

Report

ZetTrans

Bressay Link STAG Workshop: Options Generation and Initial Appraisal

December 2007

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Report

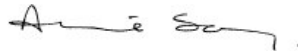
ZetTrans

Bressay Link STAG Workshop: Options Generation and Initial Appraisal

For and on behalf of
Natural Capital Ltd.

Approved by: Dr Annie Say

Signed:



Position: Director

Date: 8 January 2008

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1 PURPOSE OF THE WORKSHOP

1.1 PREAMBLE

The Scottish Transport Appraisal Guidance (STAG)¹ is underpinned by the core belief that good planning and appraisal result in good transport proposals. The STAG process is objective led and an output of the first workshop (22.11.07) was draft planning (scheme) objectives to be used in the appraisal of options for the link². These draft objectives were evolved initially at the workshop from a sound understanding of relevant issues related to the transport link between Lerwick and Bressay and also taking into account the Government transport objectives (see Appendix C of the first workshop report) and other relevant committed objectives (national and local). The objectives were subsequently combined and sorted by the project team and discussed and agreed (with minor amendments) at the Bressay Link Group meeting (30.11.07).

The purpose of the second workshop was:

- to refine and agree the draft options;
- to generate options which could help resolve the transport issues which have been raised at the first workshop and in other feedback from consultees;
- undertake an initial appraisal of the options against the agreed objectives as a first part of the Part 1 STAG³ appraisal.

Any option which did not meet the agreed objectives in a satisfactory manner would be rejected at this early stage. Those options which met the objectives would be taken through the full Part 1 STAG appraisal.

1.2 THE WORKSHOP

The workshop was held in Sound Public Hall. All participants or their representatives invited to the workshop attended - some 15⁴ people. A list of attendees with contact details is included in Appendix A.

The workshop ran from 9.30am to about 3.00pm. It was facilitated by Dr Annie Say of Natural Capital with help from Emma Perring of ZetTrans. Annie is a trained facilitator who frequently facilitates workshops and other participative processes for projects including transport related proposals. Natural Capital has worked in Shetland on a range of projects and the company has a good understanding of local and strategic issues.

1.3 LAYOUT OF THE WORKSHOP REPORT

The remainder of the report is structured as follows:

- Section 2 sets out the format which was used for the workshop;
- Section 3 presents the feedback from the issues exercises collated in plenary sessions;

¹ STAG: Scottish Transport Appraisal Guidance, Scottish Executive, 2003.

² Bressay Link STAG Strategic Issues and Objectives: Workshop Report November 2007. Natural Capital for ZetTrans

³ STAG includes a two part appraisal. In the first options are screened against the planning objectives and the Government objectives and other relevant objectives are taken into account. Those which meet these go forward to further detailed appraisal in Part 2

⁴ Numbers varied during the day

- Section 4 makes recommendations for the way forward.
- Appendix A is a list of the people who attended the workshop
- Appendix B includes the Lerwick Port Authority's key strategic objectives
- Appendix C presents the draft planning objectives as refined after the first workshop
- Appendix D includes the individual group feedback from the appraisal exercise
- Appendix E has a copy of a sample STAG Part 1 Appraisal Summary Table

2 WORKSHOP

2.1 INTRODUCTION

The workshop format and agenda is summarised in this section. Group exercises are described and references given to outputs.

2.2 WORKSHOP AGENDA

The workshop agenda as designed is presented below.

<i>Agenda Item</i>	<i>Lead</i>	<i>Time⁵</i>
• COFFEE		From 9.00am
• Welcome; Introductions and Introduction to Workshop	AW	9.15-9.25am (10mins)
• Recap on STAG Process	AS	9.25-9.35am (10mins)
• Workshop Agenda and for the Day	AS	9.35-9.45am (10mins)
• Refined Draft Planning Objectives (PowerPoint and handout and description of process and brief group description)	AS/EP	9.45-9.55am (10mins)
• Reminder of Government Transport Objectives		
• Any other relevant Objectives?		
• Agreeing Final Planning Objectives	AS	9.55-10.05am (5mins)
• Options (Brainstorm Long List in Framework of relevant Issues and Objectives)	AS	10.05-10.30am (25mins)
• Refine Long List of Options (Rapid Group Discussion-have we forgotten anything)	AS	10.30-10.45am (10mins)
• BREAK		10.45-10.55am (10mins)
• Appraising Options (Handout - Planning Objectives and STAG criteria) (Work in Groups to appraise options against planning objectives using sheets; then consider effects in context of Government objectives)	AS	10.55-12.25am (90mins)
• <i>If this is too long start pm session-check progress and interest</i>		
• Resume of Morning Session	AS	12.25-12.30am (5mins)
• LUNCH		12.30-1.00pm
• Group Part 1 Appraisal of Options (work through options and complete using PowerPoint-screen out any no-goers and identify those for STAG Part 1 appraisal against Government objectives-run through if time)	AS/EP	1.00-2.40pm (100mins)
• Options for full Part 1 and Part 2 Appraisals – Resume-show appraisal tables on PowerPoint	AS/EP	2.40-2.50pm (10mins)
• Summary and Way Ahead - funding checks; Part 1 feedback; detailed work; consultancy requirements; etc	AS/MC	2.50-3.00pm (10mins)

⁵ Agenda as issued at the beginning of the workshop. Timings therefore approximate

2.3 WORKSHOP EXERCISES

2.3.1 Introduction

The workshop was designed to be interactive and to provide all participants with opportunities to share ideas, in groups and also in plenary sessions. The outputs from all workshop exercises were collated on flipcharts during the workshop (participants' contributions in their own words and those from plenary sessions) and are presented in this report (see Section 3 and Appendix D).

2.3.2 Workshop Introduction

Allan Wishart⁶ welcomed everyone to the workshop and all present introduced themselves. The facilitator gave a brief overview of the first workshop⁷ and other work to date, outlined the purpose of the workshop and introduced the agenda. It was explained that the format was again one designed to encourage all to participate and that all points raised would not be attributed to individual participants or groups.

The Lerwick Port Authority had provided their summary objectives subsequent to the first workshop and these are included in this report in Appendix B for information.

The facilitator reminded the workshop participants that the overall aim of the STAG process (as agreed with the Bressay Link Group) is:

'To identify means of providing sustainable efficient transport links between Bressay and mainland Shetland for the long-term and identify the most appropriate measures to carry forward to implementation for the benefit of Shetland as a whole.'

As in the first workshop it was important to return to this overall aim throughout the day to ensure that the outputs underpinned the needs of this particular study.

2.3.3 Agreeing the Refined Draft STAG Planning Objectives

In the first part of the STAG appraisal options will be screened against 'planning objectives' (see Section 1.1). Those options which do not meet specific local objectives will be sieved out to avoid unnecessary use of time and resources. Setting and agreeing objectives is thus a critical task in the STAG process.

Following the first workshop the project team considered all the draft objectives which each group at the workshop had produced (see Section 3.6 of the first workshop report) and combined and sieved these. These were then discussed at the November Bressay Link Group meeting (see Section 1.1) and the agreed output is included Appendix C.

