

**Minutes of the Road Safety Advisory Panel held on 16 September 2008 at 2.15 pm
in the Council Chamber, Town Hall, Lerwick**

Present

I J Hawkins	Shetland Islands Council
A S Wishart	Shetland Islands Council
F A Robertson	Shetland Islands Council
F B Grains	Shetland Islands Council
R S Henderson	Shetland Islands Council
I Halcrow	Head of Roads Service
C Gair	Traffic Engineer
S Pearson	Manager - Safety & Risk
E Skinley	Road Safety Officer
P Petursson	Driving Instructor
L Gair	Committee Officer

Chairperson

Mrs I J Hawkins, Chairperson of the Panel, presided.

Apologies

Mr J H Henry	Shetland Islands Council
Mr J Budge	Shetland Islands Council
Mrs J Wylie	Community Safety Officer
Sgt M Czerniakiewicz	Northern Constabulary
F Johnson	Safety Manager
N Mann	Safety Officer

Minutes

Minutes of the meeting held on 17 June 2008 were approved on the motion of Mr F A Robertson, seconded by Mr A S Wishart.

1. Matters Arising

Driving Standards Agency – Testing Centre

Mr P Petursson brought to the Panel's attention, that from March 2009 it would no longer be possible to sit a driving test for large vehicles and motorbikes in Shetland.

It was explained to Members that the minimum area required to carry out the tests for HGV, buses and motorbikes is 120m long and 20m wide, and that a suitable site would need to be identified to allow testing to continue in Shetland.

Mr Petursson advised that the bus test now consisted of 4 stages with 2 theory and 2 practical tests, one of which involved vehicle safety. He said that drivers would be less willing to take the test if they had to travel to Aberdeen, resulting in a shortage of drivers in Shetland. He said that it was stated in Legislation that test centres must be provided within a specific number of miles and Shetland was outwith that limit. Mr Petursson suggested that Mr Carmichael MP and Ms Thew, Chief Executive for the Driving Standards Agency should visit Shetland to gain an understanding of Shetland's position. Mr A S Wishart advised that this matter had been an ongoing saga and that he had been involved in this matter with the Head of Roads and the Asset and Property Manager to some extent. He said that other areas on the Mainland did not comply with the minimum standards required, and felt that the matter for Shetland was not a fait accompli.

Mr Wishart said that he would be willing to discuss the matter further with Mr Petursson.

The Head of Roads said he was concerned that the DSA appeared to be looking for an off-road test site for motorcycles only. He said that the area at the Anderson High School still complied with the standards for HGV and buses but that the site would be lost to the new Anderson High School building. He had spoken with Mr P Appleby, senior driving examiner for Scotland, who recognized the need to find a solution that was suitable for both motorcycles and HGVs/buses, but it appeared that the DSA head office were only looking for a solution for motorcycles testing. Mr A Carmichael, MP had been interviewed on local radio in both Orkney and Shetland and had put out an appeal for help in identifying a suitable testing site. The Head of Roads advised that it was the responsibility of the DSA to provide the facilities, but that they were reluctant to meet the cost of developing a new site considering the relatively small number of tests undertaken in Shetland.

Mr R S Henderson suggested a possible site at Scatsta. Mr Petursson advised that this area was now very well used by the airport and a hanger was due to be built there. In addition he advised that the site was too far away from Lerwick, which would limit the number of tests carried out in the day, making it necessary for testers to visit more often. He said that Scatsta would be less cost efficient.

During further considerations, the Panel agreed that Mr Petursson should liaise with other instructors including, Mr S Peterson and Mr S Henry and prepare a letter to Mr A Carmichael, MP. Mr Petursson queried whether there would be any financial assistance available from the Council if the DSA were not prepared to provide a testing centre.

Mr A S Wishart said that it was vitally important that the matter be handled carefully, and that the Panel would be unable to give an answer however the Council may wish to discuss this at a later stage. He reiterated his willingness to liaise with Mr Petursson on the matter and to write to Mr Carmichael MP as well.

2. Road Safety Updates (Roads)

2.1 Engineering Updates (Roads) (Appendix 1)

The Head of Roads briefly introduced the report. He advised that work continued on installing 20mph limits around schools and that there were still a number outstanding, with Brae scheduled next. He updated on the progress of signs at Oversund and Sound School. He advised that his service received less budget than expected therefore it was taking longer to complete the list of works.

The Head of Roads advised that the White Lining contractor would be in Shetland soon with a number of surface dressed areas to be lined. He added that crashes had been identified at the top of Dales Lees and high performance surface dressing had been put on top of the road.

Mrs F B Grains said she would be attending Whiteness and Weisdale School Council and queried the position relating to the 20mph signs on the Stromfirth Road. Mrs Grains advised that the signs were placed before the junction to the housing scheme and that there were no signs for the

private houses on the other side of the road. She said she had representations from residents to say that they would want signs, but she was disappointed that no funds had been allocated to complete the scheme properly. Mrs Grains queried whether these residents would have any case to argue, should they be charged for speeding.

Mr P Petursson said that from within the limit of the signs, the residents would have a case, and he provided an example of an instance on the mainland where, at great expense, speeding charges were dropped due to inadequate signing.

The Head of Roads advised that when the area was assessed it was felt that residents living close to the school would be very aware of the speed limits within that area, and that both junctions were close enough to the school that vehicles would not reach the limit by the time they got to the school, unless they accelerated excessively. He said that with hindsight, signs should have been provided, but that due to budget constraints, it was assessed as not required. He said however that it would be put on the list, but was not viewed as a priority.

Mrs I J Hawkins advised that there was a lot of concern from the Community Council and the Parent Council, regarding the Scalloway 20mph limit. She said that it had been delayed due to way leaves and now because of budget. She said that this was in an area with a high volume of HGV vehicles passing, and they were considering putting in a request for a lollypop lady.

The Head of Roads advise that Scalloway was being funded from the rolling programme, which was working to a reduced budget. He said that he hoped the scheme would be done next year.

(Mr R S Henderson left the Chamber to attend another meeting).

Mr A S Wishart advised that there had been a near accident at Dunrossness Primary School and asked whether the consultation would start next year and how long it would take.

The Head of Roads advised that there were 2 stages to the consultation. He said the first consultation was with Emergency Services and Community Councils, which may prompt alterations. The first stage consultation would be starting soon and would be followed by a full consultation that would include the public.

In response to a query from Mr Wishart, the Head of Roads advised that the Roads Safety Advisory Panel had approved that prioritisation be done by the service, and that it consider the volumes of traffic, speed of traffic and the number of children walking to school. He explained that a larger school, which used buses and had less children walking to school, would be prioritised lower than a small school with more children walking. The Head of Roads explained that Whiteness and Weisdale had been a high priority due to the 60mph speed limit at the edge of the school.

In response to a query from Mrs F B Grains, the Head of Roads confirmed that the consultation on Happy Hansel would begin soon.

Mr A S Wishart raised a concern received from a bus driver regarding the Oversund roundabout. Lengthy discussion took place on the safety of pedestrians as buses and larger vehicles overhung the pavements. Mr Petursson said that the roundabout at Oversund had to be approached properly and larger vehicles had the use of the lock-blocked area near the centre of the roundabout, which gave them more space. He gave other examples of junctions in Lerwick where buses overhung the pavements and expressed his opinion that it was down to the driver of the bus to enter and exit a roundabout or junction safely. Mr Petursson said that if the speed and gear was right it could be handled safely. The Traffic Engineer stated that he had observed buses on the roundabout and they appeared to take the line of least resistance and agreed that it came down to the bus drivers, however he said that it took time for all drivers to get used to a new road layout.

The Service Manager – Safety and Risk said that she did not disagree with what had been said and that theoretically if everyone drove the way they were taught to drive then there would be virtually no accidents however the reality is that people don't and it was the job of this committee to recognise the potential risk and take steps to minimise it. She said that if drivers were not using the roundabout properly some form of action had to be taken. The Head of Roads said that he would have a member of staff look closely at the roundabout to determine driving practice while negotiating the roundabout which would then ascertain whether the solution should be physical, educational, or a combination thereof. Mrs Hawkins requested that the monitoring of the roundabout be carried out inconspicuously. The Service Manager - Safety and Risk said that if it was an educational problem, a campaign to highlight how best to use the roundabout could be arranged. The Panel agreed.

