

# Shetland Inter-Island Transport Study



Foula Public Engagement Meeting  
Wednesday 31<sup>st</sup> August 2016 – 1000–1300  
Foula School



# Shetland Inter-Island Transport Study

Welcome to the **Foula Public Engagement Meeting** for the Shetland Inter-Island Transport Study (SIITS).

The Shetland inter-island transport network, which consists of a combination of ferry and air services, connects nine islands with Shetland mainland. These lifeline connections support the economies of Shetland's island communities as well as providing personal accessibility to employment opportunities and access to key services such as education, health and leisure opportunities.

The inter-island transport network has been supported in both capital and revenue terms by the Council over many years. Whilst this remains the case, ageing assets, escalating costs and a reduction in the funding available to local authorities has led to a need to consider the future of the inter-island transport network at the strategic level. To this end, the Council, in partnership with ZetTrans, Transport Scotland and Highlands & Islands Enterprise, commissioned the Shetland Inter-Island Transport Study (SIITS), with a view to developing and appraising options for the future of the inter-island transport services.

The purpose of this exercise is to determine the **appropriate level of service for each island / island group** and the **funding implications** of this. This will provide the Council and ZetTrans with an evidence base to inform discussions with Scottish Government. To this end, the study team, led by Peter Brett Associates LLP, has developed, appraised & costed a set of capital (e.g. vessels, harbours, fixed links, airfields and aircraft (where appropriate)) and revenue (i.e. additional sailings and / or flights) options. These options are based on identified transport problems within each island, which we have had initial confirmation of from each local Community Council.

Following the submission of the final report in October 2016, a subset of these options will be taken forward for further development and appraisal. **This is your chance to have your say on the options** – please speak to the team, provide your feedback and fill up the brief exit questionnaire which we have provided.



# How have we determined what level of service is needed by the community?

There are two elements used to inform this process:

- Transport Scotland's Routes & Services Methodology (RSM)
  - Provides an initial 'model' ferry service depending on a range of inputs
  - The RSM is one of a number of inputs used to inform the appraisal
- An appraisal based on the Scottish Transport Appraisal Guidance (STAG) and Business Case Guidance
  - provides a much more detailed analysis based on the local context and circumstances
- The study is joint-funded by Shetland Islands Council, Transport Scotland, and Highlands & Islands Enterprise
  - All stakeholders have had an input into the development of the study, ensuring consistency with other Scottish ferry-related studies



# Routes and Service Methodology

As part of the Scottish Ferries Review, Transport Scotland developed a 'Routes & Services Methodology' (RSM), which is designed to produce a consistent approach to ferry service transport provision across Scotland.

The RSM is a six-step, evidence-based process which:

- Identifies the current level of service to an island
- Establishes a 'model' level of service for an island in terms of the:
  - number of sailing days
  - number of connections per day
  - the length of the operating day
- Develops and appraises options to address any gaps between the 'current' and 'model' service provision

**The RSM does not imply an immediate or indeed any commitment to scale-up to the 'model' level of service**, but is a tool which is taken into account in the analysis, and potentially an outcome worked towards over time.



# Foula – RSM Findings

- The RSM findings for Foula are as follows:

	Sailing / Flight Days	Sailings / Flights Per Day	Operating Day
Current Service	6 days Summer, 5 days winter	1-2 connections per day	Varies by day
Model Service	7 Days	1 connection per day	No normal operating day
<i>RSM Outcome</i>	<i>Marginal under-provision</i>	<i>Acceptable</i>	<i>Acceptable</i>

- The lifeline service for Foula is provided by air, with the ferry largely fulfilling a supply chain role.
- The air service operates 4 days a week in summer and winter.
- The ferry service operates 3 days a week in the peak summer period, 2 days per week in winter.
- Foula is under provided in terms of the number of days on which there is a connection. However, the number of connections per day and the length of the operating day are largely in line with the RSM.



# Current Ferry Service



**Vessel Issues:** Vessel is relatively slow (8 knots) and has a very low carrying capacity.

**Access for Disabled:** Disabled access to the ferry is extremely limited.

**Accommodation Issues:** Passenger accommodation is limited and the journey can be uncomfortable.

Current Vessel:  
*MV New Advance*

Vessel Age:  
*20 years*

Scheduled Replacement Date:  
*Medium-term – 2025-2030*

Carrying Capacity:  
12 passengers  
1 car  
21 tonnes

Ship-Shore interface:  
*Lo-Lo only*

*The vessel overnights at Foula and is taken out of the water on special davits.*



