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ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

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ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

1. INTRODUCTION

- 1.1 The “Route Partnership” has, following an extended design study and selection process, proposed the provision of a new combined passenger/freight vessel to operate between improved route terminal facilities at Penzance and Hugh Town, St Mary’s on the Isles of Scilly.
- 1.2 This project review, requested by the Department for Transport, has been tasked to provide independent assurance that the vessel and harbour improvements have been correctly specified and value engineered as appropriate.
- 1.3 The review conducted has been based almost entirely on the study of previous reports, other documentation and drawings. A detailed record of all documents studied for the purpose of this review is listed in Appendix A to this report.
- 1.4 To evaluate the proposed project solution, it was first necessary to identify the route requirements and any route specific limitations that would bear directly on the solution selected.
- 1.5 Before full evaluation of the proposed vessel and terminal port improvements, it was necessary to establish the project evolution process. There was a need to identify a project development time-line as it would not be possible to judge key project decisions without first understanding the options and restrictions appertaining at the time any such decision was made. Confirming the natural progression from initial transport strategy studies to final proposed specifications for the vessel and associated harbour facilities was fundamental to the review process.
- 1.6 The final project solution of the proposed new combined passenger/freight vessel has been considered in depth to ensure it satisfies all previously identified requirements including:
 - Availability of Proposed Passenger/Freight services with regard to weather and tide
 - Passenger Capacity and Transit Times
 - Passenger Comfort, Health and Safety
 - Freight Capacity and Loading/Discharge time
 - Freight Handling Efficiency and Operational Safety
- 1.7 The proposed improvements at the route terminal ports have been studied to establish whether the specified harbour modifications/improvements are necessary and compatible with the proposed combined passenger/freight vessel.
- 1.8 Conclusions reached with regard to compliance with identified requirements are proposed together with further opinions relating to any areas where the final project solution either under or over caters for those requirements.
- 1.9 Estimated project costs for the specified solution have been studied and comments are included on a “Value Engineering” basis only, a full analysis of all individual cost element and future operational expenditure not being within the terms of reference for this review.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

2. EXECUTIVE SUMMARY

- 2.1 The offshore resident community on the Isles of Scilly is not self-sufficient and is totally reliant on an effective link to the mainland to supply food, fuel and other commodities and also to deliver the many tourists required to support the main island industry. The sea link is currently maintained and operated on a commercial basis by the Isles of Scilly Steamship Company Limited. They currently operate two vessels; one passenger vessel operating seasonally and a cargo vessel providing a year round freight service. Both vessels are nearing the end of their service life and alternative arrangements are now required to maintain this essential link.
- 2.2 The “Route Partnership” has, following an extended design study and selection process, proposed the provision of a new combined passenger/freight vessel to operate between improved route terminal facilities at Penzance and Hugh Town, St Mary’s on the Isles of Scilly. This project review, requested by the Department for Transport, has been tasked to provide independent assurance that the vessel and harbour improvements have been correctly specified and value engineered as appropriate.
- 2.3 This review, associated report and conclusions reached by the undersigned, have been based almost entirely on the study of previous studies, other documentation and drawings. A detailed record of all documents studied for the purpose of this review is listed in Appendix A to this report.
- 2.4 The route from the mainland to the Isles of Scilly is unique. The Isles of Scilly are exposed to Atlantic swell and wind and the weather is unpredictable and can change very quickly. The many reefs and strong tidal flows can make navigation hazardous as the many historic and recent wreck sites confirm. These special transport requirements, together with the relatively shallow water at the terminal ports dictate a route specific design solution.
- 2.5 A number of significant shortcomings and deficiencies effecting operations at the terminal ports had been previously identified. These deficiencies, generally applicable to both locations, included:
 - 2.5.1 Restricted freight handling facilities and associated congestion on the quays
 - 2.5.2 Conflict between passengers and freight movements with safety issues
 - 2.5.3 Poor passenger terminal facilities and inadequate port security
 - 2.5.4 Quay facilities exposed to adverse weather conditions and inadequate for less able and disabled passengers
 - 2.5.5 Port facilities essentially tidal due to shallow water with restricted shipping access at certain states of the tide.
- 2.6 The proposed improvements at St. Mary’s and Penzance, although not addressing the depth of water at the berth, include positive improvements in all other deficient areas.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

2. EXECUTIVE SUMMARY (Continued)

- 2.7 When considering the proposed project solution and any alternative proposals, it was evidently important for the “Route Partnership” to focus on the principal objective; that of maintaining an efficient, cost effective and user-friendly year-round passenger/freight link between the Isles of Scilly and the mainland. It was also inappropriate to consider the terminal ports and vessel or vessels in isolation.
- 2.8 The selection of the “Preferred Option”, relatively low cost port developments and the provision of a new purpose-built passenger freight vessel, was made in 2004 following study of alternative proposals and consultation. This “Preferred Option” was then taken forward to the “Major Scheme Bid” involving detailed investigations and development of final design solutions. It is apparent that “Value Engineering” principals were adopted for the selection of the “Preferred Option” with regard to the harbour development selection, both St Mary’s and Penzance being selected using an evaluation matrix that considered benefits, disadvantages and costs.
- 2.9 The new combined passenger/freight vessel, although addressing the majority of the requirements identified and, in addition providing the distinct improvement of a year round passenger service, it cannot be regarded as a “Step Change” from Current provisions. It is evident however that the selection of the “Preferred Option” was cost driven and proceeded on the basis of maintaining an efficient, cost effective and user-friendly passenger/freight link between the Isles of Scilly and the mainland.
- 2.10 While the proposed new vessel is designed to operate on a similar basis to that envisaged when the “Scillonian III” entered service in 1977, numerous improvements have been included to improve efficiency of operation and passenger comfort. This would appear to be indicative of influence by the operators of the current service in the early stages of the decision making process and there invaluable experience of both the route and operational requirements.
- 2.11 “Value Engineering” principals would appear to have been adopted in the development of the proposed combined passenger/freight vessel, numerous options being evaluated on a benefit against cost basis. The project solution proposed appears to meet the identified route requirements with sufficient surplus capacity to cater for possible increase in demand during the projected service life.
- 2.12 The final stages of the design selection process appear to have not benefited from operator input. If the project is to proceed, it is essential than an operator is appointed as soon as possible and take over the responsibility of “fine tuning” the vessel and quay arrangements to suit the specific operator needs they would be best equipped to identify. The appointment of an operator before vessel completion is also essential as a proportion of the statutory certification required is operator specific.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

3. THE ISLES OF SCILLY ROUTE

- 3.1 The Isles of Scilly are made up of 48 islands and numerous rocky outcrops, covering an area of approximately 10 miles by 7 miles and lying between 21 and 31 miles WSW of Lands End. Only six islands are inhabited; these being St Mary's, St Martin's, Tresco, Bryher, St Agnes and Gugh.

The largest island is St. Mary's, this being the location of the principal island port at Hugh Town.