At the workshop participants were asked to review the refined objectives as presented in Appendix C and to comment on these following discussions at each table. Emma Perring also reminded everyone of the key issues that had been raised to date in order that participants could check that the objectives covered all key issues. These issues are: -

- Accessibility
 - Employment
 - Ferry/Bus Integration
- Current Fare Levels

⁶ Councillor and Chair of ZetTrans

⁷ All at that workshop should have received a copy of the first workshop report. Additional copies can be obtained by email. Request to emma.perring@shetland.gov.uk

- High!- Business Costs
- Business Constraints
 - Time Loss
 - Constraint on Development
- Service Delivery
 - Ageing Population
 - Adequacy of Care
 - Out of Hours Care
- Long Term Impacts
 - Lack of Economic Development
 - High Costs of Access
 - Sustainability of Ferry

Following the group discussions one change was suggested to the draft objective Economy 4 (see Section 3.2). This change was agreed and used in the subsequent appraisal tables.

2.3.4 Options for the Link

Participants were asked to brainstorm options for the link taking account of the issues and the agreed planning objectives. Participants were encouraged to be open-minded and pragmatic and to think of reasonable alternatives. They were asked to think of options relevant to the scale of the problems which had been raised but also to think widely and not just of the obvious. It was also suggested that some issues might best be met by a combination of measures.

Each group spent some time in discussion and then ideas were fed back in plenary (see Section 3.3). A check was made that the options raised in meetings to date⁸ had been covered. These were:

- Retain the 'Leirna'
 - Different shift/crew configurations
 - More hours, more efficient
 - Possible re-engine
- Bridge
 - Lift
 - Swing
 - Current high level bridge plans
- Tunnel
- Chain ferry
- Causeway
- Fixed link and central passenger ferry
- Fixed link – multi purpose, with for example, cruise ship berthing, tidal energy etc

It was considered that all these options had been covered in the list collated in the plenary feedback session (see Section 3.4).

2.3.5 Appraising Options

The next exercise comprised the majority of the workshop. The list of options created in the previous exercise was rationalised (see Section 3.4) and any further option which it was considered did not meet the objectives and which the workshop participants agreed should not be taken forward to STAG Part 1 full appraisal were identified (see Tables 3.1 and 3.2 and Section 4).

⁸ See Bressay Link First Stage Consultation Report. October 2007. ZetTrans

Each remaining option (or as many as time allowed) was appraised against the agreed planning objectives. Each group was provided with a copy of the Government Objectives for reference. Tables were provided to record findings. The completed group tables are included in Appendix D⁹.

The options were then appraised in plenary session and any different opinions discussed. The agreed tables are included in Section 3.5.

Time allowed only brief consideration to be given to how each option met the Government transport objectives and issues to do with implementability etc.

2.3.6 Concluding Remarks

Participants were provided with a brief summary of the day and of the proposed way ahead. The options appraisal tables will be used to input to the STAG Part 1 Appraisal Summary Tables for all those options which it was considered were worthy of this level of appraisal (see Section 4). The outcome of the STAG Part 1 appraisal would be made known to the participants including those options recommended for detailed appraisals in STAG Part 2. ZetTrans would take on necessary consultancy support to assist in the Part 1 and Part 2 appraisals.

All participants were encouraged to email any further thoughts about options to Emma Perring at ZetTrans. All participants at the workshop were told that they would be emailed a copy of the workshop report and were asked to comment if anything had been misinterpreted in it.

All participants were thanked for attending and contributing to the strategic workshop and for their useful contributions.

⁹ Each option was given a number for ease of comparison of findings (see Table 3.1)

3 OUTPUTS FROM THE WORKSHOP

3.1 INTRODUCTION

This section of the report presents the outputs from the plenary sessions. Individual group outputs (not attributed) from the appraisal exercise are included in Appendix D. Outputs are as recorded at the workshop.

3.2 REFINING OBJECTIVES

One change was suggested to the draft planning objectives included in Appendix C which was accepted by the participants (see Section 2.3.3). This was to the objective Economy 4 which had read '*To provide a link which is affordable and sustainable for users and funders*' and was amended by splitting into two objectives as follows:

- Economy 4: To provide a link which is affordable for users
- Economy 5: To provide a link which is sustainable for funders and is value for money

3.2.1 Ideas Parked for Further Discussion at a Future Date

The discussion about the detail of some objectives raised issues which it was considered should be discussed further by the Council and others at an appropriate time. It was considered these issues could not be resolved at the workshop but were worthy of record for the future.

- Promote economic growth- different options have the ability to have significant impacts on economic growth in Shetland in rather different ways
- Centralisation / decentralisation-a fixed link may further focus development on Lerwick whereas continuation of the ferry service may better support decentralisation
- Housing issues-is more land available in Lerwick or is it not?-appear to be mixed messages
- What is 'affordable' – SIC to better define affordability and its implication to the detailed options appraisal (STAG 2)
- Need to look at options **in** Bressay - as well as between Bressay and the islands

3.3 ADDITIONAL OPTIONS

The following options related to the link were suggested in the plenary session to address the issues¹⁰ (see Section 2.3.4):

Ferry Services

- More regular ferry services
- Less costly ferry service
- Collect fares on shore – fewer crew? – pay and display
- Encourage car sharing to reduce passenger numbers to reduce crew requirements and frequency
- Hydrogen powered ferry
- Electric ferry
- Ferry
 - Extend operating hours from 7 to 11 (1am), earlier operation, 24 hour
 - Increase frequency - shuttle

¹⁰ The options are as recorded at the workshop but have been grouped to facilitate the STAG Part 1 work

- Fares – zero, half, variant fares
- Chain ferry
 - Existing ferry link
 - Holm of Cruester
 - Point of Scotland

Fixed Link Options: Tunnel

- Tunnel
 - Point of Scotland
 - Rova Head to North end
- Drill and blast
- Immersed tube
- Bored tunnel
- Double lane tunnel with cycle track and pedestrian facilities
- Immersed tube – lay along coast – create landfall
- Causeway and tunnel

Fixed Link Options: Bridge

- High level bridge – shortest crossing
- Full causeway
- Transporter bridge
- Causeway and opening bridge and power generation

Public Transport Enhancements (which could be combined with any option)

- Improve public transport in Bressay
- Taxi, minibus, dial a ride
- Bus link to ferry and on ferry
- Water taxi
- Passenger ferry
- Wider service-demand response
- Cycle racks on ferry

Other Transport Options

- Helicopter service

Additional Options

- Causeway and chain ferry
- Existing ferry or chain ferry and peak time 'taxi' for passengers
- Fixed link and passenger ferry
- Fixed link and very regular bus service
- Tourist opportunities with boat service
- Transport subsidy (to each resident to use as wish)
- Use causeway for cruise berth

3.4 RATIONALISATION OF OPTIONS

The list of options generated at the workshop (see above) was drawn together and options numbered for reference as shown in Table 3.1. The workshop participants discussed and screened the options and decided which met the planning objectives sufficiently well to be worthy of further consideration (see Tables 3.1 and 3.2). The appraisal of remaining options is described in Section 3.5.