Mr A S Wishart asked that an agenda item be added on education of road users in order to keep the item alive.

2.2 Education Update (Road Safety Section) (Appendix 2)

The Road Safety Officer provided an update on the Booklet for Managing Occupational Road Risk, Cycling Action Plan, Junior Road Safety Officers, Hands Up Survey, Children's Traffic Club at the Library and the Sustrans funding available.

Mrs I J Hawkins said that there was a lot of work going on and she had attended the awards ceremony at the Town Hall where she had been pleased to see how enthusiastic everyone was and they appeared to have good fun. The Road Safety Officer said that it also gave children a sense of independence and responsibility with children gaining confidence from delivering presentations to other classes.

The Traffic Engineer said that as someone who cycled to work on occasions, the biggest deterrent for staff was the lack of facilities at the workplace and lack of bike racks in the centre of town. The Road Safety Officer advised that she worked closely with Emma Perring at ZetTrans

and advised that Ms Perring could access funding for offices and that would include racks and showers. She said that if Ms Perring was made aware which particular facilities were wanted, she could then bid for the funding. The Road Safety Officer added that if other businesses had a travel plan, they too could access this funding stream. She advised that a survey had been issued to all staff, and the results of that would provide Ms Perring with the justification she needed for the bid.

The Traffic Engineer said that he often found the survey's too lengthy and the questions often required a more detailed response. He said that he was aware that staff often deleted the surveys, which would give a poor percentage return rendering the responses received meaningless. The Traffic Engineer suggested that more feedback would be gained by meeting with groups of officers face to face. The Panel discussed the matter and Mr A S Wishart said that these points should be taken to ZetTrans formally. Mrs I J Hawkins agreed and in addition advised that in the past the Panel minutes were not circulated and felt it was important that they be presented to Infrastructure Committee where all Members and the media would receive a copy. She said it was important to get the information out beyond the Panel.

Following further discussion, the Road Safety Officer said she would be happy to take the points raised on the questionnaires, to Ms Perring.

Mrs F B Grains noted that cycle training was provided to primary 1 to 5 and asked whether 5-year-old children were being encouraged to cycle to school. The Road Safety Officer said children were taught how to check and look after their bikes and were made aware of road signs. She said that children were not encouraged to cycle to school until they had passed their cycle proficiency test in Primary 6 or 7.

The Panel discussed the need to encourage children to wear their helmets, acknowledging that some age groups deemed it not cool to wear a helmet. Mr Petursson said that parents needed to take a stronger line with their children to wear helmets. Mrs I J Hawkins suggested that if possible, the Road Safety Staff make themselves available out of hours to address these matters with Parent Councils. The Service Manager – Safety and Risk said that was a good idea and agreed to make staff available, to address these groups.

2.3 Enforcement Updates (Police) Appendix 3).

The Enforcement Updates were tabled at the meeting. The Panel discussed the increase in seatbelt offences. It was noted however that the figures showed how active the police campaign had been and did not necessarily give a true picture of the problem.

Members discussed the fact that the majority of offences were from works vehicles and vans although the Police had indicated that the SIC employees were not as bad as other businesses.

Mrs I J Hawkins queried whether legislation covered the problem of passengers standing in the aisle of a bus, and whether children were required to wear seatbelts. During discussions on the use of seatbelts on

buses, it was stated that passengers 13+ years were required to wear seatbelts where provided. It was noted that if stickers were displayed, the driver was not responsible for ensuring that they were being worn. The Service Manager – Safety and Risk agreed to report back on the legislation with regard to passengers standing in the aisle.

3. **Draft Road Safety Plan** (Appendix 4)

The Chairperson's Introduction, to be included in the Plan, was tabled at the meeting. The Panel considered the Draft Road Safety Plan and agreed that it be presented to the Council meeting on 22 October 2008, on the motion of Mr A S Wishart, seconded by Mrs I J Hawkins.

The Panel agreed that once the Road Safety Plan had been approved by Council, that it be circulated to Councillors, Council Services, Road Safety Groups around Scotland, Community Councils, Parent and School Councils, Health Centres, Library, Media, BP Sullom Voe, bus companies, taxi firms, builders, businesses in Shetland, Lerwick Port Authority, John Leask and Sons and Garages.

4. **AOCB**

Mr A S Wishart advised that whilst returning from Yell recently, he had observed a Council pickup speeding. He asked if it would be possible to send a memo to all departments on the issue of safety, breaking the law and fuel savings. The Service Manager - Safety and Risk said that it was important to report these incidents in order that the offenders could re-attend the Driver Development course for further training. If they were repeatedly being put through training, and still demonstrating dangerous driving, consideration would then have to be given, by the relevant Manager, as to whether it is appropriate for them to be driving or could they perhaps be redeployed within the service.

The Panel discussed the matter and Mrs I J Hawkins said that it was important that these instances be reported to the Council, in order that they can be retrained, adding that it was not as bad as being reported to the Police.

The Service Manager - Safety and Risk advised that following the tragic road accidents last year, from a Council point of view, accident numbers within the Council had gone down slightly. She said it was important to keep sending out the message and said that the Managing Occupational Road Risk booklet would be finalised and circulated soon, which should also help to focus the minds of individual drivers.

Mrs F B Grains asked when the damaged road surface on the main road above Herrislea Hill, caused by a heavy goods vehicle fire, would be repaired. The Head of Roads said that he would look into the matter, when he returned to the office.

5. **Date of next meeting**

2.15pm on Tuesday 9 December 2008 in the Council Chamber.

The meeting concluded at 3.35pm.

I J Hawkins
Chairperson



REPORT

To: Infrastructure Committee

7 October 2008

**From: Service Manager – Safety & Risk
Legal & Administration
Executive Services**

REPORT NO: LA-53-F

Road Safety Advisory Panel Minutes

1 Introduction and Background

- 1.1 This report introduces the minutes from the Road Safety Advisory Panel. The Road Safety function lies primarily with Safety & Risk Services and is co-ordinated through the Road Safety Advisory Panel (RSAP), which is a multi-agency officer/member committee bringing together the various specialisms of both public and private sector organisations with the aim of improving road safety in Shetland.
- 1.2 The RSAP is chaired by Councillor Hawkins and minuted by Committee Services, however those minutes do not have an automatic path through Infrastructure Committee and onwards to full Council, and as a result, the RSAP acts in virtual isolation.
- 1.3 Given the undeniably high importance attached to Road Safety matters, and to ensure Members are kept apprised of the issues facing Shetland, it has been proposed that a copy of the minutes are included in the agenda of Infrastructure Committee as a standing item.

2 Links to Corporate Priorities

- 2.1 This report supports Corporate Priorities in relation to the following sections of the Corporate Plan 2008:
 - Section 2 – Sustainable Community – Community Safety
 - Section 3 – Sustainable Organisation – Ensuring we are being efficient in everything we do.

3 Current Position

3.1 As can be seen from the appended minutes, Road Safety is split into 4 main categories, namely:

- Education (Safety & Risk Services)
- Encouragement (Safety & Risk Services)
- Engineering (Road Services)
- Enforcement (Northern Constabulary)

3.2 Public sector partner organisations represented on the Road Safety Advisory Panel are Northern Constabulary, Fire Brigade, Scottish Ambulance Service, NHS Shetland, and ZetTrans, whilst private sector representation is invited from, for example, driving instructors, Youth Voice, Taxi Owners Association. etc.

3.3 By adopting a cohesive and joined up approach to Road Safety in this way, resources can be focussed more appropriately and the desired outcomes more easily and sustainably achieved.

3.4 It is proposed that future minutes of the Road Safety Advisory Panel be presented to the Infrastructure Committee for information only. Any matters arising from the minutes which require a decision shall be presented to the Committee in a separate report.

4 Financial Implications

4.1 There are no specific financial implications relating to this particular report although the successful reduction of road accidents and increased safety in road usage will lead to a more efficient use of public sector resources.

5. Policy and Delegated Authority

5.1 Infrastructure Committee has delegated authority to act on all matters within its remit, under section 12.0 of the Council's Scheme of Delegations, and for which overall objectives have been approved by the Council, in addition to appropriate budget provision.