- 3.2 The Isles of Scilly are exposed to Atlantic swell and wind. The weather can be very unpredictable and can change very quickly.

The many reefs and strong tidal flows can make navigation hazardous as the many historic and recent wreck sites confirm

- 3.3 The offshore resident community on the Isles of Scilly is not self-sufficient and is totally reliant on an effective link to the mainland to supply food, fuel and other commodities and also to deliver the many tourists required to support the main island industry.

- 3.4 Air transport links to the islands are maintained by a helicopter service from West Cornwall to St Mary's and Tresco and a limited fixed wing service to the small airport on St Mary's from a number of mainland destinations. As the airport is small and cannot accommodate larger aircraft, sea transport remains the island main link with the mainland.

- 3.5 The sea link is currently maintained and operated on a commercial basis by the Isles of Scilly Steamship Company Limited. They currently operate two vessels; one passenger vessel operating seasonally and a cargo vessel providing a year round freight service.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

4 PROJECT DEVELOPMENT

The following project development/evolution process has been established and confirmed by the study of the Reference Document included in Appendix I to this report. References to specific documents in Appendix I are indicated by the indexed number with that Appendix in brackets {*/*} within the text of this section:

- 4.1 The “Route Partnership” was created in 2003 following publication of reports including “Moving On” Transport Strategy for the Isles of Scilly, Council of the Isles of Scilly, February 2003 {A.1} and its aim was to address problems facing transport links between mainland and the Isles of Scilly in a coordinated manner.

4.2 **Stage 1 (2004)**

Technical investigations undertaken by Penwith District Council (Penzance) and Council of the Isles of Scilly (St Mary’s) leading to development of a number of ‘options’ for the development of port/harbour facilities at the route terminals.

Numerous options were initially identified for Penzance, these being reduced to a short-list of three for “Major Scheme Bid” purposes. Similarly numerous options were identified for St Mary’s and a short-list of four taken to Public Consultation on the Isles of Scilly. One option was rejected by the public consultation process, this leaving three to take forward to the “Major Scheme Bid.

Hart Fenton {A.3} considered vessel options in terms of capital and operating costs and the conclusions from these studies were taken forward to the “Major Scheme Bid.”

4.3 **Major Scheme Bid (Submitted July 2004)**

This process considered combinations of harbour and vessel options and identified which combination gave the best cost/benefit ratio, the combination selected being designated “**The Preferred Option**”

The “Preferred Option” selected at this stage being relatively low cost developments at St Mary’s and Penzance and a combined Passenger/Freight vessel.

4.4 **Stage 2 (2005)**

Further survey work was undertaken for the Department for Transport (DfT) in 2005, this designated the “Stated Preference Survey.” Burness Corlett – Three Quays (BCTQ) were commissioned to undertake outline development of the proposed combined passenger/freight vessel {B.3} and to ‘test’ and ‘update’ the Hart Fenton {A.3} conclusions.

Following this further study, the “Preferred Option”, established in January 2006, remained the same as that established in 2004 (low cost developments at St Mary’s and Penzance and a combined Passenger/Freight vessel)

Harbour revision order applications were submitted at this stage for both harbours based on the “Preferred Option.”

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

4 PROJECT DEVELOPMENT (Continued)

4.5 Stage 3 (2006)

Marine Consultants (BCTQ) undertook design development of the combined passenger/freight vessel, this concluding with the issue of a Tender Specification for issue to prospective shipbuilding contactors. {B.47}

4.6 Current phase (31 March 2008 onwards)

Birse Coastal together with sub-consultants Hyder and Trewins developed design specifications and planning applications for Harbour Developments.

Marine Consultants (BCTQ) provided client advice through first tender and subsequent preparation of specifications for subsequent re-tender.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

5. PENZANCE ROUTE TERMINAL

5.1 EXISTING SHORT-COMINGS AND PROBLEMS IDENTIFIED

- 5.1.1 Freight storage and handling facilities on the North Arm of the Wet Dock are currently very restricted.
- 5.1.2 Freight storage and handling facilities on the southern side of the Wet Dock and on Lighthouse Pier are currently very restricted.
- 5.1.3 Freight handling and temporary storage on the quays and subsequent congestion creates potential conflict with, and restricts access by, other port users.
- 5.1.4 Traffic congestion as a result of commercial vehicles making deliveries of freight to the quay and direct to the vessel is perceived to be a problem.
- 5.1.5 When engaged on a combined passenger/freight service, there is a conflict between passenger transfer operations and freight operations on loading/discharging the “Scillonian III”.
- 5.1.6 Access for less-able and disabled passengers is currently poor, the angle of the simple gangways provided varying dependant upon the state of the tide.
- 5.1.7 Passenger facilities are currently very poor; there being no dedicated passenger terminal on the quay adjacent to the vessel, a small waiting room being the only provision.
- 5.1.8 Port security and the control of access to passenger and freight transfer areas are inadequate.
- 5.1.9 The exposed location on Lighthouse Pier has occasionally resulted in overtopping by heavy seas under certain prevailing weather conditions.
- 5.1.10 Penzance Harbour is essentially tidal, having no deep-water berths, and larger vessels would generally ground at low water spring tides. This also applies generally to the approaches to Penzance, as Mounts Bay is relatively shallow, and provision of a deep-water berth could also require the provision of a dredged channel.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

5. PENZANCE ROUTE TERMINAL (Continued)

5.2 PROPOSED HARBOUR IMPROVEMENTS

The improvements proposed to provide terminal facilities for the Isles of Scilly Link are detailed within the reference documents studied during the compilation of this report and are not duplicated within this section, the following being restricted to a brief outline summary only.

- 5.2.1 Reclaim land on the southern side of the existing South Pier and construct a new sea wall. This land reclamation/sea wall is proposed to extend from the eastern side of Jubilee Pool eastwards to the existing knuckle in the South Pier located south of the Wet Dock entrance gates.
- 5.2.2 Construct an extension to the north eastern end of Lighthouse Pier to provide a sheltered berth for the proposed new combined passenger/freight vessel.
- 5.2.3 Install rock armour to protect and reinforce the seaward side of the existing South and Lighthouse Piers. The new rock armour to be installed between eastern end of the new sea wall section (5.2.1 above) and the northeastern extremity of the new Lighthouse Pier extension.
- 5.2.4 Construct a new Passenger Terminal at the western end of the reclaimed land detailed above together with a designated secure passenger transit route to the vessel.
- 5.2.5 A mobile and height adjustable passenger boarding ramp is to be provided on the quay.
- 5.2.6 New freight terminal, handling and storage facility to be constructed adjacent to the Passenger Terminal on the reclaimed land to the south of the existing South Pier.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