Table 3.1 Findings of Initial Appraisal of Options v Planning Objectives

Option	Description	Comment	Meets Planning Objectives?
1	Chain ferry		✓
2	Reconfigured ferry service (existing vessel)	All options (which would be considered in detail at STAG2)	✓ ✓
3	Passenger ferry (or also a ferry service)	May be in combination with other options (eg passenger ferry)	✓ ✓
3a	Water taxi	Included in 3	Yes if in combination with another link option
4	Electric ferry	Need more information and to be considered as a ferry option-may be worthy of consideration as a ferry replacement option in future	Yes but to be considered as ferry option
5	Hydrogen ferry	Need more information and to be considered as a ferry option-may be worthy of consideration as a ferry replacement option in future	Yes but to be considered as ferry option
6	Ferry – cheaper to funders and users (less crew etc), less passengers, more frequent	See no 2	✓ ✓
7	Improve public transport <ul style="list-style-type: none"> • Bus links • Taxi • DRT • Mini bus • etc 	To be considered with all options	✓ ✓
8	Helicopter service	Not considered a viable alternative to ferry	✗
9	Transport subsidy to local people	Only considered a viable option in combination with other options eg reconfiguration of ferry service-could be considered as a sensitivity test at later stage	✗? Only viable with other options
10	Increase provision for cyclists and pedestrians	To be considered with all options	✓ ✓
11	Tunnel (drills and blast bore etc)	All options to be considered further	✓ ✓
12	Immersed tube	Also in combination with part causeway	✓ ✓
13	Causeway (and pier/energy generation)	Doesn't meet safety objectives (access north for lifeboat) Option would not meet LPA objectives Environmental impacts?	✗
14	Opening bridge	Worthy of some further consideration although LPA has reservations	✓ / ?
15	Causeway and tunnel (north end)	Include with no 11	Yes but to be considered as tunnel option
16	High level bridge	Worthy of some further consideration although LPA has reservations	✓ / ?
17	Transporter bridge	Not considered worthy of further consideration because of constraints to harbour and not as efficient as current provision	✗

3.5 APPRAISAL OF OPTIONS

The findings of the group appraisals of options (see Section 2.3.5) are included in Appendix D. The following option summary sheets were completed in the plenary session:

- Do Minimum and Options 1 (chain ferry) and 2 (reconfigured ferry service) summarised in Table 3.2a.
- Options 8 (helicopter service); 13 (causeway) and 14 (opening bridge) summarised in Table 3.2b.
- Options 11 (tunnel options) and 16 (high level bridge) summarised in Table 3.2c.

The completed summaries are presented below.

Table 3.2a Bressay STAG: Initial Appraisal of Options Worksheets Feedback in Plenary

Options	Do Minimum		No1 Chain Ferry		No 2 Reconfigured Ferry: assume 24 hrs, free, shuttle	
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	No	Not enhancing, not changing	Uncertain	Depends on timing, size and crewings. Journey time could be longer, depending on location, meaning less frequency than current option. Insufficient information	Yes	
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	Yes	Doesn't not allow the land on Bressay – LPA would consider development in the long-term Require terminal and marshalling for <i>Filla</i>	Uncertain, query no	Need more understanding of operation	Yes	Greater frequency could lead to busier navigational situation, as increase in traffic. Doesn't hamper, require more management
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	No	No change	Yes No	If more frequent If leads to less crewing requirements	Yes	
Ec4: To provide a link which is affordable for users	No	Too expensive for users	Unknown	Yes, if cheaper	Yes	
Ec5: To provide a link which is sustainable for funders, and value for money	No Don't know	Council need for savings, makes financial sustainability more challenging. Need for SIC	Unknown	Yes, if cheaper. Location is important, depending on onshore requirements	Don't know	On the whole, less revenue would be a less sustainable situation. Scottish Govt taking

Options	Do Minimum		No1 Chain Ferry		No 2 Reconfigured Ferry: assume 24 hrs, free, shuttle	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
		priorities.				off tolls, RET? Affordability is determined by 'value' of accessibility
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	No	Because not accessible all the time etc.	Yes?	Depends on configuration	Yes	
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	No	Shift work, employment	Potentially Yes	Depends on frequency and location	Yes	
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	Uncertain	For private housing – constraints on construction For social housing – lack of demand Issues around uncertainty of link	Uncertain	For private housing – constraints on construction For social housing – lack of demand Issues around uncertainty of link	Yes	
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours	Don't Know	Yes for emergency services No for out of hours and Social Care	No	If slower and less frequent. Possible hold up if on wrong side	Yes	There all the time. There is weather constraint, which could be overcome with a re-engining.

Options	Do Minimum		No1 Chain Ferry		No 2 Reconfigured Ferry: assume 24 hrs, free, shuttle	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
needs.						
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island	Yes	No change	Yes	No change	Yes	
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	Uncertain	Need to know more about ferry's carbon footprint.	Ditto do minimum	+ less carbon emissions?	No	More ferry use, more car use. Complicated.
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	Uncertain		Ditto do minimum		Yes	Encourages more people
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	Yes		Uncertain, to less good	Need more information on operation – believe that would hamper as does have fixed structure.	Yes	Health impact if easier for people to take vehicles. Could pay for vehicles? Could lead to capacity problems. Problems with shuttle, as don't run to timetable.
S2. To ensure the link	Yes		As above		Yes	More vehicles could

Options	Do Minimum		No1 Chain Ferry		No 2 Reconfigured Ferry: assume 24 hrs, free, shuttle	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
does not compromise maritime safety or road safety						make it less safe – double vehicles is double safety. Greater frequency could lead to busier navigational situation, as increase in traffic. Better access for police. If more frequent would assist 8.30 'dash' for ferry.
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	No	A lot of issues around access.....	Depends on frequency of service		Yes	
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	Don't know	Planning zones – not taking opportunities up Council's decentralisation policy	Don't know	Planning zones – not taking opportunities up Council's decentralisation policy	Uncertain	

Table 3.2b Bressay STAG: Initial Appraisal of Options Worksheets Feedback in Plenary (continued)

Options	No 8 Helicopter		No 13 Causeway		No 14 Causeway with Opening Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	Can't take cars. Capacity danger Does it have a role as combined – have to make sure it was available, therefore expense.		Yes		Key issues – conflicts over rights of way (road or boats); width of bridge would have to satisfy LPAs requirements for shipping and future improvements in navigational channel.	
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion			No	Split port in 2 – increased costs, need 2 sets of tugs, boats steam around Bressay to get from one end to the other	Swing bridge set at height for lifeboats etc. but would have to be swung for larger/most shipping. Under control of LA and LPA	
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities			No	Loss of employment in harbour, constrain port. E.g. decommissioning, and other industry needing unrestricted movement. Enhances access to employment for people on Bressay	Reliability, location, costs etc>??? Possibly more maintenance costs. Original plans – maintenance costs prohibited.	
Ec4: To provide a link which is affordable for users			Yes		Safety issues over problems happening when moving. Can be lower therefore could be closer to town	

Options	No 8 Helicopter		No 13 Causeway		No 14 Causeway with Opening Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
					<p>Uncertainties as to when open etc.</p> <p>Advantage would be that if broken, boats would have another way out – unlike in estuaries</p>	
Ec5: To provide a link which is sustainable for funders			Yes		Nearly costs of high bridge and higher maintenance costs	Cruister to North Ness would make it much more accessible. North Ness isn't possible to be developed now.
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay			Yes			
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland			Yes			
Ac3: To provide a link which does not restrain opportunities for housing in Bressay			Yes			

Options Objectives	No 8 Helicopter		No 13 Causeway		No 14 Causeway with Opening Bridge	
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.			Yes	Other than severe weather (e.g. Churchill Barriers, but unlikely to have same wave heights)		
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island			No	Impact on harbour's environment – natural flushing, no maintenance required. Would lead to costs		
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources			No	Increased shipping and increased car use		
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay			Yes			
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance				Concerns over community safety? Better access to		

