Isle of Wight Steamship Company (known as Red Funnel) of Southampton annually runs millions of passengers together with vehicles and freight to and from the Isle of Wight, and have an out of town freight depot for some of these services. They were employed to assess how the operation of the Option C freight and passenger facilities at Penzance would have affected their charter fee to operate the Option A.

The conclusion of their study was that Option C would result in their bid for the Charter reducing by £330,000 per annum over the life of the charter (12 years). This reduction has a major affect on the viability of the business case for the service. Red Funnel's report is included in Appendix D.

Financial Assessment

The Council's Corporate Resource team reviewed the construction and operating costs and re-ran the business model for the sea link service. Predicted construction inflation of £1.5m was added to the building costs and £3.5m added to the vessel cost, reflecting the change in the Euro to Sterling exchange rate since the original tender (a ship yard risk). The conclusion was that at the end of the business case period (two operator terms, 24 years) there would still be £5.5m to repay of the £15m Council loan. The loan would be repaid after approximately 34 years but no vessel replacement

fund would have been established therefore placing the authority in the same position as the service is in now, having to seek central government and European government support.

A sensitivity test was carried out using total increased cost of +£3.5m instead of +£5m. The effect of this was that at the end of the business case period there would still be an unpaid loan of £0.9m, which would be repaid in year 25. There would still be no vessel replacement fund established under Option C.

Security – Future Changes

Whilst the facilities are currently being designed for the current Level 1 security it is right that the Council should assess the possibility of their modification to cater for a future escalation to Level 2 security status, if required by TRANSEC³.

Level 2 would be the same as for airports, requiring checked-in passengers and luggage to be separated from the public areas and for freight that had been checked to be held in secure areas before loading.

Passengers could be transported from Trinity House to the pier in coaches and freight could be held at the out-of-town depot until called to the ship. If this option could be made compliant it would slow the operation and would not allow freight containers to be brought to the quay and left on the pier in unsecured areas. To make the required changes to the facilities may be possible but would be an expensive additional operating cost which would transfer to freight and passenger charges. A worst case scenario would be that alternative facilities closer to the pier would be necessary.

Conclusion:

The factors affecting the delivery of Option C have been fully assessed. The financial and procurement aspects were reported to the Council's Procurement Assurance Scheme Panel on 25 November 2009. This information was summarised in a report to the Council's Cabinet on 16 December 2009. The report was withdrawn from the 16 December Cabinet but was considered at the 25 January 2010 Special Cabinet.

The Cabinet decided not to pursue Option C.

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³ TRANSEC - The Department for Transport's TRANsport SECurity team is responsible for the security of ports, shipping and cargo.