5. PENZANCE ROUTE TERMINAL (Continued)

5.3 EVALUATION OF PROPOSALS

- 5.3.1 The proposal addresses the current restricted freight handling on the North Arm of the Wet Dock with the provision of a dedicated handling/storage area closer to the vessel berth on the south side of the wet dock.
- 5.3.2 The security of the freight handling will be greatly improved, all handling and temporary stowage to be in a secure area.
- 5.3.3 The provision of a freight terminal on the quay, with the capability of accepting and storing consignments prior to vessel loading and following discharge, would allow commercial vehicle deliveries and collections to be scheduled over a greater period of time and reduce perceived traffic congestion at peak periods
- 5.3.4 Dedicated passenger and freight transit routes minimise the existing conflict and greatly reduces associated risks.
- 5.3.5 The proposed development, on an area of foreshore only visible from the vicinity of Jubilee Pool and inaccessible at high tide, minimises the environmental impact on the Penzance community.
- 5.3.6 The dedicated Passenger Terminal provides a significant improvement on existing arrangements. The provision of a dedicated drop-off point for public transport can be utilised to provide a shuttle bus link from the Rail Station and adjacent car/coach park and further reduce perceived road traffic congestion.
- 5.3.7 The provision of an adjustable and portable passenger access ramp addresses the current shortfall in boarding provisions for less-able and disabled passengers.
- 5.3.8 The proposed development to the south of the existing Wet Dock is located to cause minimum disruption to other port users and to have no adverse impact on other proposed long term harbour development plans. The removal of freight facilities from the North Arm would free this area for other much needed development.
- 5.3.9 The proposal will provide significant benefit to other commercial harbour users by removing the freight congestion from the North Arm and releasing significant quay and landing areas for other purposes.
- 5.3.10 The proposal does not address the identified lack of deep water berthing facilities, this being excluded from the “Proposed Option” due to cost considerations.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

6. ST MARY’S ROUTE TERMINAL

6.1 EXISTING SHORT-COMINGS AND PROBLEMS IDENTIFIED

- 6.1.1 Quay frontage is limited and provides safe berthing for one larger vessel only, and this is also dependant upon tides. The current vessels ground on the berth at low water spring tides.
- 6.1.2 Freight storage and handling facilities on the existing quay are currently very restricted and in consequence freight-handling operations are extremely inefficient.
- 6.1.3 No shelter is provided for the current freight handling and temporary storage area on the quay, this often resulting in weather damage to some consignments.
- 6.1.4 Freight handling and temporary storage on the quays and subsequent congestion creates potential conflict with, and restricts access by other quay users.
- 6.1.5 Access for commercial vehicles to the quay area for loading/discharge is inadequate. This restricted access leads to continual conflict between vehicle and pedestrian use of the quay.
- 6.1.6 When engaged on a combined passenger/freight service, there is a conflict between passenger transfer operations and freight operations on loading/discharging the “Scillonian III”.
- 6.1.7 Access for less-able and disabled passengers is currently poor, and the angle of the simple gangways provided, varies according to the state of the tide.
- 6.1.8 Passenger facilities are currently very poor; there is no dedicated passenger terminal on the quay adjacent to the vessel, a small waiting room within the Harbourside building being the only provision.
- 6.1.9 Port security and the control of access to passenger and freight transfer areas are inadequate.
- 6.1.10 The exposed location on quay has occasionally resulted in overtopping by heavy seas under certain prevailing weather conditions.
- 6.1.11 Shallow water at the berth and the significant tidal range prevent the safe berthing of larger vessels and specifically vessels not designed to ground on a regular basis.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

6. ST MARY'S ROUTE TERMINAL (Continued)

6.2 PROPOSED HARBOUR IMPROVEMENTS

The improvements proposed to provide terminal facilities for the Isles of Scilly Link are detailed within the reference documents studied during the compilation of this report and are not duplicated within this section, the following being restricted to a brief outline summary only.

- 6.2.1 Construct new sea wall and reclaim land to the west of the existing pier creating a new vehicle access route between Hugh Town and Rat Island
- 6.2.2 The existing pier between Hugh Town and Rat Island is to be re-designated as a pedestrian only route.
- 6.2.3 The existing pier beyond Rat Island to be extended northwards increasing the length of the berth to accommodate the proposed new combined passenger/freight vessel.
- 6.2.4 The pier north of Rat Island, as extended, to be increased in breadth with the construction of a new sea wall and reclaimed land to the west.
- 6.2.5 New freight handling/storage facility to be constructed on the reclaimed land north of Rat Island.
- 6.2.6 Enhanced passenger terminal facilities to be created within the ground floor areas of the existing Harbourside Hotel building.
- 6.2.7 A mobile and height adjustable passenger boarding ramp is to be provided on the quay.
- 6.2.8 New steps to be created at the northern end of the extended pier to provide alternative small craft embarkation facilities.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

6. ST MARY'S ROUTE TERMINAL (Continued)

6.3 EVALUATION OF PROPOSALS

- 6.3.1 The area selected for the development of Terminal Facilities is located in an area where it will have the least environmental impact on the residents of Hugh Town.
- 6.3.2 The proposal addresses the current restricted freight handling on the pier with the provision of a dedicated freight handling/storage area closer to the vessel berth.
- 6.3.3 The security of the freight handling will be greatly improved, all handling and temporary stowage to be in a secure area.
- 6.3.4 The provision of an enclosed building for freight handling and temporary storage will address the issue of weather damage to items awaiting collection from the quay.
- 6.3.5 The provision of a freight terminal on the quay, with the capability of accepting and storing consignments prior to vessel loading and following discharge, would allow commercial vehicle deliveries and collections to be scheduled over a greater period of time and reduce perceived traffic congestion at peak periods
- 6.3.6 The segregated passenger and vehicle access routes minimise the existing conflict and greatly enhances safety.
- 6.3.7 Dedicated passenger and freight embarkation routes from terminal buildings to the vessel will minimise the existing conflict and greatly reduce associated risks.
- 6.3.8 The provision of Passenger Terminal facilities on the quay is a significant improvement on existing arrangements.
- 6.3.9 By providing an adjustable and portable passenger access ramp, the current shortfall in boarding provisions for less-able and disabled passengers is addressed.
- 6.3.10 The creation of the broader pier with an effective sea wall will provide a safer berth for all port users and restrict the risk of overtopping by heavy seas in adverse weather conditions.
- 6.3.11 The proposal does nothing to address one of the principal route deficiencies identified by Fisher {A.1}, there being only a minimal improvement of water depth at the berth. The continuing draught restriction limits harbour use to smaller vessels and to those specifically designed to lie aground alongside at low tide.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.1 EXISTING PROVISIONS

The existing service, operated by the Isles of Scilly Steamship Company Limited, is currently maintained using two vessels. The “Scillonian III”, a passenger vessel with a limited freight carrying capacity, is operated seasonally from about April to October and the “Gry Maritha”, a dedicated general cargo vessel, operates a year-round freight service with limited (12) passenger carrying capacity.

7.1.1 SCILLONIAN III

The vessel was built in North Devon in 1977 and delivered to the Isles of Scilly Steamship Company Limited, having been designed and purpose built to service the route between Penzance and St Mary’s, Isles of Scilly.

