

1 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report is the STAG 2 (Scottish Transport Appraisal Guidance) report for the Bressay Link (see Section 1.2). It sets out the process that has been followed in the appraisal; the findings from different stages in the process; and discusses and provides the rationale for the recommended option.

The options which have been appraised in the STAG 2 are described in Chapter 7.

1.2 BACKGROUND AND HISTORY TO THE STUDY

Options for linking Bressay to Mainland Shetland have been considered by Shetland Islands Council (SIC) since at least the 1970s and the need for securing the option that, on balance, best meets the aspirations of stakeholders has been subject to much debate. This included the Council's decision to build a bridge and the effects of this on other land uses, navigation and reliability of the new link.

In 2005, ZetTrans became Shetland's Regional Transport Partnership, concluding the consultation and development of Shetland's Transport Strategy¹. Within this strategy, ZetTrans acknowledged there was a need to draw a line under the previous debate over the proposed 'Bressay Bridge' and to revisit this issue with a fresh pair of eyes.

'there is a need to draw a line under the previous debate over the proposed 'Bressay Bridge' and to revisit this issue with a fresh pair of eyes. ZetTrans acknowledges this and proposes to initiate a 'Bressay Link' study examining all possible future options to provide an efficient link between Bressay and Lerwick, whether this is in the form of an improved ferry service, a bridge or a tunnel. This study will be undertaken in accordance with Scottish Transport Appraisal Guidance (STAG) and will be taken forward by ZetTrans in co-operation with SIC and Lerwick Port Authority (LPA).'

A joint working group, the Bressay Link Group, was set up in June 2007² to oversee the process. The group includes representatives from ZetTrans, SIC, LPA and Bressay Community Council.

This group agreed to a study *'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.'*

This study is being led by ZetTrans in co-operation with the Bressay Link Group. Specific expertise is being provided by:

- Anderson Solutions (economic appraisal);
- Donaldson Associates (technical tunnelling expertise);
- Halcrow (technical bridge, transport economic efficiency (TEE) expertise);
- Natural Capital (STAG advice, facilitation skills and environmental appraisal);
- and
- ZetTrans (safety, integration and access appraisal).

¹ This strategy was produced by ZetTrans, and submitted to the Scottish Executive for approval in March 2007. It has been resubmitted to the Scottish Government at their request and approval is anticipated imminently

² Approved by SIC Infrastructure Committee, June 2007

1.3 STUDY AREA

The Shetland Islands are the most northerly local authority area in the UK, 298 miles (480 kilometres (km)) north of Edinburgh and 211 miles (340km) north of Aberdeen. Shetland comprises more than 100 islands, 15 of which are permanently inhabited, and the total population is around 22,000³, of which approaching 8,000 of these live in Lerwick, the main town⁴.

Lerwick has developed around Bressay Sound, a sheltered stretch of water between the Mainland of Shetland and Bressay. Bressay lies off the east coast and is seven miles (11km) long by three miles (5 km) wide with a current population of approximately 400⁵. This main study area, see Figure 1.1, is shown, although wider issues, such as access to the rest of Shetland and to the rest of the UK, have also been taken into account.

Bressay Sound provides a sheltered shipping channel that has provided safe anchorage for vessels for centuries. Currently Bressay is reached from Lerwick by a seven minute ferry crossing that runs at hourly intervals from 7am-11pm (1pm on Fridays and Saturdays) and on a more frequent basis at peak times (see Section 7.6.1).

Shetland was central to the North Sea oil boom, and over the last 30 years this has been a major impact on the economy and helped to raise living standards. However, a recent study has shown that, although Shetland has a generally high standard of living and quality of life, there are still individuals and households in Shetland who are living in poverty and are unable to access the many opportunities Shetland has to offer⁶. The study found that access to employment, skills, services and social activities was key to a person's feeling of wellbeing

Fishing and agriculture are Shetland's traditional industries. Since the 1970s, oil has had a significant impact, but is now decreasing and the Shetland economy is having to adapt to these changes. The decommissioning industry and tourism are areas of potential growth. Shetland continues to have one of the lowest unemployment rates in Scotland. However, economically active individuals who are unable to find work, tend to move away. The Gross Regional Domestic Product per capita of Shetland is lower than the UK average.

1.4 SCOTTISH TRANSPORT APPRAISAL GUIDANCE (STAG)

STAG is the Government standard for appraisal of transport services and infrastructure projects and provides a framework to use for the objective consideration of options against Government and local objectives. Since July 2003 it has been a requirement of the Scottish Executive⁷ that all projects for which it provides support or approval are appraised in this way. Consultation and participation with all stakeholders is important throughout.