# Air Service



**Aircraft Issues:** Low carrying capacity; limited to operation during hours of daylight.

**Access for Disabled:** It can be challenging for people with mobility difficulties to access the aircraft.

## Current Aircraft

2 \* Britten-Norman Islanders

## Aircraft Age

10 & 25 years old

## Carrying Capacity

8-9 passengers and limited freight

Passenger numbers on G-SICB limited to 6

## Airfield Features

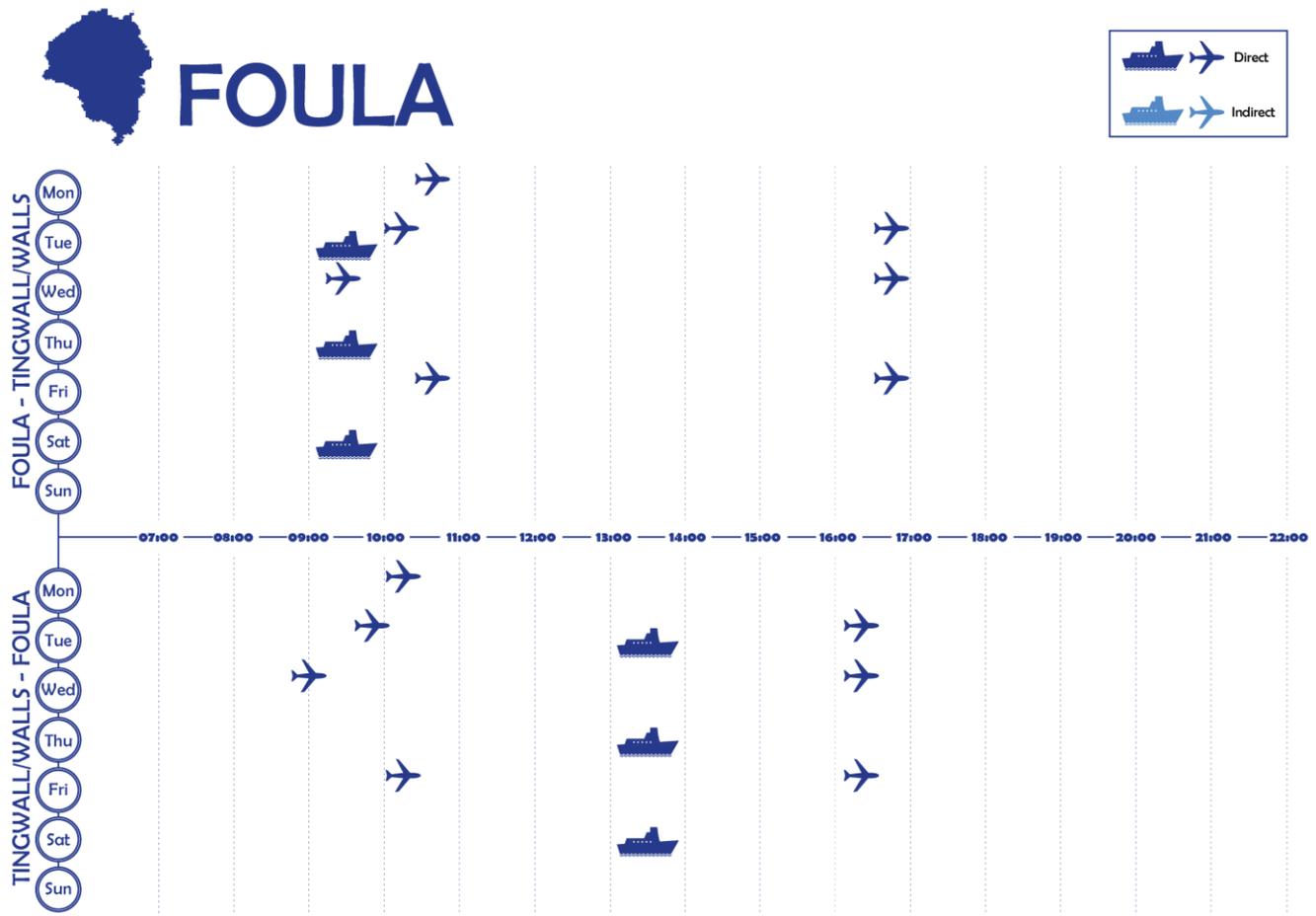
Unlicensed

Fire cover limited

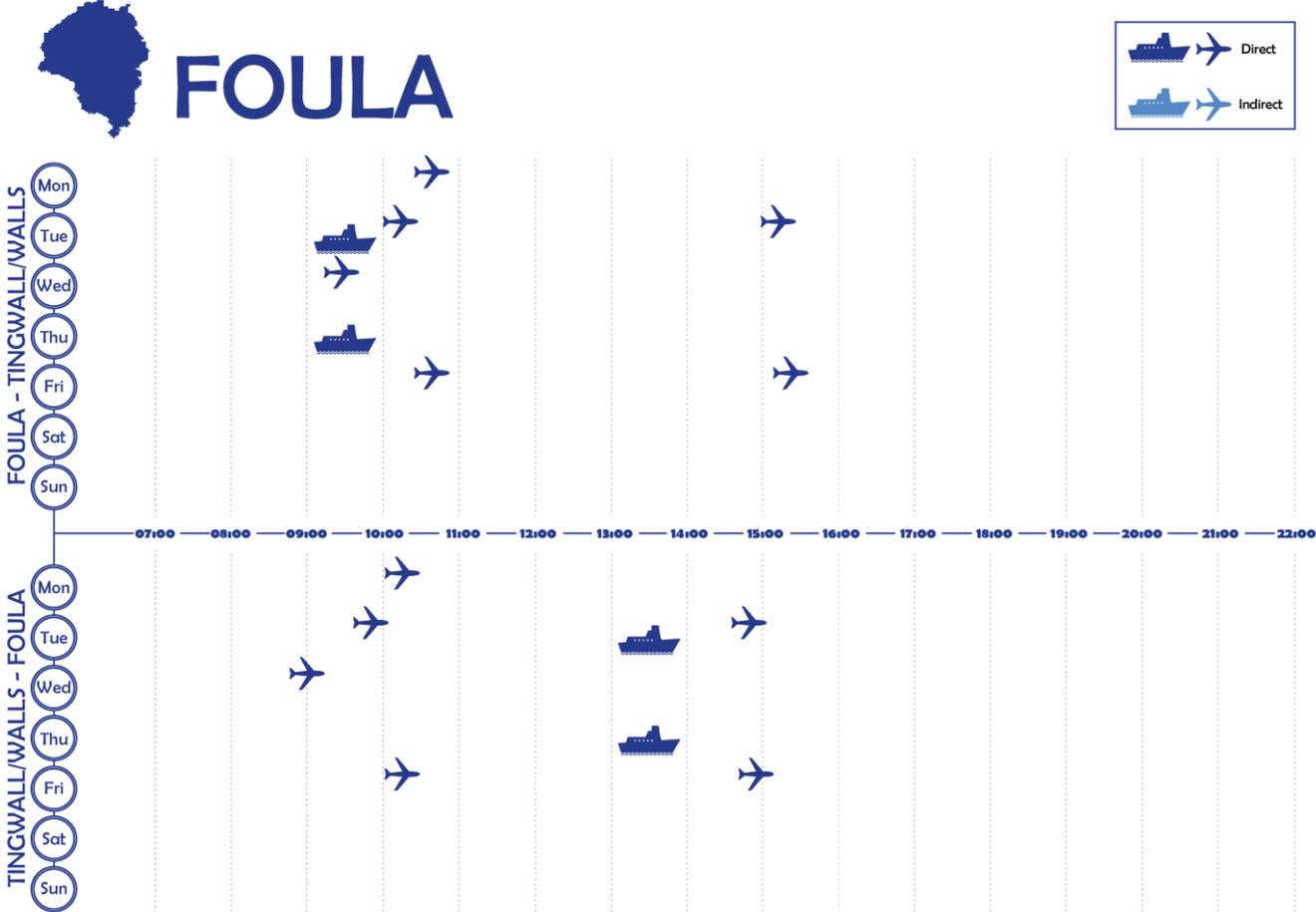