General Particulars:

Length Overall:	68.00 Metres
Breadth:	11.25 Metres
Summer Load Draught:	2.89 Metres
Passenger Capacity Total:	600
Passenger Capacity (Winter):	480
Cargo/Freight Capacity:	50 Tonnes Approx
Installed Engine Power:	1795 kW
Maximum Service Speed:	15 Knots

The vessel operated a combined passenger freight service until about 1990 when, for operational reasons, a second dedicated freight vessel was put into service. Since that date the vessel has been employed mainly for the carriage of passenger and occasional freight consignments, the latter generally when the dedicated freight vessel was unavailable. This operation has enabled the operators to lay the vessel up in Penzance during the winter months.

The vessel is fitted with a deck crane for loading and discharge purposes, there being no cranes installed or available on the quays at the route terminal ports.

The vessel is now nearing the end of its service life. It is non-compliant with applicable EU Directives on Passenger Vessels currently being phased in and further re-fitting to achieve compliance is probably cost prohibitive.

Previous investigations and reports referred to and listed in Appendix I to this report, identified that the “Scillonian III” would be unable to operate commercially beyond 2014.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.1 EXISTING PROVISIONS (Continued)

7.1.2 GRY MARITHA

The “Gry Maritha” was built in Norway in 1981 as a General Cargo/Pallet Carrier vessel for operation on a Coastal and Inter-Fjord Service. The vessel was purchased by the Isles of Scilly Steamship Company Limited in about 1989 and entered service in or about 1990.

General Particulars:

Length Overall:	40.34 Metres
Breadth:	9.80 Metres
Summer Load Draught:	3.65 Metres
Passenger Capacity Total:	12
Cargo/Freight Capacity:	350 Tonnes Approx
Installed Engine Power:	480 kW
Maximum Service Speed:	9 Knots

The vessel currently provides an all-year-round freight service with three return sailings from Penzance each week. The vessel can carry up to 12 passengers, a small passenger compartment being provided within the forward accommodation superstructure.

The vessel currently carries very few passengers as the passage is slow and the motion at the extreme forward end of the vessel is extremely uncomfortable.

The vessel is fitted with a deck crane and a pallet hoist for loading and discharge purposes, no cranes being installed or available on the quays at the route terminal ports.

The vessel is nearing the end of its service life and some form of replacement is required. Previous investigations and reports referred to and listed in Appendix I to this report, identified that the “Gry Maritha” would be unable to operate commercially beyond 2009.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.2 OPERATIONAL REQUIREMENTS

7.2.1 General:

The sea transport link is necessary for the supply of freight to the Isles of Scilly, it being totally impractical for heavy and bulky items to be delivered by air transport.

A full passenger service is generally required during the summer months only but it is essential, for island residents, that passenger facilities are available all year round.

Early studies and island public consultations generally indicated that a winter sea passenger service would be used if it were available provided current passenger comfort issues were addressed with a new vessel.

7.2.2 Passenger Capacity:

The existing vessel, “Scillonian III” has a maximum capacity (summer) of 600 passengers and has only operated at this level on the occasional day at the peak of the holiday season or when air transport links are suspended due to prevailing weather conditions.

There are no current records for winter operation, as the “Scillonian III” has not operated on a regular basis during winter months since the freight vessel “Gry Maritha” entered service in about 1990

Previous studies and analysis of statistical data, contained within applicable reference documents as listed in Appendix I to this report, have identified a required passenger capacity of between 400 and 500 per day this allowing for growth in line with population trends.

7.2.3 Passenger Comfort

The main reason for passenger discomfort on any vessel is seasickness, this being induced by the ship motions in a seaway and the time period over which these motions are endured. To reduce the onset of seasickness it is therefore necessary to reduce the ship motions or reduce the time the vessel is at sea.

The motion of a ship at sea can be simplified as pitching, heaving and rolling; pitching longitudinally as the bow lifts and falls in waves, heaving as the vessel lifts bodily in heavy seas and rolling from side to side when travelling at an angle to the oncoming seas.

Motions in given sea conditions generally reduce with increase in vessel size, a larger vessel of greater mass will be less likely to suffer from heaving. Increasing vessel length can reduce pitching, and rolling can be limited by designing active or passive stabilization systems into the vessel.

Vessel speed is also another factor. Increasing speed will reduce the time required for the crossing and thus reduce the period over which the passengers on board have to tolerate the vessel motions. Increased speed in a conventional vessel however tends to increase the accelerations due to pitching so is not a simple solution.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.2 OPERATIONAL REQUIREMENTS (Continued)

7.2.4 Freight Type:

The sea freight service is currently the “lifeline” to the Isles of Scilly and has to be maintained for the supply of all the island community’s needs including fuel. Any supply vessel would have to be capable of transporting consignments varying from fresh food for local stores, hardware, furniture, building materials and fuel for domestic heating, and road and inter-island sea transport.

The service is required to transport items designated as “Dangerous Goods”.

Numerous freight studies have been conducted and concluded that full containerisation of the island supply freight service is not a practical solution due to handling restrictions and multiple off-island freight destinations. Containerising the general freight and supplies carried would involve increased handling of individual items and naturally increase freight charges.

7.2.5 Freight Capacity:

Study of reports prepared in association with previous investigations indicate an annual freight capacity requirement of at least 12,000 tonnes, 88 % of this being freight imported into the islands.

7.2.6 Freight Handling:

There are currently no fixed or mobile cranes on the quay at St. Mary’s and the provision of such is not included the proposed harbour development summarised in section 6 of this report. This also applies to the proposals for Penzance although the arrangement of the port is such that a mobile crane could be utilised if required.

On the basis of the above lack of shore-side handling provisions, any vessel engaged on the Isles of Scilly Supply Route would need the capability of self loading and self discharging of freight.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.3 DESIGN LIMITATIONS

The required area of operation and the designated route between Penzance and St Mary's imposes restrictions upon the design and selection of suitable vessels.

- 7.3.1 The Isles of Scilly are in an exposed location and open to the full force of Atlantic Ocean weather systems.
- 7.3.2 The exposed location in the shallow water on the continental shelf can result in very rough sea conditions, ocean swells of relatively long wavelengths generally cause seas of shorter wavelength and increased wave height as the wave energy dissipates in shallow water. Any vessel employed on the route would require good sea keeping capabilities.
- 7.3.3 The waters on the approaches to Penzance in Mounts Bay and those around the Isles of Scilly are relatively shallow, many reefs in the Isles of Scilly archipelago being hazardous to shipping as history of shipwrecks in the area adequately confirms. The route itself imposes a draught restriction on any vessel selected.
- 7.3.4 There is insufficient depth of water at St Mary's for any passenger or freight vessel to lay afloat alongside the proposed extended berth at all states of the tide. It is therefore necessary, with harbour facilities currently proposed, for any vessel operating the route to be capable of grounding on the berth and to continue passenger/freight discharge and loading operations while lying aground.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.4 PROPOSED COMBINED PASSENGER/FREIGHT VESSEL

Details of the proposed new vessel are contained within the Tender Specification issued by Cornwall County Council, the latest issue of which is dated March. These particulars are summarised below.