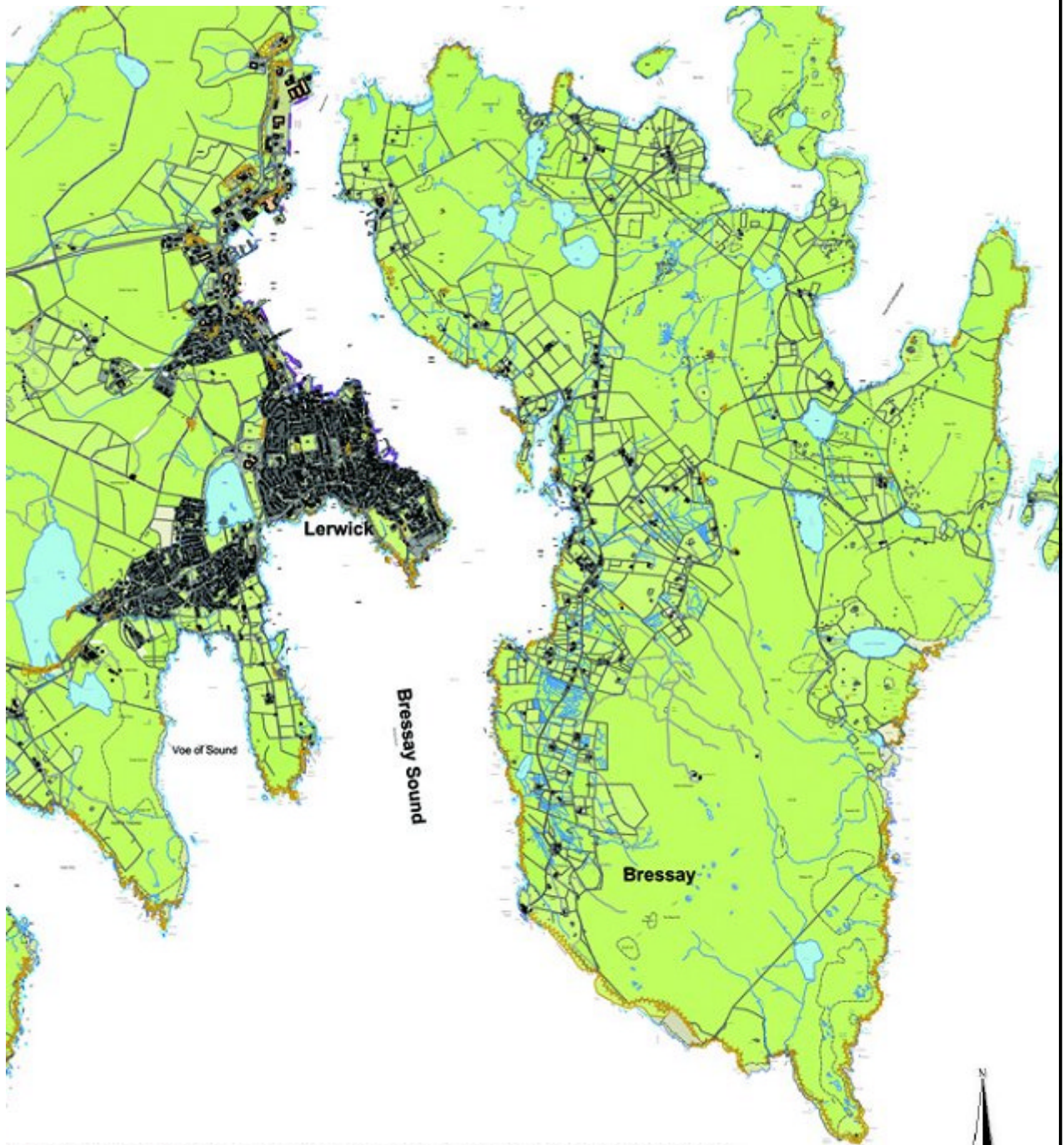
³ Census, 2001

⁴ Shetland Islands Local Plan, June 2004

⁵ Shetland Islands Local Plan, June 2004

⁶ Perring, E (2006) Deprivation and Social Exclusion in Shetland. Shetland Islands Council

⁷ Now Scottish Government



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	DRAWN BY: SIC	CHECKED BY: EP	DATE: 05.08
Not to Scale	<p align="center">Bressay Link STAG 2 Report</p> <p align="center">Figure 1.1: Main Study Area</p>		



natural CAPITAL

Anderson Solutions
ECONOMIC DEVELOPMENT CONSULTANCY

Halcrow

DONALDSON ASSOCIATES
CONSULTING ENGINEERS

Box 1: The Scottish Transport Appraisal Guidance (STAG): Process and Appraisal Criteria