Airfield susceptible to fog



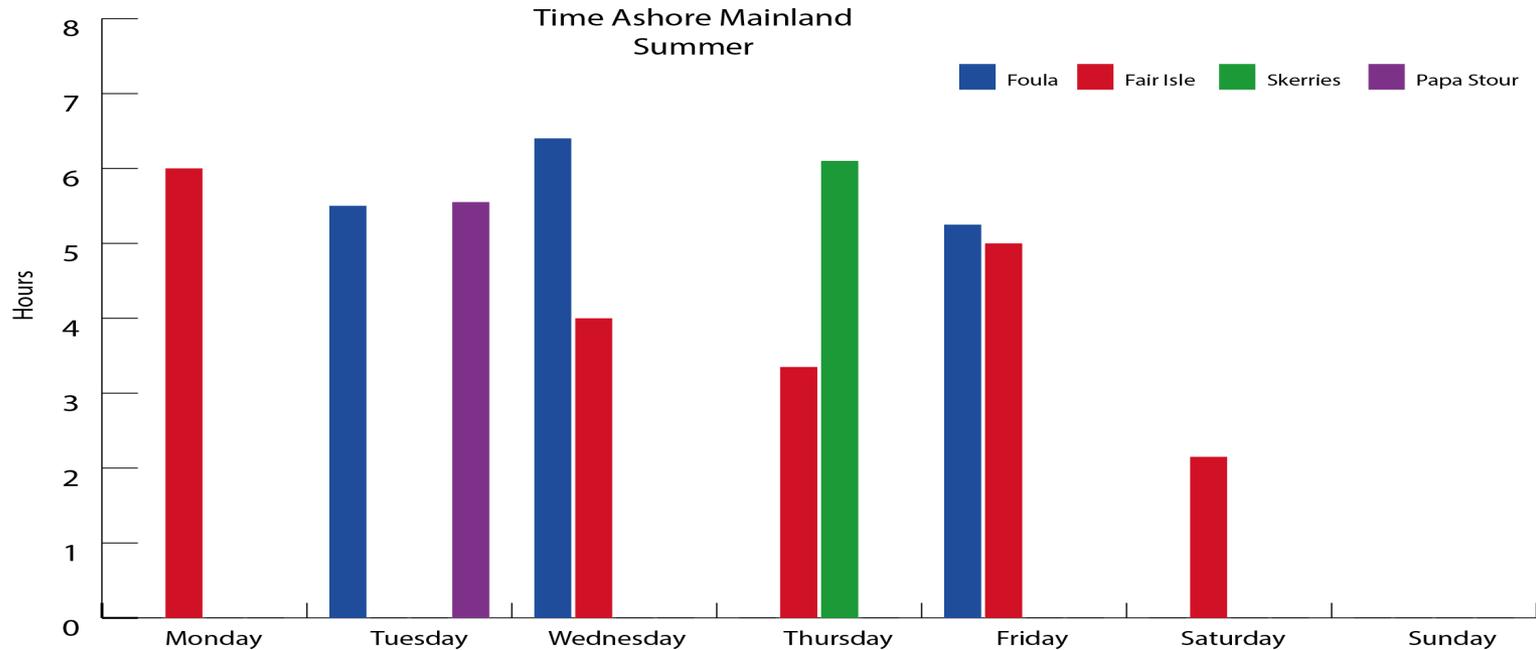
# Foula - Current Summer Service – departures by day of week



# Foula - Current Winter Service – departures by day of week



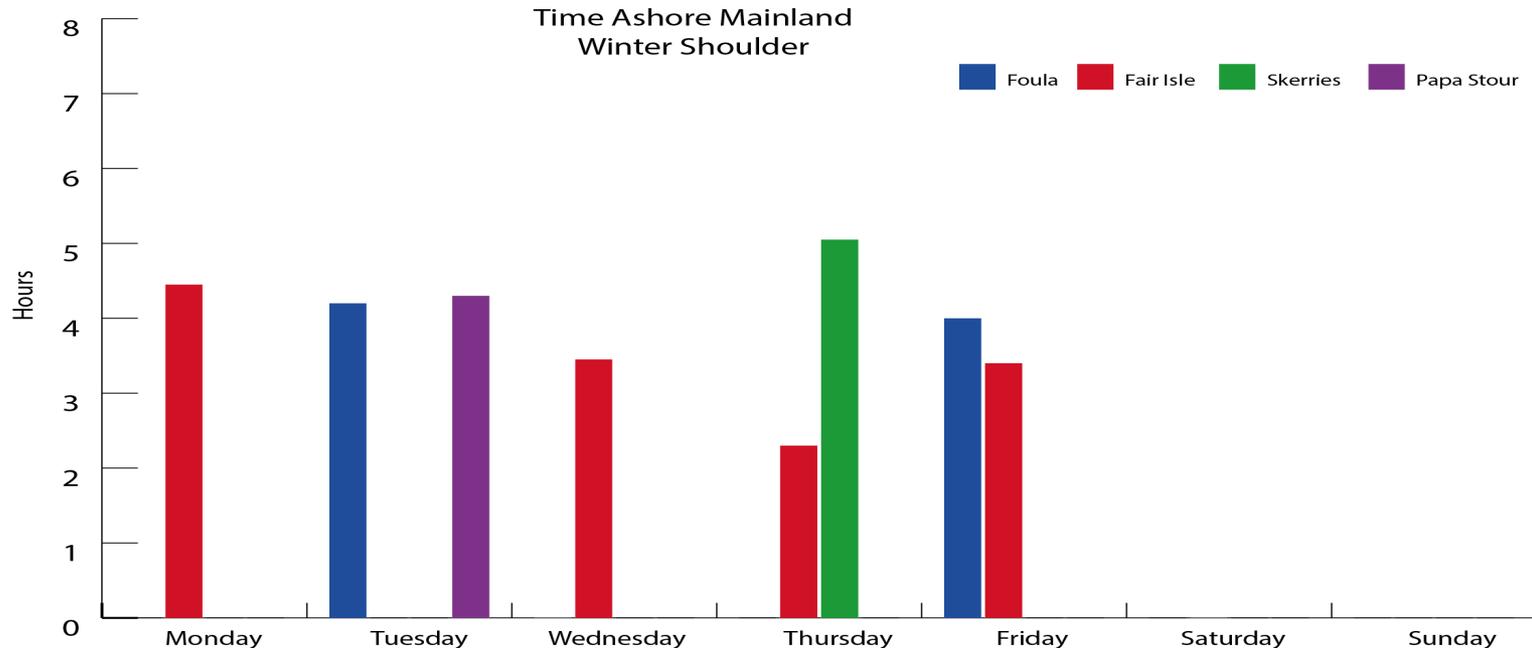
# Daily Time in Shetland Mainland – Air - Summer