6 Recommendations

6.1 I recommend that the Infrastructure Committee:

- i) note the issues contained within the minutes of the Road Safety Advisory Panel; and
- ii) discuss any items of concern arising from the minutes and the proposal in section 3.4 above.



REPORT

**To: Infrastructure Committee
Shetland Islands Council**

**7 October 2008
22 October 2008**

**From: Service Manager - Safety & Risk
Executive Services**

Report No LA-54-F

ROAD SAFETY PLAN 2008-2010

1 Introduction and background

- 1.1 This Report seeks adoption by Shetland Islands Council of the Road Safety Plan for Shetland for the period 2008-2010, and follows on from the now expired Road Safety Plan of 2004 – 2007.
- 1.2 The document contains a strategy designed to improve road safety and reduce road casualties to meet Government targets for casualty reduction by 2010. These are:
 - A 40% reduction in the number of people killed or seriously injured
 - A 50% reduction in the numbers of children killed or seriously injured
 - A 10% reduction in the slight casualty rate.
- 1.3 It brings together the targets and strategies of the organisations involved. It also analyses and presents crash statistics for Shetland, the key points of which are that:
 - The cost of crashes in Shetland in 2006 was estimated at £4 M.
 - A total of 12 people were killed or seriously injured in Shetland during 2006.
 - A total of 49 people were slightly injured in crashes.
- 1.4 Every year, incidents on Shetland's roads cause death and injury. Road crashes are the biggest single cause of accidental death in both children and adults in the whole of Great Britain. Each year in Shetland unnecessary crashes result in grief and suffering, and all too often the loss of individuals within our community.
- 1.5 The Road Traffic Act (1988)(Section 39) places a duty on local authorities to provide a programme of measures to promote road

safety. That service includes road safety education, engineering and encouragement as well as enforcement activity.

- 1.6 Shetland Islands Council's Safety and Risk Services have produced this document, in conjunction with our road safety partners in Shetland.
- 1.7 The Road Safety Themes contained in this Road Safety Plan are: -
 - Road Safety Encouragement (Safety & Risk Services)
 - Road Safety Education (Safety & Risk Services)
 - Road Safety Engineering (Roads Service)
 - Road Safety Enforcement (Northern Constabulary)
- 1.8 Progress on these targets will be reported at the Road Safety Advisory Panel, the minutes of which will be presented as a standing item at Infrastructure Committee and onwards to Shetland Islands Council.

2 Links to Corporate Policy

- 2.1 This report supports Corporate Priorities in relation to the following sections of the Corporate Plan 2008:
 - Section 2 – Sustainable Community – Community Safety
 - Section 3 – Sustainable Organisation – Ensuring we are being efficient in everything we do.

3 Financial Implications

- 3.1 Whilst there are no direct financial implications arising from this report, other than those which are already covered within existing budgetary limits, any reduction in road accidents will have a positive impact on the estimated £4m annual cost of car crashes in Shetland, leading to more effective use of local resources.

4 Policy and Delegated Authority

- 4.1 Infrastructure Committee has delegated authority to act on all matters within its remit, under section 12.0 of the Council's Scheme of Delegations, and for which overall objectives have been approved by the Council, in addition to appropriate budget provision. As this report proposes the adoption of a new Road Safety Plan as policy, a decision of the Council is required.

5 Consultation

- 5.1 Consultation has taken place with our public sector partners including Northern Constabulary, Fire Brigade, Scottish Ambulance Service, NHS Shetland, and ZetTrans, whilst comment has been invited from the private sector representatives for example, driving instructors, Youth Voice, Taxi Owners Association, etc. through the Road Safety Advisory Panel.

6 Recommendations

- 6.1 I recommend Infrastructure Committee recommend to Shetland Islands Council that:
- i) The Road Safety Plan 2008-2010 be adopted as a Strategy for Shetland.

Date: 25 September 2008
Our Ref: SP/A1.4.5.3.1.1

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Chairperson's Introduction

I have great pleasure in introducing the Road Safety Plan for Shetland for 2008-2011.



My predecessor, Alistair Inkster, summed up the issue perfectly in his foreword to the 2003-2007 Road Safety Plan (see overleaf), by encouraging all individuals within Shetland, both in a work and private capacity, to use our roads with safety in mind at all times. Our roads themselves are perfectly safe. Roads do not kill. Inappropriate use of them does. Those sentiments are as relevant today as they were in 2003 and so I have chosen to include Alistair's introduction in the current plan because of its continuing relevance, and to build on that with some additional thoughts.

Tragically, last year, 5 lives were lost on Shetland's roads. This is a devastating total and, put simply, is 5 too many in my view. I would ask you just to take a few minutes to fully contemplate the wide-reaching impact that the loss of those 5 people have had on our community. I cannot impress enough, the complete waste of human life, all the lost hopes, the unrealised dreams and unmet aspirations. Improving Road Safety must surely be one of our highest priorities and by working together we can truly make a difference.

The Council's Road Safety staff, in association with a wide range of public and private partners, have built up a "cradle to grave" approach to Road Safety Education and Encouragement over recent years, starting with initiatives like Children's Traffic Club in Playgroups, pedestrian training in Nursery, cycling proficiency in Primary school, Crash Magnets in High School and various initiatives all the way through the educational system into adulthood with such issues as Pass Plus, better driving campaigns and initiatives for the over 50's drivers.

Roads Service focus attention on the Engineering side of Road Safety, introducing 20mph speed limits around schools, laying high friction surface pelicans and coloured patches to road surfaces to identify the need to reduce driving speeds, etc. They also carrying out accident investigation prevention work and will continue to adapt, build on and improve engineering initiatives to assist in Shetland's Road Safety aim.

The Police continue to have considerable success with the enforcement side of Road Safety, including campaigns relating to mobile phone offences, along with seatbelt and speeding offences. This has produced a downward trend with figures for slight and serious injuries being lower than last year.

The Road Safety Advisory Panel provides cohesion and direction for Council and its partners in terms of meeting the 2010 targets set down by the Scottish Government. It is my belief that, by working together, we will go from strength to strength in the goal to make road use in Shetland safer and by radically reducing the number of serious and fatal road accidents in our community.

Iris Hawkins

Chairperson
Road Safety Advisory Panel

Foreword – Alistair Inkster, *past chairman 2005-2008*

We are extremely fortunate to have such good roads in Shetland and it is important that when we use them we do so sensibly and carefully with due care, attention and respect for all other road users including pedestrians.

Following the discovery and subsequent production of oil around our shores from the mid-1970s, the Shetland Islands Council were able to negotiate with vision and great endeavour considerable revenue streams from the Oil Industry to the Council, and these monies were used in part and wisely to almost completely upgrade our road and transport infrastructure in the following twenty years or so. Indeed, this work is still going on today.

Our roads are well designed to a high standard and are extremely safe to drive on, but traffic speeds have increased in close correlation with the improvements made. It could be construed therefore, that one downside of having good well-designed safe roads is that when certain types of accidents do happen, they tend to be more serious, as vehicles are travelling faster.

Notwithstanding what I have stated above, our accident statistics stand favourable comparison with any other roads in Scotland, but because of the relatively small numbers of accidents that do happen, the figures, in percentage terms, can vary quite significantly. In this regard, our fatal and serious accident categories are higher than we would wish, and we must continue to strive to do what we can to reduce accidents across-the-board, but particularly so in the serious and fatal categories. Having said that, I must emphasise that our accident trends are down and hopefully this will continue. This is attributable, in no small measure, to the excellent work our road safety staff, designers and constructors, in association with our partners, have been doing, and I wish them well in continuing endeavours to reduce accidents still further.

My perspective is that the loss of human life on our roads is nothing short of a tragedy, not only because of the loss of that irreplaceable life but also because of the heartache and trauma that comes with the loss of a loved one. I have experienced three such tragedies in my own electoral area or nearby in the last few years, and I have witnessed the effects not only on the families involved, but also on the wider community, and I can assure you that this is profound. Hence the importance of the considerable efforts being made by all the relevant bodies to reduce accidents still further.

It follows that I am delighted that our staff, in association with our other partners, have produced a Road Safety Plan for the period 2004 to 2007, and I trust that this effort will contribute to the increased awareness of motorists of the need to drive safely and with due care and attention, and so contribute to a reduction in accidents on our roads.