7.4.1 General Particulars and Description:

Length Overall Hull	79.0 Metres
Breadth Moulded.	14.0 Metres
Depth Moulded to Main Deck	4.6 Metres
Depth Moulded to Forecastle Deck	7.4 Metres
Design Draft Moulded. Maximum	2.9 Metres

The ferry is to carry 450 passengers under cover in air-conditioned accommodation and additional exterior seating to be provided on the Boat Deck aft. Passenger facilities are to be suitable for a passage time of approx 2.5 hours. The ferry to be designed to carry total summer cargo deadweight of 145 tonnes comprising mixes of general and liquid cargoes. The ferry is also to be arranged with built in tanks for the carriage of oil fuel cargo and kerosene.

The vessel is to have sufficient hold capacity and clear cargo deck area to allow the carriage of a wide range of general cargo including 10 ft containers, pallets and individual items such as cars, roof trusses and gigs etc. Minimum clear deck areas to be provided as follows; Open cargo deck forward 210m² including hatch cover, Main tween deck hold 290m² x 2.3m clear height, lower holds 100 m² x 2.6m clear height. Cargo handling systems and passenger access arrangements are to take full account of the high tidal range at Penzance, Cornwall and St Mary's, Isles of Scilly. The vessel is to have a minimum service speed of 15.5 knots in BF 3 conditions and to be suitable for slow speed, economical winter service. The vessel is to be capable of taking the ground on a regular basis. Ferry to be designed to carry dangerous goods on the Forecastle Deck forward, in the hold and bulk kerosene in a tank forward. A Document of Compliance for the Carriage of Dangerous Goods to be obtained from the Flag Authority.

The hull, machinery and electrical installations to be built and installed under special survey in accordance with the Rules and Regulations of a major European Classification Society which is a member of IACS, with a classification equal to Lloyd's Register of Shipping notation:

+100A1 General Cargo/Passenger Ferry, 'Bottom Strengthened for Loading and Unloading Aground', +LMC, UMS, EP, LA, PCAC 1/3

All lifting appliances including lift, cargo crane and pallet hoists etc to be built to comply with the requirements of Lloyds Register Code for Lifting Appliances in a Marine Environment, or equal. Ferry to be registered in the United Kingdom, port of registry Penzance and to comply with the requirements of the U.K. Maritime & Coastguard Agency (MCA), the Flag Authority, for an EU Class B passenger ferry. A multiple passenger certificate to be obtained to apply to different operational requirements
Standard Summer: 450 Peak Summer: 600, winter: 150.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.5 EVALUATION OF PROPOSALS

7.5.1 The combined passenger/freight vessel proposed has a nominal summer passenger capacity of 450 with the facility to increase this to 600 with exterior seating at peak holiday periods. This satisfies the identified requirement including a margin for growth. This passenger capacity is similar to that the “Scillonian III” currently provides.

7.5.2 The proposed operating speed of the new vessel (15.5 knots) is similar to the original designed service speed of the “Scillonian III” there being no significant reduction in the anticipated passage time between the mainland and the islands.

7.5.3 The proposed replacement vessel is of greater dimensions than the “Scillonian III” and should display improved sea keeping characteristics. The increase in length will tend to reduce pitching and increased displacement will have a beneficial influence on heaving. The new vessel is to be fitted with fin stabilizers to reduce rolling.

All passenger accommodation areas on the proposed new vessel are located within the after two thirds of length, this being the area where accelerations due to pitching are at a minimum

The above dimensional factors, together with improved on board facilities, should ensure a noticeable improvement in passenger comfort above that currently experienced aboard the “Scillonian III”.

7.5.4 The arrangement of the proposed new vessel has been developed to facilitate the safe stowage of the general freight as required to maintain the island supply service. The vessel is also provided with dedicated cargo tanks for the supply of fuel to the islands.

7.5.5. The cargo capacity of the proposed new combined passenger/freight vessel, 145 tonnes total cargo deadweight, is adequate to meet the current demand of approximately 250 tonnes per week with an adequate margin for identified peak periods and future growth.

7.5.6 The combined passenger/freight vessel provides the flexibility to increase the frequency of freight deliveries to the islands should this be desirable to cope with future peak demand. Implementation of such a schedule would result in a lesser quantity of freight being carried on each voyage compared with that now delivered by “Gry Maritha”. Any reduction in the freight loaded per sailing will lead to a corresponding reduction in loading and discharge times at the berth.

7.5.7 The proposed cargo handling options, two deck cranes or one deck crane and two pallet hoists, provide the required loading and discharging facility.

7.5.8 The possibility of increasing the frequency of freight deliveries to the island from three to a maximum of six per week would facilitate greater flexibility of operation that could provide a significant improvement on the current service.

7.5.9 The vessel design has been developed for safe operation within the limits dictated by the route. The vessel has a relatively shallow operating draught of 2.90 metres (similar to that of “Scillonian III”) and is of adequate strength to ground on a regular basis.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.6 ALTERNATIVE PROPOSALS – TRYTHALL SHIPPING

Full details of the alternative proposals from Trythall Shipping are adequately documented and will not be reproduced here in detail. The basic proposal, as obtained by reference to the appropriate documents listed in Appendix I, can be summarised as follows:

- 7.6.1 This alternative proposal is essentially to maintain segregated passenger and freight services; replacing the “Gry Maritha” with a similar small general cargo vessel and operating a high-speed passenger only service for the holiday season.
- 7.6.2 The proposal also includes a remote (off quay) freight terminal and partial containerisation of the cargo and freight supplies to the islands.
- 7.6.3 The proposed alternative high-speed passenger only vessel would be of a SWATH type (Small Water-plane Area Twin Hull), have an operational speed in the order of 25 knots and an associated crossing time of just over 1.5 hours.
- 7.6.4 The proposed vessel “Cloud X” (currently available second hand), originally certificated for the carriage of 350 passengers, is of aluminium alloy construction, powered by twin gas turbines, operates at a draught of approximately 3.50 metres and is not designed to ground at the berth.
- 7.6.5 The proposed vessel would operate from Albert Pier in Penzance with new passenger terminal facilities on the pier.
- 7.6.6 The proposed vessel “Cloud X” is currently out of service and laid up

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.7 EVALUATION OF ALTERNATIVE PROPOSALS

Freight Service:

- 7.7.1 Operating a dedicated freight only vessel, as currently provided by the “Gry Maritha”, provides little scope for improvement on the current service as scheduling more than three sailings per week would not be practical.
- 7.7.2 Providing a remote off-quay freight facility for containerisation of freight would involve increased handling of individual small consignments. A previous detailed freight study, the report associated with which is listed in Appendix I as {B.18}, has concluded that total containerisation of freight is not suitable for the requirements of this route and would increase cargo handling and costs involved.

