BRESSAY STAG 1 REPORT

The STAG (Scottish Transport Appraisal Guidance) process has been followed for this study, involving the community and other stakeholders at relevant stages as recommended by the guidance and to ensure that the process was informed by local input.

1.1 KEY ISSUES

The main issues identified at the outset were:

- a belief that Bressay is not currently conducive to business expansion or new development;
- that employment based on Bressay is heavily reliant on the ferry;
- that it is unclear whether there are real constraints on the economic development of Lerwick at the current time, from lack of suitable land for development, as different perceptions were given by different people;
- some people considered that there were difficulties over land ownership in Lerwick and about the affordability of available land;
- that it was unclear whether opening up Bressay to development (by providing a fixed link) would be positive for Lerwick in the future or have a negative impact by leaving vacant properties, for example;
- that previous debate over a long time period could be detrimental to developments in the harbour area and was difficult for local residents;
- the lack of decision about the link (not the nature of the link itself) means that owners of land are not selling land and this is a barrier to development;
- a fixed link could provide opportunities to sustain the Bressay community but the design of this link would have to ensure that the LPA would be able to continue to 'manage, maintain, and regulate the Port and Harbour of Lerwick, including the undertaking to improve and deepen the harbour area' in the interest of industries operating in the harbour, so as to ensure their business potential can be achieved;
- the overall cost of the current service to travellers is considered to be high. The ferry has to be used to access most opportunities off the island and can be expensive to visitors staying on Bressay;
- it was recognised that it is important to consider how any new infrastructure could affect the environment including in terms of carbon emissions and in retaining remote biologically diverse areas of the island and of neighbouring Noss;
- some stakeholders considered that a fixed link could lead to a loss of island identity and associated social benefits, such as knowing everyone in the community; feeling and being safe; and using the ferry as a social hub;
- there is heavy reliance on Lerwick and Mainland by Bressay residents for employment, services, leisure and learning as opportunities are relatively limited on the island itself;
- restricted access sometimes denies access to opportunities available on the Mainland (eg social activities; shift working etc);

- there is a lack of accessibility for those residents without access to a vehicle and who are unable to walk to the ferry as public transport and taxi provision is limited on Bressay and is not always convenient;
- there is an ageing population on Bressay and associated with this are difficulties in being able to provide adequate services: residents may not always get the service they need or equality of community care as service as compared with the rest of Shetland as services have to be planned to fit with the ferry timetable;
- there are some ongoing problems with recruiting staff for community posts because living in Bressay carries extra travel costs as compared with living in Lerwick;
- there are difficulties in accessing Bressay out-of-hours, unless the ferry is called out in an emergency;
- there is a lack of integration between the ferry service and bus services on the Mainland;
- some stakeholders queried whether the current service is sustainable and whether in terms of Shetland's finances the inter-island ferry service is sustainable in the long-term compared to fixed links; and
- the unresolved decision about a fixed link is resulting in other aspects of the community's development not being addressed, for example road improvements and public transport provision.

1.2 OBJECTIVES FOR THE STUDY

Strategic workshops assisted in the development of local planning objectives, and, with the help of the community, a long list of options were identified for further consideration.

1.3 FINDINGS OF STAG PART 1 APPRAISAL

These options were then appraised against the identified planning objectives. At an early stage the following options were sifted out:

- **Causeway**:
    - It was considered that this option could cause significant problems to operation of Lerwick Port, and the economic activities that it supports. For example the port would be split in two, not enabling boats to move around easily; requiring two sets of tugs to operate; and constraining activities such as decommissioning;
    - there were also safety issues: for example the lifeboat would be on one side, unable to quickly reach incidents in the other direction, and build up of shipping in one area, rather than another; and
    - there were environmental issues, as it would cause silting of harbour and increased fuel used of boats moving from one side of the harbour to the other, around Bressay.

- **Transporter Bridge**:

- This option was rejected because of the increased journey time associated with it; potential constraints of use in poor weather; constraints on harbour activities; and potential visual impact.

- **Helicopter Service**:
  - This option would be unable to take vehicles; unable to take many passengers or much freight and could have associated safety issues. It was recognised that the option could be used in combination with other options, but was likely to be too expensive to be sustainable.