Prominent in our Road Safety Plan is the emphasis on what is called the 4E's – Encouragement, Education, Engineering and Enforcement, and I hope that the adoption and the vigorous promotion of this approach will yield good results.

The Scottish Executive has set specific targets relating to accident reduction to the year 2010. At this time we are well placed to more than meet those targets but there is no room for complacency. As I have stated earlier we have had more fatal accidents than should have been, and it is therefore imperative that we must continue to work very hard to try and reduce and hopefully eliminate fatal accidents.

Lets give it our best shot; we can't do any better than that. If we go some way to achieving our objectives in this area, then I am sure that all those involved will feel justifiably proud, and rightly so. I am sure that the people of Shetland would also be extremely appreciative.

Alistair Inkster
Chairman
Road Safety Advisory Panel

Executive Summary

This document contains a strategy to improve road safety and reduce road casualties to meet Government targets for casualty reduction by 2010. These are

- A 40% reduction in the number of people killed or seriously injured
- A 50% reduction in the numbers of children killed or seriously injured
- A 10% reduction in the slight casualty rate.

The plan is divided into the four main themes of road safety (Encouragement, Education, Engineering and Enforcement). It brings together the targets and strategies of the organisations involved. It also analyses and presents crash statistics for Shetland, the key points of which are:

- The cost of crashes in Shetland in 2006 was estimated at £4 M.
- A total of 12 people were killed or seriously injured in Shetland Islands Council area in 2006.
- A total of 49 people were slightly injured in crashes.
- Shetland is on course (at the end of 2006) to meet all of the three Government targets by 2010.

Appendix 4 details Shetland's Statistics, with graphs, tables of offences and casualties. Further information on accidents statistics can be found on the Shetland Islands Council website. Northern Constabulary supplied Road crash statistics with additional information from the Scottish Executive publication "Road Accidents Scotland 2007".

Whilst we deal in statistics, we should remember that every statistic refers to a person.



Scalloway School Junior Road Safety Officers holding the cycle safety kits handed out in 2007 & 2008

Introduction

Road Safety is vitally important to everybody. Few people make a journey without use of the road system. Every year there are incidents that cause death and injury. No longer are they regarded as accidents but are termed crashes. Crashes happen for many reasons but rarely are they unexplained.

Road crashes are the biggest single cause of accidental death in both children and adults in the whole of Great Britain. Every year in Shetland unnecessary crashes often result in grief and suffering.

The Road Traffic Act (1988)(Section 39) places a duty on local authorities to provide a programme of measures to promote road safety. That service includes road safety education, engineering and encouragement as well as enforcement activity.

Shetland Islands Council's Safety and Risk Services have produced this document, in conjunction with the road safety partners in Shetland.

The Road Safety Themes contained in this Road Safety Plan are: -

- Road Safety Encouragement
- Road Safety Education
- Road Safety Engineering
- Road Safety Enforcement

Progress on these targets will be reported to the Road Safety Advisory Panel and Shetland Community Safety Partnership. Many different organisations are involved with road safety projects across the islands. Each group sets their own targets with regard to their particular remit for road safety.

Meeting these targets will be challenging but are central to our Strategy and these can only be achieved by taking a holistic approach, which combines the use of the 4 "Es" of road safety – Education, Encouragement, Enforcement, and Engineering.

The following chapters of this document look at policy links, the consultation carried out and the aims and objectives of the strategy. It also describes the Government's casualty targets in more detail and looks at the respective remits and initiatives of the Road Safety partners. The data analysis covers the years up to and including 2006.

Appendix 5 shows Tables for the Shetland Area taken from the Road Accidents Scotland books produced each year by the Scottish Government.

Policy Links/Consultation

This document was developed through the Road Safety Advisory Panel and the Shetland Community Safety Partnership.

This document is linked to the following policies and activities

- Shetland Community Plan
- A Community Safety Strategy For Shetland 2005 - 2010
- Shetland Regional Transport Strategy
- School Travel Plans
- Active Schools Programme
- Health Promoting Schools
- Eco schools
- The ACPOS National Road Policing Strategy
- Northern Constabulary Roads Strategy

The above strategies link to different parts of the Road Safety Plan.

Consultation with all our partner organisations has been carried out prior to the publication of this plan.



JRSO Presentation day 2007

Aims and Objectives

The following aims and objectives have been developed through consultation with our partners. They provide a clear link to the programmes and initiatives, which are detailed later in the strategy.

Aims

- To reduce road casualties in Shetland
- To reduce the number of drink and drug drivers in Shetland
- To encourage healthier and more environmentally friendly alternatives to car journeys such as walking, cycling and public transport

Objectives

- To reduce the number of people killed, seriously injured and slightly injured on Shetland's roads, in line with government targets, through a programme of engineering, enforcement, education and encouragement, by 2010
- To make Shetland road users aware of the risks their actions impose on others, and seek to change driver behaviour, primarily through education
- To promoting appropriate speeds especially around schools and home zones in line with government targets
- To reducing the need for single car journeys, where practical, in favour of healthier or more environmentally friendly alternatives
- To conduct analysis of crash statistics to highlight problem areas
- To commit resources to intelligence-led policing initiatives and campaigns
- To increase awareness of safety equipment, for example, cycle helmets and seatbelts



Have you been smiled or frowned at? The Intelligent Road Sign in Unst

Casualty Reduction Targets

In 1987, HM Government set a target of reducing casualties by one-third by 2000 (based on the average number of casualties from 1981-1985). Shetland achieved two out of the three targets.

1981-1985 average v % change for Year 2000

Class of Casualty	1981-1985 average	% Change in 2000
Fatal*	4	+54
Fatal and Serious*	10	-82
All severities*	48	-55

*See glossary at end for definitions

Because of the low numbers involved in Shetland, small changes can skew the statistics enormously. In the case of fatal accidents a numerical increase of two equates to 50% in this table.

These statistics were encouraging in all but the fatal accident category. However, the difference between serious and fatal can often be separated by only a small margin. In Shetland, despite active enforcement of seat belt legislation many casualties who could have received slight injuries, end up with serious or fatal injuries simply by not wearing the safety equipment provided in their car.

Because of the nationwide reduction in casualties that took place over the period 1981-1985, HM Government set new targets for 2010 for all organisations that have an interest in road safety.

These are based on the 1994-1998 average and define targets in three specific categories:

- To reduce the number of people killed or seriously injured (KSI) as a result of road accidents by 40%
- To reduce the number of children killed or seriously injured as a result of road accidents by 50%
- To reduce the number of all people slightly injured as a result of road accidents by 10%, expressed as the number of people slightly injured per 100 million vehicle kilometres

The timeframe set by the Government for achieving this reduction is by 2010.

The table below gives details of the how the figures were calculated

Figures and Averages for Shetland for 1994-1998

		Year					Average 1994-1998
		1994	1995	1996	1997	1998	
All Casualties	Fatal	5	4	1	5	0	3
	Serious	20	20	21	22	21	21
	Slight	45	80	49	53	65	58
Child Casualties	Fatal	0	0	0	0	0	0
	Serious	1	8	6	1	2	4
	Slight	-	-	-	-	-	N/a

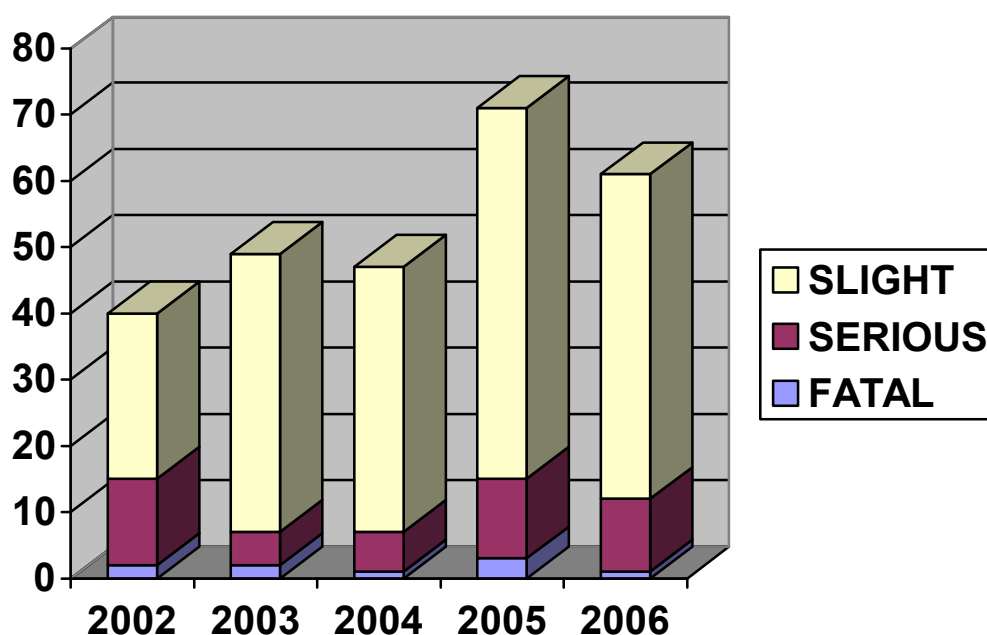
As the table below shows, the targets for slight injury accidents are already being met, however as with the fatal and serious categories, there is no room for complacency. The targets for fatal and serious injuries may be meeting the targets at the moment but the drive must be to reduce these still further.