Due to the diverse nature of the cargo and island supplies carried, and the need to tranship small consignment to inter-island vessels, it has previously been concluded correctly that a freight handling/storage facility on the quay adjacent to the vessel is the preferred and most cost effective option.

- 7.7.3 It should be relatively easy to obtain a small dedicated freight vessel as a replacement for the “Gry Maritha”, second-hand tonnage is available on the open market to maintain the existing service.

Any replacement vessel would be required to have improved passenger accommodation, preferably located aft in the vessel and not at the extreme forward end as in “Gry Maritha”

Passenger Service:

This section will also include comment and observation with regard to the use of Albert Pier and the additional harbour works necessary to accommodate the proposed vessel.

- 7.7.4 The proposed “Cloud X” Swath vessel operating from Albert Pier could provide a number of advantages:
- 7.7.4.1 The operational speed of 25 knots would allow at least two return crossings per day and departures could be scheduled to coincide with passenger train arrivals at the railway station.
 - 7.7.4.2 Departure from Albert Pier would provide direct pedestrian links with the railway station and main port car park.
 - 7.7.4.3 The shorter crossing time would enable day trippers more time on the islands.
 - 7.7.4.3 The reduced crossing time would reduce passenger discomfort due to seasickness.
 - 7.7.4.5 Operation from Albert Pier would free South Pier for freight vessel operations.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

7. VESSEL FOR PASSENGER AND FREIGHT TRANSPORTATION

7.7 EVALUATION OF ALTERNATIVE PROPOSALS

Passenger Service: (Continued)

7.7.5 The proposed “Cloud X” Swath vessel operating from Albert Pier would also produce a number of disadvantages:

7.7.5.1 This vessel would provide a “summer only” service and does not address the islanders’ identified desire for an all-year-round service as previously identified. {A.1}

7.7.5.2 The road surface on Albert Pier is in poor condition and considerable refurbishment would be required to provide safe access.

7.7.5.3 The pier is narrow and currently used for storage of small craft and for other harbour users. Improvement and change of use in some areas would be required to provide terminal access by motorised transport for less-able and disabled passengers. This could result in conflict with other port users.

7.7.5.4 The depth of water available at the proposed berth in Penzance is insufficient for the vessel to remain afloat at all states of the tide and considerable and costly dredging operations will be required as it would not be safe for this vessel to ground at low water.

7.7.5.5 No information has been provided with regard to the foundations for Albert Pier at the proposed berth and additional piling and under-pinning may be necessary to accommodate the removal of the adjacent seabed during dredging operations.

7.7.5.6 The depth of water available at the proposed berth in St Mary’s is insufficient for the vessel to remain afloat at all states of the tide. Considerable and expensive dredging operations will be required or the construction of a further considerable pier extension or berthing pontoon to provide safe moorings at all times.

Passage schedule adjustments to ensure the vessel does not ground on the existing seabed profile may be possible but this involves a high degree of risk, which is considered unacceptable for a public passenger service on the specified route.

7.7.5.7 Although previously certificated by the US Coastguard, there is no confirmation that “Cloud X” would comply with current applicable EU Directives for a Class B Passenger Vessel as required by the Maritime and Coastguard Agency for the issue of a Passenger Certificate.

Until such confirmation has been established and verified by the UK statutory authorities, this vessel cannot be considered as suitable for operation.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

8. VALUE ENGINEERING

- 8.1 Analysis of the route to the Isles of Scilly and the identified requirements to maintain year-round passenger and freight services together with geographical, environmental and climatic factors, there are two basic options for route development.
- 8.1.1 Complete major harbour developments at Penzance and St Mary's to provide deep-water port facilities accessible at all states of the tide allowing access by vessels of alternative design and not limited to those ships capable of grounding on a regular basis.
- Or
- 8.1.2 Completing minimal harbour development works at Penzance and St Mary's, sufficient to address the identified access and safety issues, and design/provide a new combined passenger/freight vessel capable of operating from the tide restricted facilities provided.
- 8.2 "Value Engineering" or arriving at the best compromise solution to the identified need in the most cost-effective manner, appears to have been a major driving factor taken into account at all stages of the project development
- 8.3 The final "Preferred Option" of minimal harbour works at Penzance and St Mary's with a new combined passenger/freight vessel was selected on a cost or "value for money" basis while ensuring that the principal aim of the project, that of maintaining a year round efficient and user-friendly passenger/freight link between the Isles of Scilly and the mainland was achieved.
- 8.4 After fully considering initial building and subsequent operating costs, it was firmly established that to maintain an all-year-round service, the provision of a single combined passenger/freight vessel would be more cost effective than the supply and operation of two, one dedicated freight vessel and one dedicated passenger vessel.

Although the detailed analysis of costs was not included within the preparation of this report, (refer to report paragraph 1.9) it is the opinion of the undersigned that the above conclusion was correct.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

9. CONCLUSIONS

- 9.1 When considering the proposed project solution and any alternative proposals, it is important to focus on the principal objective; that of maintaining an efficient, cost effective and user-friendly passenger/freight link between the Isles of Scilly and the mainland. Other benefits that could be gained for communities around the mainland route terminal should be incorporated wherever possible but these must be considered secondary to the needs of the offshore community on the Isles of Scilly.
- 9.2 The design and selection of a vessel or vessels to maintain the route link between Penzance and St Mary's is inexorably linked to the port facilities available at the route terminal ports. It is therefore impractical and totally inappropriate to consider the vessel proposals in isolation. The selection of a "Project Solution" has therefore naturally had to encompass vessel provision and route terminal port facilities.
- 9.3 The selection of the "Preferred Option", relatively low cost port developments and the provision of a new purpose-built passenger freight vessel, was made in 2004 following study of alternative proposals and consultation. This "Preferred Option" was then taken forward to the "Major Scheme Bid" involving detailed investigations and development of final design solutions

After fully considering initial building and subsequent operating costs, it was firmly established that to maintain an all-year-round service, the provision of a single combined passenger/freight vessel would be more cost effective than the supply and operation of two, one dedicated freight vessel and one dedicated passenger vessel.

Although the detailed analysis of costs was not included within the preparation of this report, (refer to report paragraph 1.9) it is the opinion of the undersigned that the above conclusion was correct.

- 9.4 It is apparent that "Value Engineering" principals were adopted for the selection of the "Preferred Option" with regard to the harbour development selection, both St Mary's and Penzance being selected using an evaluation matrix that considered benefits, disadvantages and costs.

Apart from the failure to provide deep-water berthing facilities for larger vessels, the proposed harbour developments at Penzance and St Mary's address all shortcomings identified, the new facilities being designed specifically to satisfy the anticipated freight and passenger traffic.

- 9.5 The "Preferred Option" selected in 2004 was assessed by the Route Partnership to be the best "affordable" option to ensure that a reliable sea passenger/freight service to the Isles of Scilly was maintained for the future. The option selected effectively satisfies the principal project requirements while attempting to keep initial investment and future operational costs to a minimum.