The remaining options were taken through the Part 1 STAG appraisal. The following options were considered to sufficiently meet national and local objectives and are to be carried forward to more detailed appraisal (Part 2 STAG):

- reconfigured ferry service;
- water taxi/passenger ferry;
- public transport improvements;
- measures to promote walking and cycling;
- drill and blast tunnel; and
- high level bridge

The following options were eliminated as a result of the findings of the Part 1 STAG appraisal:

- **Chain Ferry:**
  - This option would require higher levels of capital investment than the existing ferry service (operating the ferry and back up for overhaul/maintenance). Slipways would need to be constructed on either side at a new location and operational costs would not be significantly lower than the existing service (manning levels would be similar to current operation to ensure the ability to safely evacuate a vessel in an emergency situation);
  - the Maritime and Coastguard Agency (MCA) code of practice will only consider issue of a certificate allowing a Chain Ferry to operate in Category A-C waters[1]; Bressay Sound is categorised as a Category D water;
  - the ferry could cause a level of disruption to Lerwick Harbour operations, depending on the frequency of service, because the Master of the ferry generally has to ascertain that the way is clear, before leaving shore, and vessels less than 50m long have to give way to the ferry when it is crossing. Mariners also have to be

[1] Category A: narrow rivers and canals where the depth of water is generally less than 1.5m; Category B: wider rivers and canals where the depth of water is generally more than 1.5m and where the significant wave height could not be expected to exceed 0.6m at any time; Category C: tidal rivers and estuaries and, large, deep lakes and lochs where the significant wave height could not be expected to exceed 1.2m at any time.

warned not to pass directly in front of the chain ferry and the draught behind the ferry can also be restricted by the chain;
- the location would have to be from the Point of Scatland or Greenhead, in order to function effectively. The crossing time would be approximately three minutes, but the overall journey time would be slower, as the link would not be so central, and there would be additional time for embarking and disembarking;
- the ferry must travel in a straight line, along the chain, limiting manoeuvrability. The service could also be adversely affected by sea conditions, particularly waves; and
- there are safety issues, because chain ferries have no means of steerage if the chain were to break, as happened with the Dartmouth Ferry in 2005 when the ferry was washed out to sea.

- **Immersed Tube Tunnel:**
  - The capital costs involved in building this option would be high compared to a drill and blast tunnel, because of the depth of dredging the trench required (up to 18m) and the cost of transporting tunnel sections to Shetland or of constructing holding ponds locally to construct the sections in Shetland;
  - there is a potentially greater environmental impact, particularly during construction, because of the activities required to facilitate construction;
  - there is a high degree of risk in floating or craning in sections of tunnel in Shetland's climate and sea conditions; and
  - 160-170,000 cubic metres of rock would be removed. It may not be possible to use and/or dispose of this quantity of material easily locally.

- **Opening Bridge:**
  - Operational costs would be higher than for other fixed link options, due to required maintenance and manpower costs;
  - it would place some constraints on the current activities of Lerwick Harbour, for example, it would have to be opened to enable to allow any pelagic fishing boats to pass through;
  - access would be unpredictable: from when the bridge begins to open it would require up to 30 minutes wait (opening and closing time of 5-15 minutes each way and time for the vessel to pass through). The frequency of opening is not known, but the unpredictability to those using the link could present access issues and could prevent integration with other transport services, including external connections. There would be a deterioration in level of provision of access for emergency services at these times; and
  - under certain extreme weather conditions opening would be prevented.

1.4 RECOMMENDATIONS

The following recommendations are made:

- The following options are considered in more detail:
- reconfigured ferry service;
- water taxi/passenger ferry;
- public transport improvements;
- measures to promote walking and cycling;
- drill and blast tunnel; and
- a high level bridge.
- The detailed appraisal should be undertaken by a team of environmental, economic, technical and health experts and with stakeholder involvement, where appropriate. The team of specialists will be a combination of SIC staff and consultants.
- The options should be considered singly and as bundles of options. For example a reconfigured ferry service or fixed link option, along with improvements to public transport and measures to promote walking and cycling.
- The 'Do Minimum' Option should continue to be appraised alongside these, in order to provide a baseline for comparative purposes.
- Work must continue to progress rapidly to recommend a final preferred option from the STAG process, in order that current uncertainties about the future link are ended. However it is the important that appropriate steps are taken to ensure the process remains rigorous and the findings stand up to scrutiny. Due to the large number of options generated and taken forward to broad appraisal, the study is now due to report in April 2008.
- In addition it is recommended that:
    - further consideration is given to the definition of 'affordability' in Shetland by ZetTrans and the Council;
    - the Council confirms 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 Council considers the strategic land-use 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 (e.g. promoting centralisation/ decentralisation etc).