- The ferry service offers limited amount of time on mainland but the relatively long and uncomfortable journey coupled with the ferry terminating at rural Walls means that the air service is generally the lifeline mode.
- The air service offers Foula residents varied amount of time on Shetland mainland over the week.
- There is only one air rotation on a Monday, which means a day return trip to Shetland mainland cannot be made.
- Connectivity on a Thursday and summer Saturday is by ferry only.



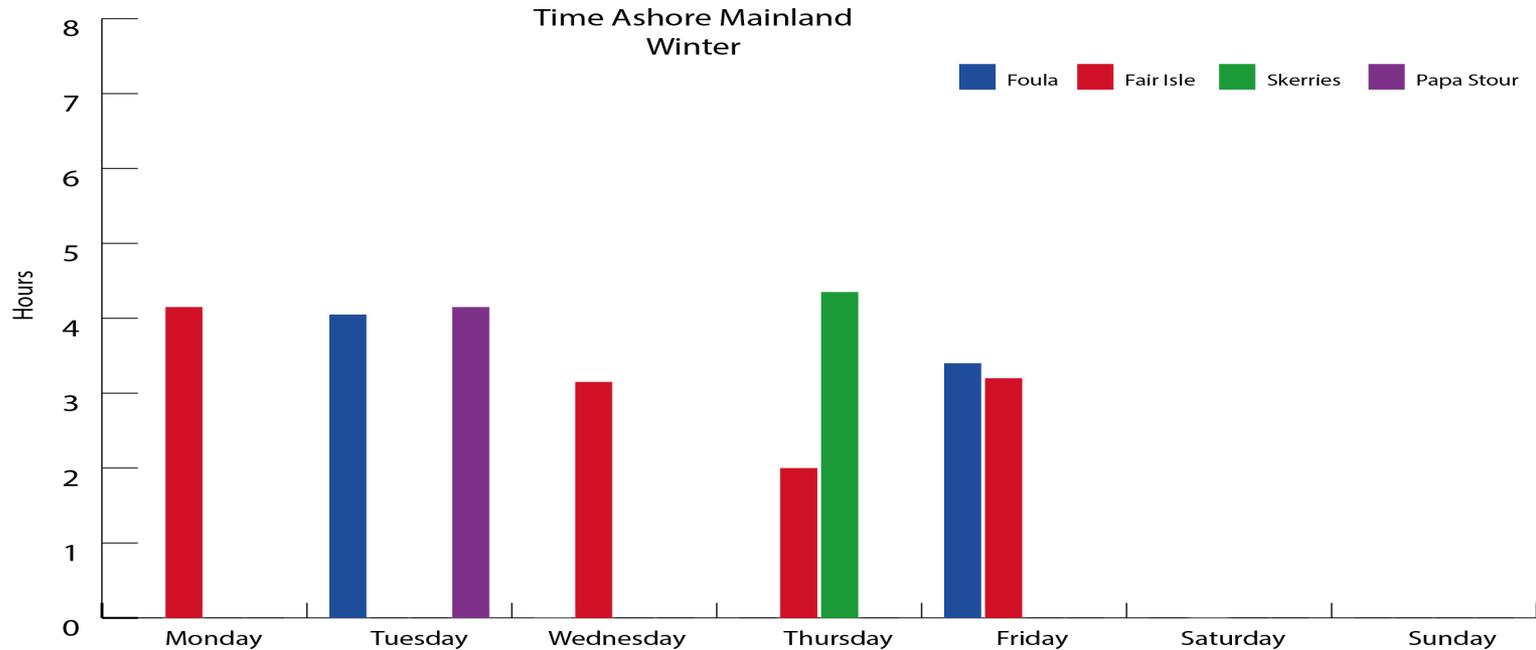
# Daily Time in Shetland Mainland – Air – Shoulder Winter



