

A Stakeholder view of future transport demand and its delivery

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Background

*This paper has been prepared by Robert Francis and Tony Berkeley to provide input into the transport needs of the Isles of Scilly, both to and from the mainland and within the islands, from the point of view of **the customer, both resident and visitor, as well as business customers**. We are grateful to the Isles of Scilly Steamship Company for its work in developing proposals for new vessel(s) but feel that we should start with the views and needs of the modern customers, many of whom are used to and expect the kind of service and comfort which is now common elsewhere and designed to be future-proof and of course safe.*

Since the Strategic Outline Business Case (SOBC) submission in early 2020, much has changed. The Penzance Helicopter service has started, providing competition to Skybus and the Scillonian. The Covid-19 restrictions have severely restricted the demand for passenger transport and consequently the income to operators. Government support to some of these during the first half of the summer has enabled some services to continue and it is hoped that, subject to the government providing further support, this will continue over the winter period.

Probably due to the Covid-19 crisis, there has been no substantive progress or discussion with Government on the SOBC. The islands' needs remain the same, and the vessels and craft get even older and the future income from passengers and freight remains uncertain in the light of the continuing Covid-19 restrictions.

In the meantime, the IOSSC has continue to work on developing plans for new passenger and freight craft, and an alternative suggestion for using Ro-Ro has been submitted to the Transport Board (TB) for discussion.

The TB has agreed to hold a stakeholder meeting early in the New Year and to set up a working group to look into the Ro-Ro and other craft options in more detail.

However, the SOBC set out an interim cost of £53.5m and suggested that some kind of government financial support will be required to raise these funds. The current financial and income uncertainty caused largely by the Covid-19 crisis and the changes in potential state aid support after BREXIT has made the likelihood of the private sector being able to fund these necessary enhancements even more remote. IOSSC has not indicated that it can fund any such improvement from the private sector.

Although the new programmes to replace the ERDF funds and revisions to the state aids rules are still to be set out in detail, it seems very unlikely that state support will be offered without the need for competitive tendering for any substantive work, be it capital expenditure or operating support.

This would then mean that the **TB would be the principal development and operating body**, being responsible for specifying, procuring, obtaining finance etc. in accordance with public procurement rules. It would of course be good if the IOSSG were able to bid, but this must be seen as being independent of the TB's role.

As a start, we thought it would be useful for the TB to review the various studies, submissions and ideas over the years, including from the 2011 Route Partnership work, to seek agreement on the demand for service improvements and the related replacement and upgraded vessels, craft and structures. We have tried to bring these conclusions together overleaf.

We confine our analysis to seaborne traffic since there is now competition on the air services. We cover passengers and freight, both to and from the mainland and inter-island. Given the current financial situation in the UK, we believe that any solution should be based on the lowest possible costs, always subject to safety and resilience.

Robert Francis and Tony Berkeley have discussed options with the St Mary's harbourmaster, a fuel supplier, an independent carrier and a retired skipper of the inter-island freight vessel. We are grateful for the comments and information provided by Bill Davidson.

These are our joint conclusions and recommendations to the TB to take forward for further consultations but with a more limited scope.

What services do stakeholders want?

Passenger demand and comment (Sea services only)

To/from mainland

Passenger numbers: daily peak 1,000¹, winter 150 per week
Service frequency – 2 round trips/day (occasionally 3 at peak demand days and once on Sundays), winter 3 times/week
Journey time – prefer shortest but recognising speed/resilience issues, go for 2 hr journey.
Passenger fares – average single around £50²
Concern about passenger facilities at Penzance and, at both ends, speed of loading/unloading and facilities for those with mobility difficulties.

Inter-island services:

Passengers – as at present
Passenger luggage – concern about safe movement of heavy luggage around the steps to access the off-island passenger boats at St Mary's. Safety concerns about the human chains moving passenger luggage to and from the inter-island services.

Freight demand and comment (Sea services only)

To/from mainland

General cargo 150 tonnes daily, or 14,000 tonnes per annum.
Fuels and dangerous goods – as at present.
Service frequency – summer: 1 per day minimum, urgent cargoes more frequently if ship is operating. Winter 3 per week minimum.
Safety concerns about use of cranes
Charges – too high.