Options	No 8 Helicopter		No 13 Causeway		No 14 Causeway with Opening Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
community safety and health				health		
S2. To ensure the link does not compromise maritime safety or road safety			No	Compromise maritime safety. Possible build up of shipping. Lifeboat on one side or another.		
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities			Yes			
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies			No	Not with LPA		

Table 3.2c Bressay STAG: Initial Appraisal of Options Worksheets Feedback in Plenary (continued)

Options	No 11 Tunnel		No 16 High Level Bridge			
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	Yes		Yes			
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	Yes	Future constraint on depth that would dredge to, but might require future proofing for dredging	No	Depends on size (vs practicable cost) and impact on future developments. Navigation – height and width are more important than depth) not developing so fast – sea draft might be 7-8m, for new vessels. Unlikely to be able to dredge the area required for deeper than 9m.		
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	Yes	Detrimental to ferry posts. Maintenance required would be FTE, 1-2? Vs opening up other opportunities	Yes	Adverse affect on port Ferry jobs Vessel operations		
Ec4: To provide a link	Yes		Yes	If free		

Options	No 11 Tunnel		No 16 High Level Bridge			
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
which is affordable for users						
Ec5: To provide a link which is sustainable for funders	Yes		Unknown			
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	Yes	Depend on location and whether able to enable cyclists and pedestrians	Yes			
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	Yes		Yes	Depends on infrastructure that went with it – decrease in frequency of 'transport'		
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	Yes		Yes			
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	Yes		Yes	Restriction with weather – plans included wind sheilding		

Options	No 11 Tunnel		No 16 High Level Bridge			
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island		Nothing visible, still feel like an island	No	Visual impact? Iconic? Loss of island status		
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	Uncertain		No/Uncertain	increased car use vs ferry, increased vessel movements		
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay			Yes			
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	yes		Same as tunnel	Concerns over community safety? Better access to health		
S2. To ensure the link does not compromise maritime safety or road safety	yes		No	Compromise maritime safety – air draft, problem of structures in sea. Coastguard issues.		

Options	No 11 Tunnel		No 16 High Level Bridge			
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities			Yes	Pedestrians might not be keen to walk across it.		
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies			No	Not with LPA		

4 RECOMMENDATIONS ON THE WAY FORWARD

It is recommended that:

- Options 8 (helicopter service); 13 (causeway) and 17 (transporter bridge) are not considered further.
- The following options are taken through full Part 1 STAG appraisal:
 - Option 1 (chain ferry);
 - Option 2 (including Option 6) (reconfigured ferry service);
 - Option 3 and 3A (passenger ferry and water taxi);
 - Option 7 (improvements to public transport);
 - Option 10 (improved provisions for cyclists and pedestrians);
 - Option 11 (tunnel options-including Option 15 (causeway and tunnel));
 - Option 12 (immersed tube tunnel);
 - Option 14 (an opening bridge);
 - Option 16 (a high level bridge).
- Options 4 (electric ferry); Option 5 (hydrogen ferry) and Option 9 (transport subsidies) are considered further in STAG Part 2 if the ferry options are taken forward to this more detailed appraisal.
- Options 7 (improvements to public transport) and Option 10 (improved provisions for cyclists and pedestrians) are considered in combination with other options.
- Further consideration is given on how any option might 'fit' with stakeholder objectives.
- Further consideration is given to the definition of 'affordability' in Shetland by ZetTrans and the Council.
- The Council confirm what available land there is in Lerwick for housing and development and whether there is a shortfall as there appears to be mixed ideas at present.
- The Part 1 STAG appraisals are completed as soon as possible drawing on additional expertise to inform these as required (eg in connection with the chain ferry etc).
- Those options which meet the objectives and other criteria in Part 1 are taken forward to Part 2 and that appropriate expertise is commissioned to assist in the detailed appraisals.
- The Council considers the strategic landuse transport planning effects of the preferred options as defined by the STAG Part 2 process in the light of their potential impact on Shetland's future (eg promoting centralisation/ decentralisation etc).

Appendix A

Workshop Attendees

Appendix A: Workshop Attendees

Name	Organisation	Address	Email
June Porter	Community Learning and Development	Old Library centre	June.porter@shetland.gov.uk
Shona Thompson	Education and Social Care Department	Hayfield House	Shona.Thompson@shetand.gov.uk
Emma Perring	Transport/ZetTrans		
Victor Sandison	Lerwick Port Authority	Albert Building, Lerwick	victor@lerwick-harbour.co.uk
Michael Craigie	Transport/ZetTrans		
David MacNae	SIC Roads	Gremista	David.macnae@shetland.gov.uk
Bessie Barron	Planning		
Jonathan Swale	Scottish Natural Heritage		
John W Clark	SIC Ferries	'Leirna', Bressay	Johnclark774@ksmail.net
Theo Smith	Bressay CC	Bressay	gunnista@aol.com
Iris Hawkins	Councillor		
Wendy Hatrick	NHS		
Anita Jamieson *	SIC Housing	Fort Road, Lerwick	Anita.jamieson@shetland.gov.uk
Katrina Wiseman *	HIE Shetland		
Allan Wishart *	Councillor	Townhall, Lerwick	Allan.wishart@shetland.gov.uk

* attended for half of the workshop

Appendix B

Lerwick Port Authority's Key Strategic Objectives

Appendix B: Lerwick Port Authority's Key Strategic Objectives

The **key strategic objectives** of the Authority are:

- The management, maintenance and regulation of Lerwick Harbour.
- To continuously improve its environmental performance.
- To invest in new port facilities where a need is identified. To diversify its portfolio of investments and sources of income, especially where this also supports and strengthens its core harbour activity.
- To attract new businesses and ensure the continued satisfaction of existing customers and users, and to defend the port against unfair competition and anti-competitive practices.
- To maximise quality and value for money in all its services through continually endeavouring to make its operations cost-effective, efficient and streamlined while maintaining high standards.
- To maintain existing buildings, plant and equipment and harbour facilities in a safe and serviceable order.
- To operate safely with particular regard to ensuring compliance with any new legislative requirements within required timescales.

A full copy of Lerwick Port Authority's Strategy & Business Plan can be downloaded from the Lerwick Port Authority website at:- <http://www.lerwick-harbour.co.uk/pdfs/stratbusplan.pdf>

Appendix C

Draft Planning Objectives

Appendix C: Draft Planning Objectives

Bressay STAG: Draft Refined Objectives

Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency

- Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.
- Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion
- Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities
- Ec4: To provide a link which is affordable and sustainable for users and funders

Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network

- Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay
- Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland
- Ac3: To provide a link which does not restrain opportunities for housing in Bressay
- Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.

Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy

- Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island
- Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources
- Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay

Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff

- S1. To ensure the link continues to maintain and enhance community safety and health
- S2. To ensure the link does not compromise maritime safety or road safety

Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport

- Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities
- Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies

Appendix D

Individual Group Feedback

Appendix D: Workshop Output

D1.1 Introduction

This appendix presents the output from each group for the appraisal exercise undertaken in the workshop (see Section 2.3.5). Plenary feedback is included in Section 3.5 of the main report.