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

9. CONCLUSIONS

9.6 It is clear from the reports issued in connection with preliminary studies in 2003/4 that the proposed re-developments at St Mary's and Penzance were selected to suit a combined passenger/freight vessel operated in a similar manner to the current service. It is also clear that many decisions reached at the early stages of the project development reflected input from the current vessel operators, the Isles of Scilly Steamship Company Limited, who were part of the Route Partnership organisation at that time. The wealth of experience gained by the Isles of Scilly Steamship Company Limited during many years maintaining the sea link to the islands provided invaluable route-specific knowledge to the Route Partnership not available from other sources.

9.7 Competition from other operators was not envisaged when the "preferred solution" was determined, the combined passenger/freight vessel having the capacity to service all identified route transport requirements. The route terminal facilities are proposed on the basis of handling freight and passengers from one vessel alongside the berth at any given time, being designed to best suit a single operator service

9.8 The new vessel, although addressing the majority of the requirements identified and, in addition providing the distinct improvement of a year round passenger service, it cannot be regarded as the "Step Change" recommended in the Fisher Report of 2003 {A.1}

It is evident however that the selection of the "Preferred Option" was cost driven and, as suggested in 9.1, proceeded on the basis of maintaining an efficient, cost effective and user-friendly passenger/freight link between the Isles of Scilly and the mainland.

9.9 The proposed new vessel is designed to operate on a similar basis to that envisaged when the "Scillonian III" entered service in 1977 although numerous improvements have been included to improve efficiency of operation and passenger comfort. This is also indicative of influence by the operators of the current service in the early stages of the decision making process and their invaluable experience of both the route and operational requirements.

9.10 "Value Engineering" principles would appear to have been adopted in the subsequent design development of the proposed combined passenger/freight vessel, numerous options being evaluated on a benefit against cost basis.

9.11 The final stages of the design selection process appear to have not benefited from operator input. If the project is to proceed, it is essential that an operator is appointed as soon as possible and take over the responsibility of "fine tuning" the vessel and quay arrangements to suit the specific operator needs they would be best equipped to identify. The appointment of an operator before vessel completion is also essential as a proportion of the statutory certification required is operator specific.

For and on behalf of
R & J MARITIME LIMITED



ROBERT J MEDLER
Managing Director

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

APPENDIX I

LIST OF REFERENCE DOCUMENTATION

A. GENERAL:

Cornwall County Council provided all documents listed in section A.

- A.1. “Moving On” Transport Strategy for the Isles of Scilly Council for the Isles of Scilly, February 2003
- A.2. Burness Corlett & Partners: Route Study BCP/J/7366/02, May 2003
- A.3. HF389/1404 Report prepared for Scott Wilson Kirkpatrick Hart Fenton & Co. Limited, May 2004
 - A.3.1 0571w389 Isles of Scilly, Freight Handling Capability
 - A.3.2 0581w389 Isles of Scilly, Vessel Evaluation in Relation to Seasickness
 - A.3.3 059jh389 Isles of Scilly, Replacement Vessel Speed Alternatives
 - A.3.4 055ms389 Isles of Scilly, Replacement Vessel Types
 - A.3.5 049jh389 Isles of Scilly, Replacement Vessel Operating Costs Estimates
 - A.3.6 076jh389 Isles of Scilly, Vessel Replacement Final Report and Conclusions

B. PROPOSED NEW VESSEL

Cornwall County Council provided all documents listed in section B.

- B.1 Cornwall County Council (CCC) Marine Consultant – Project Outline October 2005
- B.2 Burness Corlett; Extract from Pre-Qualification Questionnaire; notes on vessel dimensions included in CCC Project Outline
- B.3 Scillonian III Replacement, Workscope Response, Design Study Machinery and Propulsion System and Outline Specification BCP/J/7917/00 Burness Corlett – Three Quays (BCTQ), November 2005
- B.4 Fuel Consumption and passenger distribution comparisons; proposed new vessel and “Scillonian III”
- B.5 Record of correspondence BC/CCC/Isles of Scilly Steamship Company Ltd (IOSSCO) 01/11/2005 – 02/11/2005
- B.6 Copies of email correspondence (6) BCTQ/CCC; 01/11/05, 25/11/05, 28/11/05, 29/11/05, 01/12/05 & 08/12/05
- B.7 Route Partnership, IOS Link Project Appointment of Marine Consultant, Tender Invitation

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW**APPENDIX I****LIST OF REFERENCE DOCUMENTATION****B. PROPOSED NEW VESSEL (Continued)**

- B.8 CCC letter of appointment to BCTQ – 15th May 2006
- B.9 BCTQ letter of acceptance to CCC – 15th May 2006
- B.10 Email CCC/MCA/BCTQ 02/06/2006 with attached General Arrangement Drawing 917ga rev 0
- B.11 Email CCC/BCTQ 16/06/2006
- B.12 Email Scott Wilson/CCC/BCTQ 19/06/06 with attached drawings, vessels berthing at St Mary's
- B.13 Minutes of Progress Meeting at BCTQ 26th June 2006
- B.14 Minutes of meeting at MCA 26th June 2006
- B.15 Email CCC/BCTQ 27/06/2006
- B.16 Email BCTQ/CCC 29/06/2006 with attached proposed Penzance Harbour layout
- B.17 Email BCTQ/IOSSCO/CCC 30/06/2006 with attached alternative cargo/hatch arrangements
- B.18 Isles of Scilly Freight Study, MSS/J/8083 Ed 3, Maritime Sector Specialists Limited, June 2006
- B.19 Email CCC/MSS 07/07/2006
- B.20 Email BCTQ/CCC 10/07/2006 with attached crane/hatch proposals
- B.21 Minutes of progress meeting at RDA - 25/07/2006
- B.22 IOS Link Project, Berthing Study, BCP/J/8083/01 Burness Corlett – Three Quays (Southampton) Ltd., August 2006
- B.23 IOS Link Project, Vessel Speed Sensitivity Study, BCP/J/8083/01 Burness Corlett – Three Quays (Southampton) Ltd., August 2006
- B.24 Email CCC/BCTQ - 21/09/2006
- B.25 Notes from meeting IOSSCO/CCC - 10/01/2007
- B.26 Notes from meeting IOSSCO/CCC/BCTQ - 22/01/2007
- B.27 Email BCTQ/IOSSCO/CCC – 30/01/07

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW**APPENDIX I****LIST OF REFERENCE DOCUMENTATION****B. PROPOSED NEW VESSEL (Continued)**