		YEAR					AVERAGE 2002-2006	TARGET 2010
		2002	2003	2004	2005	2006		
All Casualties	FATAL	2	2	1	3	1	2	14
	SERIOUS	13	5	6	12	11	10	
	SLIGHT	25	42	40	56	49	42	52
Child Casualties	FATAL	0	0	0	0	1	1	2
	SERIOUS	5	0	1	0	0	1	
	SLIGHT	1	2	4	5	3	3	NO TARGET

Progress towards the targets is discussed in Crash Statistics section.

The graph below shows at a glance the proportions of each classification of accident up to the end of 2006.

Shetlands Casualty Totals 2002-2006



As well as the pain and suffering involved, these accidents cost the community millions of pounds each year. The Department of Transport publishes valuations each year of accident and casualty costs. These include monetary values for:

- Human cost - pain, grief, suffering, loss of enjoyment of life etc
- Economic costs - loss of output due to injury and medical costs
- Cost of damage to vehicle and property
- Police and insurance administration

The table below shows the cost per casualty for 2006 in Shetland. These costs affect us all, not just those who suffer grief and financial hardship as the result of being involved in a car crash.

Cost of casualties in Shetland in 2006

Severity of Casualty	Cost per casualty	2006 casualties	Total cost*
Fatal casualties	1,489,450	1	1,489,450
Serious casualties	167,360	11	1,840,960
Slight casualties	12,900	49	632,100
Total cost of injury casualties to Shetland in 2006			3,962,510

* Cost includes: pain grief and suffering to casualty, relatives and friends; loss of enjoyment of life over and above the consumption of goods and services; loss of output due to injury and medical costs; ambulance/medical costs; cost of damage to vehicles and property; cost of police and insurance administration.

Road Safety Partners

In Shetland, many organisations contribute to the promotion of road safety and to this Plan.

Shetland Community Safety Partnership - membership includes all of the Emergency Services, the local authority and NHS Shetland. Their priorities, outlined in their Strategy for 2005 – 2010, are crime and the fear of crime, diversity, young people, anti-social behaviour, road safety and personal safety.

ZetTrans are the Regional Transport Partnership (RTP) for Shetland. RTP's are statutory bodies responsible for bringing together key stakeholders in transport planning in an area to produce and deliver strategies that aim to make a real improvement to users. If you would like a copy of Shetland's Regional Transport Strategy please go to www.zettrans.org.uk

Northern Constabulary – Their National Road Policing Strategy states that they will “make the roads in Scotland safer by reducing death, injury and crime”

Shetland Islands Council Safety and Risk Services section provides road safety education, training and publicity. The Council Safety Officers and Road Safety Officer are based within this section.

Shetland Islands Council Active Schools team promote Road Safety as part of their programme with school students.

Shetland Islands Council Roads Service provides road safety engineering expertise.

Road Safety Advisory Panel – This includes those interested in Road Safety from organisations such as Northern constabulary, Shetland Island council councillors and Shetland Driving Instructors.

Themes

All the key agencies involved in the promotion of road safety base initiatives around the theme of the four “E’s”, Encouragement, Education, Engineering and Enforcement.

- **Encouragement**

Children’s Traffic Club in Scotland

Aim

- To increase take up of the free resource the Children’s Traffic Club in Scotland

What we hope to gain

- Reduction in road traffic accidents for pre school children
- Participation in the scheme of all three year olds in Shetland
- Increase in road safety awareness for later life

How we will achieve this

- Free provision of the packs to parents, nurseries and childminders
- Promotion and publicity about the scheme generally
- Contacting all registered nurseries and playgroups
- Contacting all registered childminders
- Talks and information to all interested groups

Junior Road Safety Officers (JRSOs)

Aim

- To encourage schools to adopt the Junior Road Safety Officers Scheme from Road Safety Scotland.

What we hope to gain

- Participation in road safety issues by pupils
- Identification of road safety issues to Road Safety Officers, Roads Engineers, Police
- Increased school liaison by Road Safety Officer and Police Liaison Officers
- Link to school travel plans and encouragement of healthy choices when travelling to school

How we will achieve this

- By involving Head Teachers at a head teachers meeting to allow their schools participation in the scheme
- By encouraging pupils to become JRSOs and encourage the IT links that the scheme promotes

Seatbelts

Aim

- To encourage every child to comply with the law and wear a seatbelt on every journey. This will mainly be by use of the Dim Family. The Family are a portable resource, which

demonstrates the effect on an individual of not wearing a seat belt in an emergency stop or collision.

What we hope to gain

- Reduction in road traffic casualties
- Seatbelts always worn and worn correctly
- Children and young persons aware of risks and the responsibility to themselves and other family members if they do not wear a seatbelt
- Transfer of advice to parents from children

How we will achieve this

- Using the Dim Family seatbelt resource to deliver presentations to all interested schools, community groups and any interested organisations
- Using leaflets, publicity campaigns and national campaigns to highlight the benefits of wearing seatbelts and the law on wearing seatbelts.
- Talks and information to all interested groups

Theatre in Education

Aim

- To arrange for a selection of road safety plays to be performed in Shetland.

What we hope to gain

- Road safety awareness
- Opportunity for children to experience theatre and workshops targeted at road safety
- To reduce road accidents by increasing sense of personal responsibility
- To make older drivers aware of issues relating to driving

How we will achieve this

- By promoting and organising Road Safety Scotland's three yearly schedule of plays whilst visiting Shetland

Hands Up Surveys

Aim

- To take part in the National Survey of all pupils travel modes to/from school.

What we hope to gain

- Accurate data on travel modes to and from school
- Comparable results between Shetland schools and other Scottish Schools

How we will achieve this

- By distributing the Survey form to all Schools, for completion in the second week of September each year.
- Sending compiled Shetland results to Sustrans for addition into the Scottish results.

School Travel Plans

Aim

- To use the Road Safety Officer to assist in the completion of a travel plan for every school in Shetland

What we hope to gain

- Pupils choosing Safe Routes To Schools
- Encouragement of healthy travel choices eg walking buses or cycle trains
- To reduce the number of single car journeys to school if possible
- To encourage safety on the road

How we will achieve this

- By contacting and working with every school to develop a suitable school travel plan
- By liaising with the Active Schools Team, ZetTrans, NHS Shetland and other partner organisations.

Young Drivers Website –www.getinlane.com

Aim

- To raise awareness of the web site provided by Road Safety Scotland which gives information ranging from how to book a drivers test to the financial cost of buying a car.

What we hope to gain

- Awareness of the risks and responsibilities that go along with driving
- Use of the website to answer questions on technical aspects of driving
- Awareness of the risks and responsibilities of choices involving drugs, alcohol and driving.

How we will achieve this

- By providing post cards and credit card size information leaflets with the website address
- By including the website address in any promotional activities where young drivers are likely to be present

Drink/Drug Driving Campaigns

Aim

- To raise awareness of the dangers of Driving whilst under the influence of drink or drugs.

What we hope to gain

- Awareness of the risks and responsibilities that go along with driving
- Deter drivers from driving whilst under the influence.
- Awareness of the risks and responsibilities of choices involving drugs, alcohol and driving.
- Reduction in numbers of people driving whilst under the influence of drink or drugs.