BRESSAY STAG: INITIAL APPRAISAL OF OPTIONS WORKSHEET

Aim: To an provide affordable, efficient, flexible and sustainable transport link between Bressay and Mainland Shetland

D1.2 Group 1

Group 1_Table A

Options	1. Chain Ferry		4. Electric Ferry		5. Hydrogen Ferry	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	What is enhanced?	<ul style="list-style-type: none"> • Further away? • Disrupted by shipping? 				
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	×	<ul style="list-style-type: none"> • Minor disruption 				
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	✓	<ul style="list-style-type: none"> • Could do if more frequent 				
Ec4: To provide a link which is affordable for users	?	<ul style="list-style-type: none"> • Maybe 	✓		✓	

Options	1. Chain Ferry		4. Electric Ferry		5. Hydrogen Ferry	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Ec5: To provide a link which is sustainable for funders and is value for money	?	<ul style="list-style-type: none"> maybe 	✓		✓	
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	?					
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	✓					
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	=					
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	=	<ul style="list-style-type: none"> “maintain” 				
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland’s unique environment and safeguards the natural, cultural and social heritage of the island	=					

Options	1. Chain Ferry		4. Electric Ferry		5. Hydrogen Ferry	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	✓		✓		✓	
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	=					
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	=					
S2. To ensure the link does not compromise maritime safety or road safety	×	<ul style="list-style-type: none"> Maybe (maritime) 				
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	=					
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	=					

Group 1 Table B

Options	11. Drill and Blast Tunnel		13. Causeway		14. Causeway and Open Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	✓	<ul style="list-style-type: none"> possibly 	✓	<ul style="list-style-type: none"> Improved access 	✓	<ul style="list-style-type: none"> Improved access
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✓	<ul style="list-style-type: none"> Apart from dredging/quay side issues 	× × ×		×	<ul style="list-style-type: none"> Opening bridge
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	✓		×	<ul style="list-style-type: none"> Harbour jobs 	✓ / ×	<ul style="list-style-type: none"> (Bressay) (effect on Harbour)
Ec4: To provide a link which is affordable for users	✓ / ?	<ul style="list-style-type: none"> (Funders) (Users: unless toll) 	×	<ul style="list-style-type: none"> Compensation (for loss of navigation) 	?	<ul style="list-style-type: none"> Engineering assessment and requirement
Ec5: To provide a link which is sustainable for funders and is value for money						
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓		✓		✓	
Ac2: To provide a link which enables the Bressay community equal opportunities to	✓		✓		✓	

Options	11. Drill and Blast Tunnel		13. Causeway		14. Causeway and Open Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
access employment, services and facilities as other communities in Shetland						
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓		✓		✓	
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	✓		✓		✓	
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island	✓	<ul style="list-style-type: none"> (apart possibly from approach roads) 	✗	<ul style="list-style-type: none"> Removes fishing effect 	?	
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	?		?	<ul style="list-style-type: none"> Ferries versus vehicles (all indirectly construction) 	?	
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	✓		✓		✓	
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community	✓		✓		✓	

Options	11. Drill and Blast Tunnel		13. Causeway		14. Causeway and Open Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
safety and health						
S2: To ensure the link does not compromise maritime safety or road safety	✓		×		✓	
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓		×		×	<ul style="list-style-type: none"> Effect on passenger and freight shipping
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	✓		×	<ul style="list-style-type: none"> harbour 		

Group 1_Table C

Options	No change to Current service					
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	=					
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✓					

Options	No change to Current service					
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	=					
Ec4: To provide a link which is affordable for users	?					
Ec5: To provide a link which is sustainable for funders and is value for money	?					
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	=					
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	×					
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	×					
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	=					

Options	No change to Current service					
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland’s unique environment and safeguards the natural, cultural and social heritage of the island	=					
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	x					
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	x / ?					
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	=					
S2. To ensure the link does not compromise maritime safety or road safety	=					
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	x					
Int2: To promote a transport link that	x					

Options	No change to Current service					
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
facilitates the delivery of other committed plans and strategies						

D1.3 Group 2

Group 2_Table A

Options	1. Chain Ferry		2. Reconfiguration Ferry		3. Tunnel	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	✓ (potentially)	<ul style="list-style-type: none"> More detail required on this type of operation Maintenance/need reserve ferry? Cost and frequency on this type of operation 	✓	<ul style="list-style-type: none"> Depend on cost Need more information on options 	✓	<ul style="list-style-type: none"> Depend on initial cost and maintenance cost
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	? (unsure)	<ul style="list-style-type: none"> Restrictions on anchoring vessels where chain on seabed Could present navigation constraints for other vessels 	✓		✓	
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment	✓ (potentially)	<ul style="list-style-type: none"> Could supplement with a water taxi(although may be commercial venture) Further details 	✓	<ul style="list-style-type: none"> Depend on frequency/cost 	✓	

Options	1. Chain Ferry		2. Reconfiguration Ferry		3. Tunnel	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
opportunities		required on cost, frequency and time (of operation)				
Ec4: To provide a link which is affordable for users	✓ (potentially)		✓ (potentially)	<ul style="list-style-type: none"> Dependant on cost (provision and use) 	✓	<ul style="list-style-type: none"> Tolls?
Ec5: To provide a link which is sustainable for funders and is value for money						
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓	<ul style="list-style-type: none"> Could connect in with existing services Location may require additional infrastructure 	✓	<ul style="list-style-type: none"> 	✓	<ul style="list-style-type: none"> Location may require additional infrastructure provision
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	✓ (potentially)	<ul style="list-style-type: none"> Dependant on frequency of service 	✓	<ul style="list-style-type: none"> Dependant on frequency of service 	✓	<ul style="list-style-type: none"> Would provide 24hour access
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓ (potentially)	<ul style="list-style-type: none"> Dependant on cost 	✓ (potentially)	<ul style="list-style-type: none"> Dependant on cost 	✓	
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	✓ (potentially)	<ul style="list-style-type: none"> Dependant on frequency – might be slower 	✓	<ul style="list-style-type: none"> Increased service could improve access 	✓	
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link	✓		✓ (potentially)	<ul style="list-style-type: none"> Increased 	✓	

Options	1. Chain Ferry		2. Reconfiguration Ferry		3. Tunnel	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
to Bressay that recognises and protects Shetland’s unique environment and safeguards the natural, cultural and social heritage of the island				carbon emissions?		
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	✓		✓ (potentially)	<ul style="list-style-type: none"> Increased carbon emissions? 	✓	
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	✓ (potentially)	<ul style="list-style-type: none"> Dependant on capacity of ferry % cost 	✓ (potentially)	<ul style="list-style-type: none"> Dependant on capacity of ferry % cost 	✓	
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	✓		✓		?/✓	<ul style="list-style-type: none"> claustrophobia
S2. To ensure the link does not compromise maritime safety or road safety	?	<ul style="list-style-type: none"> need further information on operation and possible impacts/ navigational constraints 	✓		✓	<ul style="list-style-type: none"> would increase traffic flows
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓ (potentially)		✓	<ul style="list-style-type: none"> as long as better provision / integration 	✓	
Int2: To promote a transport link that	✓		✓		✓	

Options	1. Chain Ferry		2. Reconfiguration Ferry		3. Tunnel	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
facilitates the delivery of other committed plans and strategies						