¹ Route Partnership and FRIST 2018 paper

² FRIST 2018 paper and Bill Davidson: Isles of Scilly Ferry Services: Cash impact assessment for a 'SC4' based service

Inter-island services:

Needs increased capacity
Safety concerns about use of cranes

Delivering the above at the lowest costs:

For mainland service, from previous studies, it is evident that one ship for passenger and freight operating all year round is the cheapest solution. With one ship, ability to find a replacement at short notice important.

Discussing each element of the delivery needs separately:

Ro-Ro, Lo-Lo or both systems

See papers from IOSSG and Bill Davidson. We suggest both options should be considered and that, for reasons of timing etc., vessels that can do both (i.e., Ro-Ro & Lo-Lo) might be preferred. MV Loch Nevis has a crane to allow for use as Lo-Lo – if necessary. This mode was used for some time until the shore infrastructure at the Small Isles was finally in place.

Freight movement

Consolidation centre for all freight (except dangerous goods, fuels and passenger luggage) at Long Rock, for reception and loading into boxes – generally 8ft containers. Max load 5 tonnes.

Passenger luggage – encourage passengers to take more luggage themselves on the ships, but heavier items to be loaded into similar boxes at PZ, St M and off islands or at customer premises (e.g., campsites) – see below.

All boxes to be lifted or moved on trailers or skids for delivery to St Mary's addresses and on to inter-island ship to off-islands.

Fuels should be carried either in tanks built into the vessel PZ to St M using existing transfer facilities or carried in containers as widely used in the offshore industry. Dangerous and other similar good requiring open air transport should continue to have such a facility on the ship and inter-island boats.

Passenger movement

Faster loading and unloading, including allowing passengers to carry or drag luggage. More shelter whilst waiting or moving around on the quays. Improved facilities for passengers with mobility difficulties.

Heavy or large passenger luggage to be moved in a manner which is safe for staff and volunteers who currently are involved in this. Such luggage should be carried in boxes between PZ and final destinations. These boxes should be capable of being moved by crane, skids, tractor/trailers in a safe manner. Look at Northlink and Calmac solutions.

PZ-ST M vessel

Passenger numbers – to meet demand as above
Passenger facilities – appropriate for a 2-hour journey.

Passenger luggage – provide luggage trollies for passengers to load and unload themselves, with trolleys hauled by airport style tugs. or luggage trailed or carried themselves.

Passenger luggage on ship – allow for suitable and safe luggage storage for more luggage than at present.

Passenger loading and unloading – by wider gangway and/or walking up/down link spans. However, safety concerns about passengers and vehicles on link span at the same time.

Freight – carried mainly in boxes. Part of freight deck(s) open to carry dangerous and other goods. Boxes slid into place under other decks as necessary by skids.

Ship-mounted crane to move boxes where these cannot be moved on wheels.

Crane capacity; noting HSE/MCA concerns about safety of small cranes.

Fuels connection as at present by pipeline or offshore-type containers.

Ramps – bow/stern/side loading for vehicles. Bow/Stern needs ramp/pontoon/link span.

Side loading will need internal ramps to cope with tidal range, but this is done in the Azores to avoid the need for a pontoon and long link span.

Max size and weight of vehicles using ramps – for 5 tonne boxes.

Preferred option also depends on seaworthy and passenger comfort considerations.

Vessel dimensions LOA max 80m. Draft similar to Scillonian III; can we avoid taking the bottom?

Vessel turnaround times – dependent on Ro-Ro or not, unloading location etc. and whether freight is loaded and offloaded at the same time or only once a day.

Operating restrictions – weather/swell etc and passenger comfort – significant wave height 5m max? Will the modern passenger accept rougher seas?

Propulsion. Investigate alternative fuels including battery, hydrogen etc.

Inter-island freight

New ship: capacity required 4 boxes minimum, needing at least an extra 1m deck width and 2m length compared to existing boat, but wheelhouse space could be reduced.

Side loading ramp needed as existing boat.

Crane capacity on boat, capable of lifting a 5-tonne load from ship to quay. The present one is very inefficient. Note that the crane may be limited to a lower lifting limit for safety reasons.

Landing craft may not be suitable for St Agnes and St Martin due to greater swells which could prevent the boat from docking at certain times.

Harbour facilities – Penzance

Option 1 is to continue to use the existing berth with improvements to shelter and luggage arrangements as may be possible for the passenger experience. Ro-Ro would need side loading here, as there is not enough space for a link span and pontoon. This means Internal ramps for vehicles with several doors at different heights would be needed to cope with the tidal range. Such a design has been done for a ferry in the Azores.