How we will achieve this

- By providing Posters, Beer Mats and other resources to all Pubs, Clubs Shops and buildings where drink is served.
- **Education, Training and Publicity**

Child Pedestrian Training

Aim

- Provide child pedestrian training for children in Shetland where requested by schools and groups

What we hope to gain

- Increased Road safety awareness
- Reduction in child accident statistics
- Increased personal safety

How we will achieve this

- By using the Road Safety Officer to provide training on request to schools and voluntary groups
- By provision of Children's Traffic Club in Scotland material to all children aged 3 whose parents wish it
- Talks and information to all interested groups

Streetsense

Aim

- Encourage all schools to use the Streetsense Road Safety Pack provided in 2003 and the Streetsense 2 folders distributed to every class in Shetland in 2007 by Road Safety Scotland, to give a minimum of three hours road safety education to every primary pupil in Shetland every year

What we hope to gain

- Road safety awareness now and in the future
- Good practice taught from an early age
- Safe travel to and from school and at other times
- Reduction in child accident statistics

How we will achieve this

- Promoting Streetsense and its links to the 5-14 curriculum amongst education personnel
- Provision of leaflets and resources at relevant times of year
- Specifically targeted road safety visits to groups and schools
- Publicity and promoting road safety events

Cycle Safety

Aim

- Provide off road cycle training to all Primary pupils under 10 years.

What we hope to gain

- Increased personal safety
- Reduction in road traffic accidents
- Increased awareness of general road safety
- Reduction in cycling accidents

How we will achieve this

- Inviting schools to participate in the scheme every year
- By liaising directly with school staff, education staff and the Active Schools Team

Cyclist Training

Aim

- Provide on road cycle training for upper Primary pupils (aged 10 years of age and above) and special needs pupils on request

What we hope to gain

- Increased personal safety
- Reduction in road traffic accidents
- Increased awareness of general road safety
- Reduction in cycling accidents

How we will achieve this

- Inviting schools to participate in the scheme every year
- By liaising directly with School Staff, Education Staff and the Active Schools Team
- By using the Scottish Cycle Training Scheme provided by the Road Safety Scotland.

Travelling Green

Aim

- To provide this project to all Shetland Schools, for pupils in Primary 5 or composite class. This project encourages pupils to walk to school and educates on health issues.

What we hope to gain

- Increase in numbers of pupils walking to school

- Reduction in single car journeys to/from school
- Increased awareness of general road safety
- Increased knowledge of healthier travel options.

How we will achieve this

- Inviting schools to participate in the scheme every year
- Providing the Travel Pack to every pupil in the scheme.
- By liaising directly with school staff, education staff and the Active Schools Team

Crash Magnets

Aim

- Provide Crash Magnets Toolkit and resources to every Secondary School in Shetland.

What we hope to gain

- Increased awareness of Road Safety in the 15-18yr age group
- Increased awareness of responsibilities for new drivers
- Reduction in road traffic accidents
- Increased awareness of general road safety

How we will achieve this

- Working with PSE teachers in the delivery of the course
- By liaising directly with School Staff, Education Staff and Youth Workers
- Providing resources and engaging young people by making this subject relevant to their lives and experiences.

Pass Plus

Aim

- To publicise the Pass Plus Scheme launched by the Driving Standards Agency and run by driving instructors in Shetland. If completed within a year of passing the driving test, a certificate is issued which leads to discount in premiums from some insurance companies. There are six lessons including driving at night (practical) and driving on dual carriageways (theory).

What we hope to gain

- Drivers who have passed their tests can have extra sessions to give them more experience of driving in different conditions
- Encouragement and experience on the road for drivers who have already passed
- Used as a back-to-driving tool for those returning to driving after long absences who feel they lack experience

How we will achieve this

- By funding the scheme in Shetland by 50% for a limited time
- By reviewing and producing a new leaflet to promote the scheme and giving it to all new drivers on passing their test

School Crossing Patrol Training

Aim

- To train school crossing patrol officers on recruitment, and every three years, on how to stop traffic and promote personal and road safety in accordance with legislation and good practice

What we hope to gain

- Safe crossing patrols at each designated location in Shetland
- To provide patrols with the necessary training and guidance to stop traffic safely and legally

How we will achieve this

- By providing training on recruitment of officers
- By organising refresher training every three years for officers
- By placing adverts in local media to advise drivers on their responsibilities at patrol sites



Cycle Safety training for P1-4 pupils.

• Engineering

The role of engineering in Road Safety is to provide a safe road environment within the constraints of available finance and environmental restrictions. The physical condition of our roads and footways, street lights, traffic signals and signs all contribute to safety.

There are various engineering measures used to improve Road Safety and these remit of the Council's Infrastructure The Roads Service are responsible for implementation of engineering measures amongst a number of organisations and including the Police, local elected community councils and school boards formation of proposals.



which can be lie within the Committee. the and consults individuals members, in the

Network Management

The road network is inspected regularly to keep it clear of hazards and to identify any maintenance work required. Works resulting from such inspections include repairing potholes, resurfacing, renewal of traffic signs and road markings, maintenance of streetlights and Pelican crossings, and clearing of vegetation and drainage systems. This work is prioritised initially on a road safety basis, but maintaining and extending the life of the road network is also very important.

In addition, winter maintenance operations, such as gritting and snow clearing, are prioritised for safety and in order to keep traffic as free flowing as possible in poor weather conditions.

Safer Speeds

The government's speed review has confirmed that there is a strong link between vehicle speeds and the risk and severity of collisions. The largest group at risk overall is car passengers and drivers, especially on rural roads. Shetland records a high proportion of single vehicle crashes on rural double track sections of road. Along with the police, we will continue to raise awareness of the dangers of excessive and inappropriate speed. We will support national publicity campaigns and introduce measures to encourage drivers to travel at an appropriate speed for the conditions and the cars in which they drive.



Traffic Calming is becoming increasingly important in reducing speeds in residential areas and near to schools. Due to increased recognition that lowering traffic speeds reduces the number and severity of injuries we will continue to promote more appropriate speed limits, especially in residential areas. Traffic

Calming will remain the most effective method of reducing speed in urban areas and will continue to be part of our strategy along with 20 mph speed limits.

Crash Reduction Measures

Crash Reduction Measures will be applied to existing roads where analysis of Police Accident Reports indicate that crashes can be reduced through the implementation of engineering works. These works are targeted at sites where crashes have occurred previously and at other similar locations.

Suitable measures range from fairly low cost works such as installing new signs, white lines and reflective studs through more expensive treatments like anti-skid surfacing to the most expensive remedial actions of road realignment or junction upgrading.

New Developments (Development Control)

Roads Service staff provide advice on planning applications as well as controlling the construction of any new roads to ensure that all development designs follow best practice with respect to road safety.

Historical

The Government initiatives to promote safety, predominantly for children, namely “20 mph at Schools” and “Cycling, Walking and Safer Streets”, provided the SIC with £120,000 to be spent in year 2004/05, and a further £121,000 for use in 2005/06.

These are largely directed at engineering measures in the vicinity of schools to assist with the implementation of 20mph speed limits and improved pedestrian facilities, particularly on popular walking routes to school.

During 2004, Bells Brae Primary improvements to the Bells Road area, consideration to the drop off and pick-up the implementation of a 20mph speed roads surrounding the school and adjacent residential area. The of a part-time 20mph speed limit at Primary School has been completed, outside Cunningsburgh Primary the 20mph speed limit for Sound was installed during 2007 and will be completed with the installation of a part-time 20mph limit on the A970 during 2008 along with the construction of the new roundabout.



School saw especially with up areas, and limit for the much of the implementation Whiteness as has one School. Part of Primary School

- **Enforcement**

Both national and local road safety campaigns attempt to increase public awareness of those aspects of driving which are recognised as being the main contributory factors in vehicle collisions involving personal injury, namely

- Drink or drug driving
- Inappropriate speed
- Failure to wear seatbelts

To combat this, Northern Constabulary have increased enforcement activity and have recently trained officers in drug impairment roadside tests. Breath testing continues to be used where appropriate and after any road crash.