Group 2 Table B

Options	13. Causeway		16. High Level Bridge		Do Minimum	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	✓		✓	<ul style="list-style-type: none"> Depend on cost and maintenance 	✗	<ul style="list-style-type: none"> No enhancement of service
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✗	<ul style="list-style-type: none"> split port in two increased costs to port – would need two sets of tugs – for example – vessels have to go round Bressay (3 hours) 	✗ / ?	<ul style="list-style-type: none"> dependant on central span/height (clearance) constraints on ability to dredge post construction requirements of port as statutory navigation authority must be considered/me t dependant on parameters 	✓	
Ec3: To provide and promote a link which	✗	<ul style="list-style-type: none"> could constrain development of 	✗ / ?		?	<ul style="list-style-type: none"> no enhancement

Options	13. Causeway		16. High Level Bridge		Do Minimum	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
supports a stable and sustainable economy and enhances employment opportunities		<ul style="list-style-type: none"> Port reduce employment opportunities 				of service = no enhanced opportunities
Ec4: To provide a link which is affordable for users	✓		potentially	<ul style="list-style-type: none"> Dependant on tupe and cost of tolls? 	×	
Ec5: To provide a link which is sustainable for funders and is value for money						
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓	<ul style="list-style-type: none"> Location may require additional infrastructure 	✓	<ul style="list-style-type: none"> Location may require additional infrastructure 	×	•
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	✓		✓		×	<ul style="list-style-type: none"> restricted service
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓		✓		× / ?	
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	✓		✓		✓ for emergency services × for other service providers	
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						

Options	13. Causeway		16. High Level Bridge		Do Minimum	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island	?	<ul style="list-style-type: none"> could encourage silting in harbour Port currently has a natural through flushing current – may require maintenance dredging 	?	<ul style="list-style-type: none"> size could have visual environmental impact weather impacts - closures 	✓	<ul style="list-style-type: none"> no change
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	x	<ul style="list-style-type: none"> ships round Bressay etc 	✓		x / ?	<ul style="list-style-type: none"> need more information with regard to ferry and carbon emissions
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	✓		✓		x / ?	<ul style="list-style-type: none">
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	✓		?	<ul style="list-style-type: none"> depend on parameters (height) – vertigo windage 	✓	<ul style="list-style-type: none"> no current issues
S2. To ensure the link does not compromise maritime safety or road safety	x		x	<ul style="list-style-type: none"> parameters? Pillars a permanent obstruction Restriction on air craft Tidal flow effects constrain free movement of vessels through Port 	✓	<ul style="list-style-type: none"> No issues
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link	✓		✓	<ul style="list-style-type: none"> as long as 	x	<ul style="list-style-type: none"> timetable etc

Options	13. Causeway		16. High Level Bridge		Do Minimum	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities				better provision / integration		<ul style="list-style-type: none"> access issues
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	✓		✓		x / ?	<ul style="list-style-type: none"> planning zones not taking up opportunities councils decentralisation policies

D1.4 Group 3

Group 3 Table A

Options	1.		2.		4. and 5.	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	x	<ul style="list-style-type: none"> longer crossing time relocation terminal 	✓	<ul style="list-style-type: none"> cost less for user more frequent 	✓	<ul style="list-style-type: none"> cost less for user more frequent
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	x	<ul style="list-style-type: none"> navigation restricted during crossing 	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> ASIS

Options	1.		2.		4. and 5.	
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	×	<ul style="list-style-type: none"> employment less on this ferry 	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> ASIS
Ec4: To provide a link which is affordable for users	✓	<ul style="list-style-type: none"> Potential cost less 	✓		✓/?	
Ec5: To provide a link which is sustainable for funders and is value for money	?		?			
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓		✓	<ul style="list-style-type: none"> 	✓	
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	×	<ul style="list-style-type: none"> time constraints and location 	✓	<ul style="list-style-type: none"> frequency cost 	✓	<ul style="list-style-type: none"> frequency cost
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓		✓	<ul style="list-style-type: none"> frequency cost 	✓	<ul style="list-style-type: none"> frequency cost
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	×	<ul style="list-style-type: none"> Worse than existing 	✓	<ul style="list-style-type: none"> Even better if vessel is re-engined 	✓	<ul style="list-style-type: none"> Even better if vessel is re-engined

Options	1.		2.		4. and 5.	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland’s unique environment and safeguards the natural, cultural and social heritage of the island	✓	<ul style="list-style-type: none"> Still seen as ferry, inhibits migration of feral cats 	✓	<ul style="list-style-type: none"> Even better if vessel is re-engined 	✓	<ul style="list-style-type: none"> Even better if vessel is re-engined Improve carbon footprint
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	✓	<ul style="list-style-type: none"> Less energy 	?	<ul style="list-style-type: none"> Life cycle analysis required 	?	<ul style="list-style-type: none"> Life cycle analysis required Improve carbon footprint
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	?	<ul style="list-style-type: none"> Dependant on capacity of ferry % cost 	✓	<ul style="list-style-type: none"> Frequency cost 	✓	<ul style="list-style-type: none"> Frequency Cost Improve carbon footprint
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	×	<ul style="list-style-type: none"> frequency for long options 	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> ASIS
S2. To ensure the link does not compromise maritime safety or road safety	×	<ul style="list-style-type: none"> plenty of issues where used elsewhere 	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> ASIS
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓	<ul style="list-style-type: none"> airports 	✓	<ul style="list-style-type: none"> frequency and length of operation day 	✓	<ul style="list-style-type: none"> frequency and length of operation day

Options	1.		2.		4. and 5.	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	?		?		?	

Group 3 Table B

Options	6.		11. and 12.		16.	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	✓	<ul style="list-style-type: none"> cost less for user more frequent 	✓	<ul style="list-style-type: none"> location dependant (public transport provision) 	✓	
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> Immersed tube during construction 	✗	<ul style="list-style-type: none"> Depends on size and location
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> Detrimental to Bressay Ferry jobs 	✓	<ul style="list-style-type: none"> Ferry crews!
Ec4: To provide a link which is affordable for users	✓/!		✓/!	<ul style="list-style-type: none"> No toll 	✓/!	<ul style="list-style-type: none"> No toll
Ec5: To provide a link which is sustainable for funders and is value for						

Options	6.		11. and 12.		16.	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
money						
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓	•	✓	• accessibility depends on location for pedestrians	✓	
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	✓	• frequency • cost	✓		✓	• location
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓	• frequency • cost	✓		✓	
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	✓	• Even better if vessel is re-engined	✓		✓	• high sided vehicle restrictions in wind
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island	✓	• Even better if vessel is re-engined	✓	• Usually okay • Potential route for feral animals	=	• Fine arts dependant
Env2: To provide a link that seeks to minimise carbon emissions and	?	• Life cycle analysis required	?	• Life cycle analysis required	=	• Life cycle

Options	6.		11. and 12.		16.	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
the use of finite resources						
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	✓	<ul style="list-style-type: none"> Frequency cost 	✓		✓	
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	✓	<ul style="list-style-type: none"> ASIS 	✓ / x		=	
S2. To ensure the link does not compromise maritime safety or road safety	✓	<ul style="list-style-type: none"> ASIS 	✓	<ul style="list-style-type: none"> Roads may lead people unfamiliar with single track 	✓	<ul style="list-style-type: none"> Unfamiliar drivers
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓	<ul style="list-style-type: none"> frequency and length of operation day 	✓	<ul style="list-style-type: none"> frequency and length of operation day 	✓	<ul style="list-style-type: none"> pedestrians may be height conscious
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	?		?		?	<ul style="list-style-type: none"> current SIC policy