- The shoulder winter timetable reduces time on mainland across all operating days.
- A day return trip is no longer possible on a Wednesday as there is only one rotation. This continues to be the case on a Monday.
- There is no weekend connectivity by air or ferry



# Daily Time in Shetland Mainland – Air - Winter



- The winter timetable leads to a further marginal reduction of time on mainland for Foula residents on a Tuesday and Friday.



# Problems, Objectives & Options



Foula Transport Problems			
	Service Characteristics	Rating	Why is this a problem or not?
1	Overall journey time to Lerwick	✘	Foula residents can reach Tingwall in 15-20 minutes by air, with a 15 minute connection to Lerwick by bus. However, ferry journey times are long, some 120 minutes to Walls.
2	First sailing / flight	✓	The issue for Foula is related more to time on mainland / Lerwick / island.
3	Last sailing / flight	✓	The issue for Foula is related more to time on mainland / Lerwick / island.
4	Time on mainland	✘✘✘	It is not possible to make a meaningful day return either to or from Foula by ferry – day access is entirely dependent on the air service. The air service itself is of a reasonable level offering 8-18 hours weekly on the mainland, 7-17 hours in Lerwick and 9-20 hours on Foula. However, this is still a relatively limited period of time ashore when comparing Foula to other islands of a similar size (e.g. Fetlar, North Ronaldsay, Papa Westray etc). The limited time ashore can lead to a need for costly overnight stays when carrying out work-based or personal business which extend beyond the length of the air operating day. Foula has no connections to the mainland on a Sunday in summer or at weekends all year round. <i>The initial community consultation response noted that access can be made to the Walls doctor by ferry, as well as to the shop, post office, garage and vet. It further explains that it is not possible to visit the doctor by plane and bus on a day trip. Residents have to hire a taxi to and from Tingwall or stay overnight, both of which are considered to be expensive.</i>
5	Time in Lerwick	✘✘✘	See point 4. <i>The community consultation response points out that the measure of time that is important for Foula residents is the amount of time which can be spent in Lerwick in a day, not the accumulative time over the week. It should be noted by the author that these times have been established but were aggregated for the purpose of this paper.</i>
6	Time on island	✘✘	See point 4.
7	Frequency / Sailings per Day / Timetable gaps	✓	The community successfully work around the current frequency. The bigger question is the number of connections overall and effective time on the mainland / island.
8	Capacity	✘✘✘	The MV <i>New Advance</i> is very limited in terms of vehicle and indeed passenger capacity. The vessel can only take one small car and 12 passengers, whilst she cannot accommodate any heavy freight or plant. The air service is also limited to 8-9 passengers depending on weight. This places a significant capacity constraint on the island, particularly when one or both modes is affected by bad weather. In addition, the deadweight limitation on the vessel means that bringing any larger vehicles or plant onto the island requires the use of a different vessel. The capacity issue impacts negatively both on access to the mainland for island residents and on visitors to the island. <i>The community consultation response noted that Directflight will only book six passengers because of the weight limitation on G-SICB. It was also noted that the recent refurbishment of the MV New Advance allows a car / van or plant up to three tonnes, and heavier if it can fit in the hold.</i>
9	Reliability (weather / mechanical)	✘✘	The ferry crossing is long and exposed. This, combined with the small vessel used, presents reliability challenges on the route, particularly during winter. In many cases, the ferry has to travel when there is a weather window, even if this is off-timetable. The air service is overall believed to be reliable but can be affected by the frequent fog which affects Foula and Tingwall. Reliability issues can lead to both islanders and visitors incurring costly overnight stays, whilst a sustained period of cancellations can have significant impacts on the inbound and outbound supply chain. <i>The community consultation response noted that frequent fog, cross-winds and ice on the runway are also frequent problems.</i>
10	Comfort	✘✘	The MV <i>New Advance</i> is a relatively uncomfortable vessel given the sea states in which she operates (indeed her workboat classification hints at her size).
11	Physical access	✘✘	As a small vessel operating out of a non Ro-Ro port, the <i>New Advance</i> can present physical accessibility issues for older and disabled passengers, a key issue on Foula, which has an ageing demographic. As previously explained, the Britten-Norman Islander aircraft are not well suited to those with any kind of mobility impairments either. This is a key problem on Foula – the ageing demographic on the island means that, in the longer-term, physical accessibility could become a barrier to necessary travel. <i>The community consultation response noted that the new pier facilities at Walls has improved physical accessibility.</i>
12	Integration with PT (local bus)	✓	There are local bus connections for ferry at Walls, although the layover time is long. There is a demand responsive service from Tingwall.
13	Integration with PT (strategic)	✘✘	Given the limited connections from Foula, onward travel will always have to be well planned. However, there are a number of problems over and above this. Firstly, a high degree of reliability is required on both the connecting and onward service as any delay or cancellation can lead to the need for a costly overnight stay or a long layover on Shetland mainland. In addition, the air service from Foula travels to Tingwall and requires a double-bus connection to get to Sumburgh.
14	Crossing / flight times	✘	See point 1.
15	Onboard facilities	✘✘	As a small vessel (classified as a workboat), the MV <i>New Advance</i> has little in the way of onboard facilities. This lessens the attractiveness of the ferry as a travel option and puts pressure on aircraft capacity.
16	Weekday / weekend service variation	✘✘✘	Foula has a significant weekend connectivity gap. Other than a summer Saturday ferry return, there are no weekend services at all, which effectively cuts the island off. This suppresses the ability of islanders to take an overnight off-island trip at the weekend and discourages potential visitors to the island.
17	Landside infrastructure issues	✘✘	The ferry berth is constrained and exposed, with the vessel having to be hoisted out of the water overnight. The harbour is silted-up which prevents the larger MV <i>Snolda</i> calling as she did in the past.
18	Landside human resources	✘✘	There is an ongoing challenge of providing fire cover at the airfield, which could have an impact on the long-term sustainability of the air service. The ferry crew is also island based, which could present an issue for crew resourcing in the medium to longer term. <i>The community consultation response noted that the present skipper is in his 40s, the mate is in his 30s, the other crew member is in his 20s and the stand-by crew has members in their 30s and 40s including a stand-by skipper in his 30s. There is also an 18 year old attending NAFC qualifying as a deck officer. All are Foula residents.</i>