Speed enforcement is undertaken by Shetland Police Officers and by Road Policing Officers from the mainland. In recent years both car drivers and motorcyclists have been severely penalised for exceeding speed limits. Within built up areas speed limits are now as low as 20mph. These limits will continue to be enforced vigorously. The so-called “Smiley Face” road sign gives a visible indication to motorists of their speed and is used as a deterrent usually within short distances of schools.

Short-term local targets have been set which reflect local concerns in Shetland.

- To reduce the number of people killed or seriously injured as a result of road accidents by 33% by the end of 2010
- To reduce the number of children killed or seriously injured as a result of road accidents by 40% by the end of 2010
- To reduce the number of people slightly injured as a result of road accidents by 10% by the end of 2010
- To increase the number of drunk drivers caught by 5% by the end of 2008/2009
- To increase the number of drug drivers caught by 5% by the end of 2008/2009

It is believed that campaigns are one of the best ways of getting the enforcement message across and over the next 3 years, these will include:

- Speedwatch
- Summer Safety
- Festive Safety
- Winter Safety
- Drink/Drug Driving Enforcement
- Child Safety
- Bike Safe

Intelligence-led policing and the use of crash analysis data will ensure that the driver behaviour that causes the greatest risk to the general public will be targeted in a structured and informed manner. All available means of technology will be used in this respect and a full evaluation of initiatives will be undertaken.

Targets and Crash Statistics

The table below is from the earlier section in the Plan "Casualty Reduction Targets".

Casualty figures against 2010 targets

		YEAR					AVERAGE 2002-2006	TARGET 2010
		2002	2003	2004	2005	2006		
All Casualties	FATAL	2	2	1	3	1	2	14
	SERIOUS	13	5	6	12	11	10	
	SLIGHT	25	42	40	56	49	42	52
Child Casualties	FATAL	0	0	0	0	1	1	2
	SERIOUS	5	0	1	0	0	1	
	SLIGHT	1	2	4	5	3	3	NO TARGET

The figures so far are in the table above and a graphical representation is below. The categories listed in HM Governments targets are specific and progress is generally good.

- *40% Reduction in the number of people killed or seriously injured (KSI) in road crashes*

Shetland is on course to achieving the 2010 target if accident rates remain constant or improve.

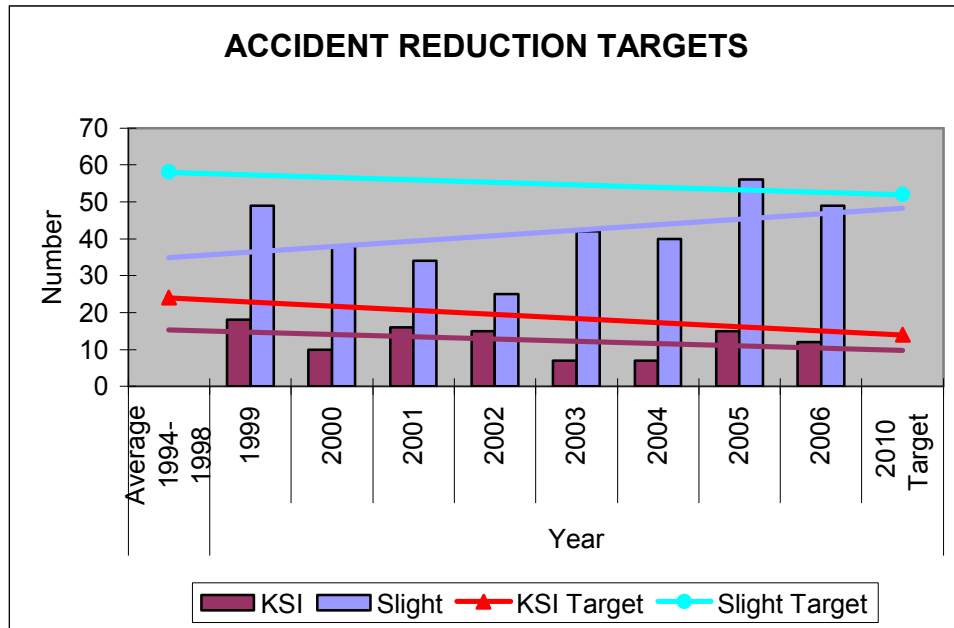
- *50% reduction in the number of children killed or seriously injured*

At the moment we have reached the 2010 target but we must work hard to reduce this rate further. Shetland is unusual, but fortunate, in having few child injuries on our roads and that is something that we must strive to retain.

- *10% reduction in the slight casualty rate, expressed as the number of people slightly injured per 100 million vehicle kilometres.*

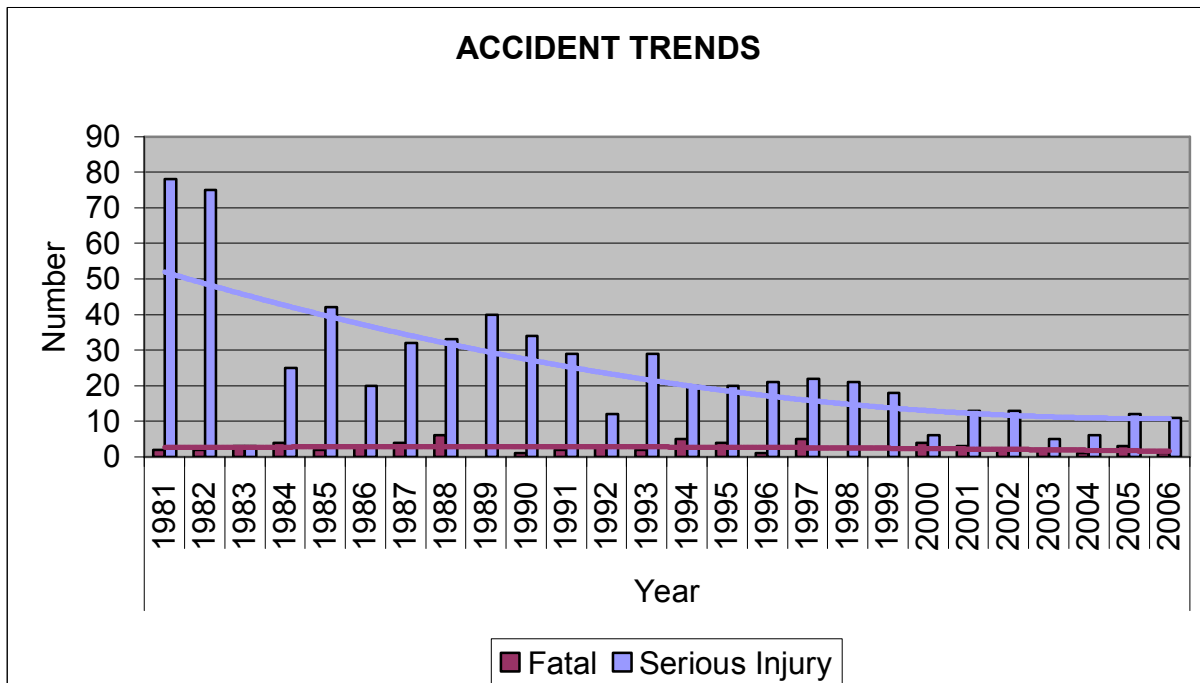
The slight casualty rate shows a large decrease on 1994-1998. It is encouraging that this rate is decreasing so dramatically. The data currently presented is based on actual numbers of slight casualties only. However, it is clear that Shetland is performing well in this category and that the decrease in the rate is continuing towards 2010.

Accident Reduction Targets and progress so far



Progress against targets will be monitored and reported to the Road Safety Advisory Panel and Community Safety Partnership on an ongoing basis.

The trends since 1981 are given below. Generally Shetland does well and the trends are mostly down. However in the small numbers that we do have, a single crash can cause a huge change in our statistics.



Future

The Governments document “Tomorrows Roads: Safer for Everyone” will continue to be the major influence on road safety policy for the life of this plan. New initiatives and campaigns will be developed under this strategy and Shetland will embrace these and use them to develop local targeted policies and strategies. It is particularly important to fully utilise additional funding wherever possible for road safety improvements or campaigns.

School Travel Plans have been put into place for most schools in Shetland. We will strive to get every school to complete a Travel Plan. This and other initiatives, in collaboration with other agencies, will continue to encourage safer and healthier journeys to school.