Group 3_Table C

Options	17.		Do Nothing			
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						

Options	17.		Do Nothing			
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	×	<ul style="list-style-type: none"> • travel time • weather constraints 	×			
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	×	<ul style="list-style-type: none"> • narrow • low 	✓			
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	×	<ul style="list-style-type: none"> • narrow • low 	×			
Ec4: To provide a link which is affordable for users	✓	<ul style="list-style-type: none"> • Free 	×			
Ec5: To provide a link which is sustainable for funders and is value for money	?	<ul style="list-style-type: none"> • ?? 				
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	×	<ul style="list-style-type: none"> • Free 	×			
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in	×	<ul style="list-style-type: none"> • more constraint 	×	<ul style="list-style-type: none"> • shift workers and social 		

Options	17.		Do Nothing			
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Shetland						
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	?		✓			
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	×	<ul style="list-style-type: none"> • slower 	=	<ul style="list-style-type: none"> • social services issues 		
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island	×	<ul style="list-style-type: none"> • ugly 	✓			
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	?		=	<ul style="list-style-type: none"> • life cycle analysis 		
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	×	<ul style="list-style-type: none"> • constraints 	=	<ul style="list-style-type: none"> • may need more runs 		
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	×	<ul style="list-style-type: none"> • hazard in itself 	✓			
S2. To ensure the link does not compromise	×		✓			

Options	17.		Do Nothing			
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
maritime safety or road safety						
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓		✗	<ul style="list-style-type: none"> frequency length of day 		
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	?		?			

D1.5 Group 4

Group 4 Table A

Options	2. Reconfigured Ferry service		3. Passenger Ferry		7. Improved Public Transport	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	✓	<ul style="list-style-type: none"> depending on reconfigure options 	<ul style="list-style-type: none"> not an option on its own but could be option alongside another vehicle option 	✗	<ul style="list-style-type: none"> not on its own but only if linked to another option 	

Options	2. Reconfigured Ferry service		3. Passenger Ferry		7. Improved Public Transport	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✓				<ul style="list-style-type: none"> not an option in its own right, but needs to be considered as part of another option 	
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	✓					
Ec4: To provide a link which is affordable for users	?	<ul style="list-style-type: none"> Could still be less for funders than other options 				
Ec5: To provide a link which is sustainable for funders and is value for money						
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓	<ul style="list-style-type: none"> Depending on reconfiguration 				
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	✓	<ul style="list-style-type: none"> Depends 				
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓	<ul style="list-style-type: none"> depends on other factors, e.g. land use 				
Ac4: To maintain and improve accessibility	✓					

Options	2. Reconfigured Ferry service		3. Passenger Ferry		7. Improved Public Transport	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
and response times for emergency services and other service providers, including out-of-hours needs.						
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland’s unique environment and safeguards the natural, cultural and social heritage of the island	✓	<ul style="list-style-type: none"> no need for increased infrastructure 				
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	?	<ul style="list-style-type: none"> no need for increased infrastructure 				
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	✓	<ul style="list-style-type: none"> no need for increased infrastructure 				
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	✓					
S2. To ensure the link does not compromise maritime safety or road safety	✓					
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and	✓	<ul style="list-style-type: none"> depending on reconfiguration of options 				

Options	2. Reconfigured Ferry service		3. Passenger Ferry		7. Improved Public Transport	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
infrastructure, including air, ferry, bus, cycling and walking opportunities						
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	✓	<ul style="list-style-type: none"> e.g. decentralisation 				

Group 4 Table B

Options	8. Helicopter		9. Subsidy		10. Provision cyclists / pedestrians	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	×	<ul style="list-style-type: none"> on its own – no! 	×	<ul style="list-style-type: none"> only solution for island people 	<ul style="list-style-type: none"> Do not think option on its own right This should be accommodated by whichever option is chosen 	
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✓		<ul style="list-style-type: none"> Not option on its own Should be considered as part of another option, e.g. reconfiguration of ferry service 			
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	×	<ul style="list-style-type: none"> not on its own 				
Ec4: To provide a link which is affordable for	×	<ul style="list-style-type: none"> Too costly 				

Options	8. Helicopter		9. Subsidy		10. Provision cyclists / pedestrians	
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
users						
Ec5: To provide a link which is sustainable for funders and is value for money	x					
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	x		x			
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	x		x	<ul style="list-style-type: none"> shift workers and social 		
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	x		✓			
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	✓	<ul style="list-style-type: none"> expensive but possible emergency option 	=	<ul style="list-style-type: none"> social services issues 		
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social	✓	<ul style="list-style-type: none"> could be tourist attraction minimal infrastructure 	✓			

Options	8. Helicopter		9. Subsidy		10. Provision cyclists / pedestrians	
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
heritage of the island						
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	?		=	<ul style="list-style-type: none"> life cycle analysis 		
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	x		=	<ul style="list-style-type: none"> may need more runs 		
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	✓		✓			
S2. To ensure the link does not compromise maritime safety or road safety	✓		✓			
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓	<ul style="list-style-type: none"> limited 	x	<ul style="list-style-type: none"> frequency length of day 		
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	✓	<ul style="list-style-type: none"> but at a cost 	?			

Group 4 Table C

Options	11. Tunnel		14. Causeway and Opening Bridge		16. High Level Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	✓		✓	<ul style="list-style-type: none"> depends on design/location and other infrastructure 	✓	
Ec2: To provide a link which does not constrain Lerwick Harbour's current activities or its future expansion	✓		?	<ul style="list-style-type: none"> location and design 	?	<ul style="list-style-type: none"> Lerwick Port Authority
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	✓		✓		✓	
Ec4: To provide a link which is affordable for users	?	<ul style="list-style-type: none"> Depends on toll Unknown capital and ongoing costs 	?	<ul style="list-style-type: none"> Depends on toll 	?	<ul style="list-style-type: none"> Depends on toll Unknown capital cost and ongoing costs
Ec5: To provide a link which is sustainable for funders and is value for money			?	<ul style="list-style-type: none"> Unknown capital and ongoing costs 		
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	✓		✓ / ?	<ul style="list-style-type: none"> Cost effect and if its breaks down! 	✓	<ul style="list-style-type: none"> ? cost effectiveness of option
Ac2: To provide a link which enables the	✓	<ul style="list-style-type: none"> Depends on 	✓	<ul style="list-style-type: none"> Issues 	✓ / ?	<ul style="list-style-type: none"> Depends on

Options	11. Tunnel		14. Causeway and Opening Bridge		16. High Level Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland		island infrastructure which accompanied this option		reliability		island infrastructure which accompanies this option
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	✓		✓		✓	<ul style="list-style-type: none"> Land dependent
Ac4: To maintain and improve accessibility and response times for emergency services and other service providers, including out-of-hours needs.	✓		✓	<ul style="list-style-type: none"> Weather and breakdown 	✓	<ul style="list-style-type: none"> All weather use?
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland's unique environment and safeguards the natural, cultural and social heritage of the island	✗	<ul style="list-style-type: none"> loss of island status / identity ? Skye example 	✗	<ul style="list-style-type: none"> loss of island identity 	✗	<ul style="list-style-type: none"> loss of island status / identity ? Skye example
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	✗ / ?	<ul style="list-style-type: none"> more people driving versus current ferry emissions 	✗	<ul style="list-style-type: none"> same issues as tunnel / bridge 	✗ / ?	<ul style="list-style-type: none"> more people driving versus current ferry emissions
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	✓	<ul style="list-style-type: none"> availability of land 	✓	<ul style="list-style-type: none"> ? land use 	✓	<ul style="list-style-type: none"> availability of land?
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link	?		?	<ul style="list-style-type: none"> same issues 	?	<ul style="list-style-type: none"> positive –