The STAG planning and appraisal process is:

- Stage 1 - Analysis of present and future problems and opportunities (see Chapter 4)
- Stage 2 - Setting objectives (see Chapter 5)
- Stage 3 - Generation of options (see Chapter 6)
- Stage 4 - Initial sifting of options (see Chapter 6)
- Stage 5 - Broad appraisal (see Chapter 7)
- Stage 6 - Detailed appraisal (see Chapter 8)
- Stage 7 - Reporting
- Stage 8 - Implementation
- Stage 9 - Monitoring and evaluation

This study summarises Stages 1 to 5 and details Stages 6 and 7.

1.5 STAKEHOLDER INVOLVEMENT

Consultation and participation with all stakeholders is important throughout the STAG process. During this study, every effort has been made to enable individuals, communities, services, businesses and other stakeholders to be involved, as appropriate.

1.6 SOURCES OF INFORMATION

Sources of information for this report include maps, planning documents and a wide range of reports completed for various previous studies. These are listed for reference in Annex A, and specific sources are listed for each baseline section in Chapter 3. Consultations have informed all work to date and key consultations are summarised in Chapter 2 and a diary of key consultations is provided in Annex B.

1.7 STRUCTURE OF REPORT

Following this introduction, there are fourteen further chapters, as follows:

- **Chapter 2:** Methodology, providing an overview on how the study has been undertaken and each of the tasks completed.
- **Chapter 3:** sets out the Issues, Problems and Opportunities that have been identified, highlighting what current and potential future problems the link should seek to address.
- **Chapter 4:** presents the study Objectives, setting out Government and relevant local objectives and the planning objectives developed for the appraisal.
- **Chapter 5:** Option Generation and Sifting of Options, lists the initial long-list of options which was identified and the findings of the assessment of these against the planning objectives. Those options that met insufficient objectives to move on to Part 1 STAG appraisal are identified.
- **Chapter 6:** presents the Broad Appraisal of options against the objectives. STAG Part 1 Appraisal Summary Tables (AST) are included in Annex F

- **Chapter 7:** presents the Options for Detailed Appraisal including the following appendix:
 - **Appendix 7.1:** LPA Vessels

The following sections appraise each of these options in relation to the following areas: environment, safety, economy, accessibility and integration.

- **Chapter 8:** Environment. Including the following appendices:
 - **Appendix 8.1:** Planning;
 - **Appendix 8.2:** Landscape and Visual; and
 - **Appendix 8.3:** Carbon Footprint Worksheets
- **Chapter 9:** Safety
- **Chapter 10:** Economic (Transport Economic Efficiency)
- **Chapter 11:** Economic Activity and Location Impacts (EALIs)
- **Chapter 12:** Accessibility
- **Chapter 13:** Integration
- **Chapter 14:** Monitoring and Evaluation
- **Chapter 15:** Discussion and Recommendations, which draws together the findings of the work and provides the rationale for the recommended option.

The following annexes support the above:

- **Annex A:** References
- **Annex B:** Consultation Diary
- **Annex C:** First Stage Consultation Report
- **Annex D:** Bressay Link: STAG Strategic Issues and Objectives Workshop Report
 - Appendix A: Workshop Attendees
 - Appendix B: Workshop Outputs
 - Appendix C: Government Objectives
- **Annex E:** Bressay Link: Option Generation and Initial Appraisal Workshop Report
 - Appendix A: Workshop Attendees
 - Appendix B: LPA Key Strategic Objectives
 - Appendix C: Aims and Planning Objectives
 - Appendix D: Individual Group Feedback
 - Appendix E: Example STAG 1 Appraisal Summary Table

- **Annex F:** Bressay Link: STAG 1 Appraisal Summary Tables (ASTs)
- **Annex G:** Drill and Blast Tunnel Option
- **Annex H:** High Level Bridge Option
- **Annex I:** Reconfigured Ferry Option
- **Annex J:** Public Transport Options
- **Annex K:** Economy (Transport Economic Efficiency)
- **Annex L:** Economic Activity and Location Impacts
- **Annex M:** STAG 2: Appraisal Summary Tables (ASTs)
- **Annex N:** Bressay Link: STAG 2 Findings and Strategic Review Workshop
 - Appendix A: Workshop Attendees
 - Appendix B: Presentation Slides
 - Appendix C: Aims and Objectives