Option 2 – Albert Pier. To achieve regular timetabled sailings, dredging would be necessary. Berth either against the west side of the pier or, if there are concerns about the stability of the pier, further out against dolphins a few metres from the pier. Berth with bow or stern ramp against a pontoon with a link span to the pier and/or side loading to the pier direct. Alternatively, bow or stern ramp onto concrete slip. Existing slip might work, or another slip built further south to reduce the amount of dredging needed.

Passengers load and unload up ramp or separate gangway to the pier. Covered walkway to the roof of the pier to a small terminal building for waiting and loading/collecting heavy luggage to/from boxes, adjacent to large car park and bus and train station.

Harbour facilities – St Mary's

Ship berths at current location.

Option 1. A Ro-Ro side loading option onto the quay – see option for PZ. There is then the option to carry on as at present but using cranes to load/unload boxes to the off-island freight boat.

Passenger loading and unloading to the off-island passenger boats would either have to continue as at present up and down the steep and uneven steps, or by a smaller pontoon and link span for passengers only.

Option 2. With bow or stern loading, a pontoon for vehicles and pedestrians would be located opposite the ferry check-in office where the quayside changes direction.

Ship's ramp drops onto pontoon, for passengers and freight. Link span to pontoon from south end of quay building where taxis turn. An alternative for passengers could be a gangway from the ship to the quay. The MCA prefers passengers and freight to load and unload separately.

Off island boats and inter-island freight boats moor to the side of the pontoon, so that off island passengers could walk directly from the PZ ship onto the off-island boat. They only carry hand luggage as heavy luggage has been loaded into boxes for onward delivery to off-island destination.

Fuelling point also located on the pontoon for use at other times, connected by flexible hoses to existing system.

Freight in boxes driven up link span to St Mary's destinations.

An alternative or additional freight unloading point for the Ro-Ro vessel would be by a concrete ramp and dolphins and/or pontoon and walkway at Porthloo just north of the lifeboat slip. A lifeboat berth could be created here as well. This would reduce the need for freight to be transported through St Mary's town. It would involve a separate move for the ship which might only be needed once a day for freight.

Harbour facilities – off islands

Facilities for loading and unloading freight in the boxes may need further work, particularly in the use of a crane on the boat or side loading.

Conclusion

With new craft, customers will expect service qualities and safety considerations comparable to the best similar services in the UK and elsewhere.

Options for Ro-Ro, Lo-Lo and mixed-use ships to be taken forward, along with necessary changes to port facilities and to the inter-island freight boat. Given the different timings for

works and manufacturing, a Ro-Ro ship capable of working using Lo-Lo would provide maximum flexibility. If harbour works are delayed at one or both ends, then the ship can operate in Lo-Lo mode. A side loading Ro-Ro ship would remove the need for link spans and pontoons.

The safety of passengers and luggage movements on steep steps or in human chains within a new facility must be reviewed and compared with other options.

Safety considerations indicate that cranes on ships or quays are matters of interest to safety regulators who may well wish to ensure that alternative options have been investigated and only excluded for compelling reasons.

With just one dedicated ship, there is an issue of resilience in the event of it being unable to operate. It will need a long-term arrangement with the owner of a suitable vessel to provide annual drydock cover and be available at short notice to cover breakdowns. Cover for freight only is relatively easy to arrange. Cover for pax and freight on a Euro B vessel will be harder but is not impossible.

The next stage is to investigate capital and operating costs, including staffing.

Summary

Preferred option:

Seek to comply with latest safety best practice.

PZ to St Mary's: 1 new ship – Ro-Ro with side loading operating 2 (occasionally 3 and 1 on Sundays) returns a day in summer, 3 per week in winter..

Berth initially at Lighthouse Quay PZ but later at Albert Quay. Reception building at root of Albert Quay for heavy luggage and waiting area; near car park and railway station. Albert Pier solution is much better all round for passengers.

St M. Quay improvements – passenger pontoon and link span to access off-island boats; also with refuelling point on pontoon.

Passengers: Better shelter at both ports; improved access for those with mobility issues. Heavy luggage carried separately in boxes and delivered to and from island destinations.

Freight – consolidation centre at Long Rock. Most freight and passenger heavy luggage carried in boxes on trailers, rollers or similar

New off-island freight boat – with more capacity, and Ro-Ro and crane.