# Study Objectives

In the light of the problems identified across the Shetland Islands, the following objectives have been defined as the basis for the options appraisal:

- **Transport Planning Objective 1:** The capacity of the services should not act as a constraint to regular and essential personal, vehicular and freight travel between the island(s) and Shetland mainland.
- **Transport Planning Objective 2a:** Where an island has a 'commutable' combined ferry or air & drive / public transport / walk time to a main employment centre (e.g. 80 minutes), the connections provided should reliably facilitate commuting.
- **Transport Planning Objective 2b:** Where an island does not have a 'commutable' combined ferry or air & drive / public transport / walk time to a main employment centre (e.g. 80 minutes), the connections provided should reliably permit a half day (e.g. 4 hours) in Lerwick, 7 days a week, all year round.
- **Transport Planning Objective 3:** The scheduled time between connections should be minimised to increase flexibility for passengers and freight by maximising the number of island connections across the operating day.
- **Transport Planning Objective 4:** The level of connectivity provided should minimise the variation within and between weekdays, evenings, Saturdays and Sundays.
- **Transport Planning Objective 5:** Where practicable and realistic, islanders should be provided with links to strategic onward connections without the need for an overnight stay on Shetland mainland.



# Foula – Capital Options

In light of the analysis of transport problems and objectives, the following **capital options** have been identified for Foula:

- Option CO1a: Replace the MV *New Advance* with a like-for-like vessel.
- Option CO1b: Replace the MV *New Advance* with a like-for-like but materially faster vessel.
- Option CO2: Replace the MV *New Advance* with a small Ro-Ro vessel (likely a car carrying catamaran)
- Option CO3: Replace the MV *New Advance* with a Lo-Lo freight vessel shared with Fair Isle (and potentially Papa Stour)
- Option CO4: Replace the MV *New Advance* with a passenger vessel and a freight vessel shared with Fair Isle (and potentially Papa Stour)



# Foula – Revenue Options

The current timetable is determined by the level of crewing resource and working hours legislation.

The funds generated through ticket sales do not cover the costs of running air and ferry services, and this deficit is funded through the Council's annual *revenue* budget.