- B.28 Emails LR/CCC/BCTQ 31/01/07
- B.29 Email BCTQ/CCC with attached diesel-electric data
- B.30 Email BCTQ/CCC 02/02/2007
- B.31 Email IOSSCO/BCTQ – 02/02/07
- B.32 Email IOSSCO/BCTQ – 02/02/07 with original message BCTQ/IOSSCO – 26/01/07
- B.33 Email IOSSCO/CCC – 05/02/07 with original message CCC/IOSSCO – 31/01/07
- B.34 Email BCTQ/CCC 07/02/2007 with attached General Arrangement 8083ga 070207 and Design Development Summary
- B.35 BCTQ Rationale & General Arrangement Concept A
- B.36 IOS Link – The Vessel: Minutes of meeting CCC/BCTQ/IOSSCO 13/03/2007
- B.37 BCTQ Rationale & General Arrangement Concept B & C
- B.38 IOS Link Vessel Design: Minutes of meeting CCC/BCTQ/IOSSCO 25/04/2007
- B.39 Email IOSSCO/CCC – 16/05/07
- B.40 BCTQ General Arrangement Drawing 8083/01/001 May 2007
- B.41 BCTQ Updated Cost Estimate May 2007
- B.42 Email IOSSCO/CCC – 07/06/07 with attached comments on GA
- B.43 BCTQ Hull Specification Rev B August 2007
- B.44 General Arrangement and Hull Specification comments October 2007
(Comments re Hull spec BCP/J/8083 Rev B 08/2007)
- B.45 BCTQ Electrical Specification Rev B August 2007
- B.46 Electrical Specification comments November 2007
(Comments re Electrical spec BCP/J/8083 Rev B 10/2007)
- B.47 Isles of Scilly Link Vessel Project – Invitation to Tender
Volume 2 Specifications Parts 1, 2, 3 & 4
Burness Corlett – Three Quays / Cornwall County Council, June 2008
- B.48 Isles of Scilly Link Vessel Project – Invitation to Tender Issue 2 March 2009

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW**APPENDIX I****LIST OF REFERENCE DOCUMENTATION****C. PROPOSED HARBOUR DEVELOPMENTS**

Cornwall County Council provided all documents listed in section C.

- C.1 Penzance Harbour Option Review
Hyder Consulting Report No. DV01104/RT/15/01
- C.2 Penzance Harbour & Promenade Proposals July 2004 Public Exhibition
- C.3 St Mary's Stage 1 - Technical Investigations and Appraisals 20/05/2004
- C.4 St Mary's Stage 1 - Summary of notes, Route Partnership Discussions 24/05/2004
- C.5 St Mary's Stage 1 - Technical Investigations and Appraisals Option Review Study
August 2004
- C.6 Isles of Scilly Link Harbour Works, Design and Build Tender Invitation Volume 3
Employers Requirements (Services and Works Contracts)
- C.7 Isles of Scilly Link Project – Security Review
December 2008
- C.8 Isles of Scilly Link – Project Development – Penzance Visualisations
Cornwall County Council, January 2009 including Halcrow Drawing
Number SK34-PZ rev 4
- C.9 Isles of Scilly Link – Project Development – St Mary's Visualisations
Cornwall County Council, January 2009 including Halcrow Drawing
Number SK15-SM rev 1
- C.10 Isles of Scilly Link Harbour ECI Works – Progress Report No 8
Birse Coastal / Cornwall County Council, January 2009
- C.11 Halcrow Technical Note ref DCSCDD dated 11/02/09 – St Mary's Freight
Building Layout
- C.12 Trewin Design Partnership, Isles of Scilly Link Harbour ECI Works
Penzance Floor Plans Sheets 1 & 2 (E-6001-PZ rev F & E-6002-PZ rev E)
- C.13 Trewin Design Partnership, Isles of Scilly Link Harbour ECI Works
St Mary's Freight Building Floor Plan (E-6001-SM rev E)
- C.14 Stratton Holborow: St Mary's Harbourside Buildings Ground Floor Plan
(P-2840.01 rev L)

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW

APPENDIX I

LIST OF REFERENCE DOCUMENTATION

D. PROPOSED ROUTE OPERATION

Cornwall County Council provided all documents listed in section D.

- D.1 Isles of Scilly Vessel Operation, Contract Notice 2008/5 251 - 336662
Scope of Services Required

E. PROPOSED ALTERNATIVE SWATH VESSEL AND BERTHING ARRANGEMENTS

Cornwall County Council provided document numbers E.1 to E.13 listed in section E.
Trythall Shipping provided the further documents in this section numbered E.14 to E.20

- E.1 Hart Fenton & Co Ltd Report HF 389/1404 Ref 055ms389 dated 7th May 2004
Isles of Scilly Replacement Vessel Types
- E.2 Met Office; Assessment of Significant Wave Heights in UK Waters
- E.3 Trythall Shipping:
- E.3.1 Alternative Proposal 28th July 2008
- E.3.2 Letter to Cornwall County Council 21st August 2008
- E.3.3 letter to Councillor J Mepstead 12th September 2008
- E.4 Email CCC/BCTQ 25th September 2008
- E.5 Email Trythall/CCC 05/10/2008
- E.6 Email CCC/BCTQ 06/10/2008
- E.7 Email BCTQ/CCC 07/10/2008
- E.8 Email TW/CCC 07/10/2008
- E.9 Trythall Shipping Cost Estimate 08/10/2008
- E.10 Trythall Shipping email 09/10/2008 with attached cost estimate (57)
- E.11 Email BCTQ/CCC 10/10/2008 with attached Fuel Curve
- E.12 Trythall Shipping, letter to Councillor J Mepstead 02/02/2009
- E.13 J Mepstead letter to T Wood 11/02/2009

ISLES OF SCILLY LINK VESSEL – PROJECT REVIEW**APPENDIX I****LIST OF REFERENCE DOCUMENTATION****E. PROPOSED ALTERNATIVE SWATH VESSEL AND BERTHING ARRANGEMENTS (Continued)**

- E.14 Trythall Shipping Revised Cost Estimate 08/01/2009
- E.15 Trythall Shipping Swath Fuel Consumption 10/01/2009
- E.16 Trythall Shipping Summary of Traffic Movements 08/02/2009
- E.17 Trythall Shipping letter to Department for Transport 19/02/2009
- E.18 Email Trythal/RJM 20/02/09 with attached passenger records 2008
- E.19 Cloud X Details:
 - E.19.1 CD containing library of photographs
 - E.19.2 DVD of operation at sea
 - E.19.3 Outline Specification
 - E.19.4 Lloyds Register Certificate of Class (Expired)
 - E.19.5 US Coastguard Certificate of Inspection (Expired)
 - E.19.6 General Arrangement Drawing (Class Prototype)
- E.20 Trythall Shipping, Isles of Scilly Service – Notes on Costing for One Ship Operation 15/03/09

F. ALTERNATIVE HARBOUR DEVELOPMENT PROPOSALS

The following documents F.1 to F.3 inclusive received from other parties have not been considered in detail as they fall outside the remit of this project review.

- F.1 Email Terry Marks/RJM 17/02/2009 with attached 10/2008 Marina Article.
- F.2 Letter Capt E Kemp/RJM 19/02/2009 with alternative proposal for Penzance Harbour
- F.3 Letter from John Moreland Dip LA FSGD dated 25.02.09 with attached alternative Penzance proposals as published in “The Cornishman”