Options	11. Tunnel		14. Causeway and Opening Bridge		16. High Level Bridge	
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
continues to maintain and enhance community safety and health				as tunnel / bridge		health • negative – anti-social issues
S2. To ensure the link does not compromise maritime safety or road safety	✓ maritime ?	• road safety	?	• same issues as tunnel / bridge	?	• ongoing debate , Lerwick Port Authority etc
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland's transport services and infrastructure, including air, ferry, bus, cycling and walking opportunities	✓		✓	• same issues as tunnel / bridge	✓	• cater everything depending on island transport infrastructure etc
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	✓		✓		✓	• which in particular?

Group 4 Table D

Options	Do Nothing					
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
Economy: Promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency						
Ec1: To enhance the transport infrastructure between Bressay and Mainland Shetland to ensure the long-term sustainability of the Bressay community.	x					
Ec2: To provide a link	✓					

Options	Do Nothing					
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
which does not constrain Lerwick Harbour's current activities or its future expansion						
Ec3: To provide and promote a link which supports a stable and sustainable economy and enhances employment opportunities	x					
Ec4: To provide a link which is affordable for users	x					
Ec5: To provide a link which is sustainable for funders and is value for money						
Accessibility: Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network						
Ac1: To provide and maintain an accessible, efficient, cost effective transport network for Bressay	x					
Ac2: To provide a link which enables the Bressay community equal opportunities to access employment, services and facilities as other communities in Shetland	x					
Ac3: To provide a link which does not restrain opportunities for housing in Bressay	x					
Ac4: To maintain and improve accessibility and response times for	✓	<ul style="list-style-type: none"> out of hour needs 				

Options	Do Nothing					
	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
emergency services and other service providers, including out-of-hours needs.						
Environment: Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy						
Env1: To develop a link to Bressay that recognises and protects Shetland’s unique environment and safeguards the natural, cultural and social heritage of the island	✓					
Env2: To provide a link that seeks to minimise carbon emissions and the use of finite resources	?					
Env3: To promote a link that can accommodate current and future patterns of development and land use in Bressay	×					
Safety: Improve safety of journeys by reducing accidents and enhancing personal safety of pedestrians, drivers, passengers and staff						
S1. To ensure the link continues to maintain and enhance community safety and health	✓					
S2. To ensure the link does not compromise maritime safety or road safety	✓					
Integration: Improve integration by making journey planning and ticketing easier and working to ensure smooth connections between different forms of transport						
Int1: To provide a link which integrates with all Shetland’s transport services and infrastructure, including	×					

Options	Do Nothing					
Objectives	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required	Meet Planning Objective?	Comment – if not why not/Any Additional Work Required
air, ferry, bus, cycling and walking opportunities						
Int2: To promote a transport link that facilitates the delivery of other committed plans and strategies	?					

Appendix E

Example STAG PART 1 Appraisal Table

Appendix E: Example STAG PART 1 Appraisal Table

Proposal Details			
Name and address of authority or organisation promoting the proposal: (Also provide name of any subsidiary organisations also involved in promoting the proposal)			
Proposal Name:		Name of Planner:	<i>Name of principle contact within the authority or organisation promoting the proposal.</i>
Proposal Description:		Estimated Total Public Sector Funding Requirement:	<i>Capital costs/grant</i>
			<i>Annual revenue support</i>
			<i>Present Value of Cost to Govt.</i>
Funding Sought From: (if applicable)		Amount of Application:	<i>Sum</i>
Background Information			
Geographic Context:	<i>Describe the location of the proposal and the areas likely to be affected. Describe the built and natural environment of the areas likely to be affected.</i>		
Social Context:	<i>Describe the social make up of the areas likely to be affected. Identify areas which suffer from problems of deprivation and social exclusion. Is the area likely to be affected within a European Structural Fund area, a Priority Partnership area or a Social Inclusion Partnership area?</i>		

Economic Context:	<i>Describe the economic context of the area likely to be affected. What are the principle sectors / industries and what are the factors affecting performance?</i>
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Planning Objectives	
Objective:	Performance against planning objective:
<p><i>List each of the planning objectives in summary</i></p> <p><i>(This should be supported in the accompanying report by a more detailed description on objectives and how they were derived)</i></p>	<p><i>For each planning objective describe to what extent the proposal is expected to meet the objective.</i></p>

<p>Rationale for Selection or Rejection of Proposal:</p>	<p><i>State whether the proposal is being selected for consideration at Part 2 or being rejected. Describe why the proposal is favoured over the other alternatives or why the proposal is being rejected from further consideration.</i></p>
<p>Implementability Appraisal</p>	
<p>Technical:</p>	<p><i>From a technical standpoint, how straightforward will it be to implement the proposal? Are any novel / untried / leading edge technologies involved? Are there any risks involved in developing or implementing the proposal?</i></p>
<p>Operational:</p>	<p><i>Are there any factors which might adversely affect the ability to operate the proposal over its projected life without major additional costs?</i></p>

Financial:	<p><i>Can the capital costs of the proposal be funded and under what methods of funding? Can the proposal meet its on-going operating costs? If operating subsidies are required, how will these be funded?</i></p>
Public:	<p><i>Has the proposal been made public? If so, how acceptable is the proposal? Are there objections from particular sections of the community or from particular areas?</i></p>

Government's Objectives for Transport		
Objective	Assessment Summary	Supporting Information
Environment:	<p><i>Description of Impacts Assessment using 7 levels of impact</i></p>	<p><i>How the proposal will contribute towards reducing emissions of CO₂ and other pollutants, and promote better air and water quality. Are there adverse impacts on the environment? What are the distributional impacts, who will be the gainers and losers?</i></p>
Safety:	<p><i>Description of Impacts Assessment using 7 levels of impact</i></p>	<p><i>How will the proposal enhance safety for different types of transport users? Will it involve gainers and losers in terms of safety? Are there impacts on personal safety / security?</i></p>

Economy:	<p><i>Description of Impacts Assessment using 7 levels of impact</i></p>	<p><i>How will the proposal affect traffic volumes, journey times, or the reliability of travel times? Will there be gainer and losers, and if so what are the impacts on users and operators of different transport modes and in different areas? How might the proposal help attract new jobs, help existing businesses, open up appropriate land for development?</i></p>
Integration:	<p><i>Description of Impacts Assessment using 7 levels of impact</i></p>	<p><i>How will the proposal promote or enhance transport integration? Will services be able to function in a more complementary manner? How does the proposal fit with wider government policy including national transport targets?</i></p>
Accessibility & Social Inclusion:	<p><i>Description of Impacts Assessment using 7 levels of impact</i></p>	<p><i>How does the proposal affect accessibility for transport users and for others, including access to jobs, communities, shops, services and other facilities? How does it impact in terms of tackling social exclusion?</i></p>