The following **revenue options** have been identified for Foula:

- Option RO1: Increase the service frequency of the current Foula ferry
- Option RO2: Increase the frequency of the air service to two rotations per day, seven days a week in summer and winter
- Option RO3: Replace the current operation with a mainland based Foula ferry service combined with Papa Stour

*Note that in our exit questionnaire, we will ask you what your priorities for the service would be, were more operating hours to be available.*



# Rationale for Selection / Rejection

Option	Take Forward (✓) or Reject (✗)	Rationale for Selection / Rejection
Option CO1a: Replace the MV New Advance with a like-for-like vessel.	✓	Community identified this as a viable option – merits further consideration
Option CO1b: Replace the MV New Advance with a like-for-like but materially faster vessel.	✗	A faster like-for-like vessel is not technically feasible.
Option CO2: Replace the MV New Advance with a small Ro-Ro vessel (likely a car carrying catamaran)	✗	The cost and technical challenges of upgrading the harbour at Foula are seen to be disproportionate for the benefits offered
Option CO3: Replace the MV New Advance with a Lo-Lo freight vessel shared with Fair Isle & Papa Stour	✗	Would reduce flexibility of service and ability to take advantage of weather windows
Option CO4: Replace the MV New Advance with a passenger vessel and a freight vessel shared with Fair Isle and Papa Stour	✓	Passenger vessel would broadly replicate current service with additional flexible freight capacity provided. May still have issues with weather windows
Option RO1: Increase the service frequency of the current Foula ferry	✓	Merits further consideration through consultation with the community
Option RO2: Increase the frequency of the air service to two rotations per day, seven days a week in summer and winter	✓	7 day air service disproportionately expensive but options should be considered for increasing the number of weekday flights to Foula.
Option RO3: Replace the current operation with a mainland based Foula ferry service combined with Papa Stour	✓	Allows for an MV <i>Snolda</i> size vessel, but implications for current island crew.

# Shetland Air Network – Capital Options

- The BN2 Islander remains the most appropriate aircraft in the medium-term.
- **Option CO1 – Maintain and continue with the current aircraft until life expiry (Do Minimum):**
  - This option would involve continuing with the current Britten-Norman Islanders over the length of the strategy period.
  - If it becomes clear during that period that one or both of the aircraft is nearing the end of its operational life, replacements should be considered at that stage.
- **Option CO2: Supplement the current aircraft with an additional Britten-Norman Islander:**
  - An additional Islander would be leased or purchased and added to the fleet. The timetable would be expanded to take account of this additional capacity.
  - It is likely that at least one more pilot would be required.
- **Option CO3: Install runway lighting at all four island airstrips**
  - This option would involve the installation of runway lighting at Fair Isle, Foula, Papa Stour and Skerries (and Unst / Fetlar if re-opened).
  - Further investigation into the type of lighting to be used is required – it is assumed for the purpose of this option that Precision Approach Path Indicator (PAPI) lights would be installed.
- **Option CO4: Install Global Navigation Satellite System on the current aircraft**
  - This option would involve the installation of GNSS and supporting equipment on the current Council Islander fleet.



# Rationale for Selection / Rejection – Air Capital Options

Option	Take Forward (✓) or Reject (✗)	Rationale for Selection / Rejection
Option CO1 (Do Minimum): Maintain and continue with the current aircraft over the strategy period / until life expiry	✓	This option is retained as the Do Minimum.
Option CO2: Supplement the current aircraft with an additional Britten-Norman Islander	✗	This option will not be considered further. There is at present insufficient demand for a third aircraft, whilst the current aircraft could be worked more intensively.
Option CO3: Install runway lighting at Tingwall and all four island airstrips	✗	This option will not be considered further, except potentially in tandem with GNSS. The experience of runway lighting in Orkney coupled with the safety risks and limited probability of obtaining CAA night flight permissions mean that this option is excluded from further consideration.
Option CO4: Install Global Navigation Satellite System on the current aircraft	✓	This option will not be considered further. It should be noted that the operator concerns about safety and implementability in the Shetland environment would need to be addressed in advance of progressing this option.
Review the case for relocating the inter-island air service to Sumburgh from Tingwall	✓	The study has set out the comparative costs, benefits and risks associated with operating the air service from both Tingwall and Sumburgh. The evidence presented will be considered in more detail by the Council following completion of the study.



# What to do Next?

- Thank you for taking the time to read through the above material – we would be grateful if you could now complete a short questionnaire in relation to the options presented
- Please follow this link to access the questionnaire:

<https://www.surveymonkey.co.uk/r/FI-Foula-PapaStour-Skerries-Aug2016>