Together with our partners we are developing a Cycling Action Plan for Shetland, when this is finalised we will strive to implement the actions within it and incorporate them into road safety initiatives.

In the longer term, the National Road Safety Strategy will demand and encourage us to closely monitor and work to achieve the targets we are set.

Shetland will have increasing traffic volumes in the future. Because of the geographical spread of our housing stock, it may not be possible to greatly influence the usage of public transport, walking and cycling but we are working with ZetTrans to do as much as possible. One thing is clear however - there is no scope for complacency if we are to remain serious about making Shetland’s roads safer for all.



Pupils and Baldy Bane Theatre Group pacing out car stopping distances.

Appendix One

Notable Road Safety Dates

1964-65: Road Traffic Act 1964 - Wider powers for speed limits. Trial 70 mph speed limit on motorway and other previously de-restricted roads. 50 mph speed limit on selected roads during summer.

1967: Seat belts compulsory on new cars - Permanent 70 mph speed limit on all roads. **An offence to drink and attempt to drive with over 80 mg of alcohol per 100 ml of blood.**

1968-69: 3 year old vehicles need test certificate.

1970: New regulations on lorry and PSV drivers' hours of work.

1973-74: Safety helmets compulsory for 2-wheeled motor vehicle users - 50 mph national maximum speed limit, later motorway 70 mph, dual carriageway 60 mph - Vehicle lighting regulations.

1975: Temporary 50 and 60 mph limits extended.

1976: Licensing Scotland Act 1976 - extension of licensing hours until 11 pm - effective from 13 December 1976.

1977: 50 and 60 mph limits raised to 60 and 70 mph.

1977: Licensing Scotland Act 1976 - extension of Sunday opening - effective from October 1977.

1978: 60 and 70 mph limits permanent - New rules on maximum hours which may be worked by goods vehicle drivers.

1982: New 2-part motorcycle test from 29 March - Application of 2-year limit on provisional motorcycle licence took effect from 1 October.

1983: Transport Act 1981 introduced evidential breath testing and made **seat belt wearing law for drivers and front seat passengers of most cars and light vans**. Learner motorcyclists now only allowed to ride machines of up to 125 cc.

1984: Regulations introduced requiring spray reducing devices to be fitted to lorries and trailers.

1985: In December, Scottish Police Authorities introduced a policy of breath testing all drivers in an accident wherever possible.

1986: All new cars manufactured from 1 October to be fitted with rear seat belts. **Seat belt legislation made permanent**. European Road Safety Year.

1987: Legal requirement introduced requiring all newly registered cars to be fitted with rear seat belts or child restraints from 1 April. Government sets a target to achieve a one-third reduction in road accident casualties by the year 2000.

1988: All coaches first used from 1 April 1974 using a motorway must have 70 mph limiters fitted by 1 April 1991.

1989: Penalty points increased for careless driving, driving without insurance and failing to stop after or to report an accident. **Seat belt wearing by rear child passengers became law in cars where appropriate restraints have been fitted and are available**. Accompanied motorcycle testing became mandatory.

1990: Compulsory basic training for motorcyclists introduced and learner drivers banned from carrying pillion passengers. High Risk Offenders Scheme for problem drink-drivers extended. New regulations requiring those

accompanying learner drivers to be at least 21 years old and to have held a licence for 3 years. Scottish Road Safety Year.

1991: Seat belt wearing by rear adult passengers became law in cars where belts are fitted and available. New road hump regulations introduced to reduce traffic speed.

1992: Subsequent to the Road Traffic Act 1991, new road traffic offences and penalties came into force, including retesting of dangerous drivers. The Traffic Calming Act 1992 came into force enabling roads authorities to introduce a wide range of traffic calming measures. **1993: First speed enforcement cameras introduced in Scotland.** The MOT test extended, including new checks on mirrors, windscreen condition, fuel tanks, seat and door security and number plates.

1994: First 20 mph zones introduced in Scotland. Traffic Calming (Scotland) Regulations came into force.

1995: Pass Plus scheme introduced for new drivers which encourages new drivers to take more lessons by offering discount on motor insurance.

1996: Driving theory test introduced from 1 July for car and motorcycle learners. Road Traffic (New Drivers) Act 1996 - requires newly qualified drivers to retake the driving test if they acquire 6 or more penalty points within 2 years of passing their test - effective from 1 June 1997. **Requirement for coaches and minibuses to be fitted with seat belts when carrying children on organised trips, including journeys between home and school - effective from February 1997.** End of concession, where seat belts are fitted, whereby 3 children could share a double seat.

1997: New Zebra, Pelican and Puffin crossing regulations introduced, with Puffin crossings prescribed for the first time.

1998: New Road Humps regulations came into force giving local authorities wider powers to establish road humps.

1999: Amendment to the Road Traffic Regulation Act 1984 gave local authorities power to introduce traffic calmed 20 mph zones and 20 mph speed limits, with or without traffic calming measures, at suitable locations. Revised Highway Code published.

2000: The Government announced a new road safety strategy and casualty reduction targets for the period to 2010 in *"Tomorrow's Roads - Safer for Everyone"*. A review of speed policy was conducted and reported in *'New Directions in Speed Management'*.

2001: Amendment to the Road Traffic Regulation Act 1984 made it clear that school crossing patrols can stop traffic for children of all ages and adults and gave local authorities greater flexibility in the times that school crossing patrols can operate. Scottish Executive awarded nearly £15 million to local authorities for cycling, walking and safer streets projects, including safer routes to school schemes.

2002: New Home Zones (Scotland) Regulations came into force. These set out the procedures local authorities must follow when designating home zones.

Appendix Two

Glossary

Term/Abbreviation	Description
Area Transportation Plan	A transportation plan for area-based issues in the future
Buses and coaches	Includes buses, coaches and minibuses.
Car	Includes cars, estate cars and three wheeled cars and taxis.
Casualty	A person killed or injured in a crash.
Child	People under 16 years of age.
Crash investigation and prevention	The process of investigating crashes at hazardous locations in appropriate detail to develop a programme of cost effective remedial measures.
Crash severity	The severity of the most seriously injured casualty.
Crash	A collision involving one or more vehicles on the public road which was reported to the police.
Damage only crash	A crash where no-one was injured.
Driver	Person in control of vehicle other than pedal cycles and two wheeled motor vehicles.
Enforcement	The measures carried out usually by the Police to detect traffic law offences which carry a high risk of causing road incidents.
Engineering	The physical measures introduced in the road, or in its immediate environment to reduce the risk of incidents e.g. traffic signals, traffic sign and road markings, road humps etc.
Fatal casualty	Someone whose injuries prove fatal less than 30 days after the crash.
Four E's	The aspects of road safety – Engineering, Education, Enforcement and Encouragement.
Goods vehicles	Vans, lorries, tankers, milk floats, tractor units travelling without trailer units.
Government targets	The Government set National Targets to reduce road casualties by 2010, which Shetland Islands Council have adopted.
Heavy goods vehicles	Goods vehicles with a maximum permissible gross vehicle weight of more than 3.5 tonnes.
Junction	A place where two or more public roads meet or within 20m of such a place.
KSI's	Casualties who were Killed or Seriously Injured.
Light goods vehicles	Goods vehicles with a maximum permissible gross vehicle weight of up to 3.5 tonnes.
Local authority road	A road which is the responsibility of the Local Authority i.e. Shetland Islands Council to maintain.
Local Transport Strategy (LTS)	The Council's strategic policy covering all aspects of transportation.
Major roads	Motorways and A class roads.
Minor roads	B and C class roads and unclassified roads.

Motorcycles	Includes the drivers or riders of all two wheeled motor vehicles e.g. motorcycles and mopeds.
Older people	Person who is 60 years old and over.
Other non-motorised vehicles	Includes vehicles drawn by an animal, ridden horse, invalid carriages without motors and street barrows etc.
Other vehicles	Includes ambulances, fire engines, pedestrian controlled vehicles with motors, railway trains, refuse vehicles, tractors and motor caravans etc.
Passengers	Occupants of vehicles, other than the person in control, including pillion passengers.
Pedal cycles	Including toy cycles ridden on the carriageway, tandems and tricycles. Pedal cyclists includes any passengers of pedal cycles.
Pedestrians	Includes persons walking on the footway or road, but also those riding toy cycles on the footway, those pushing a vehicle, occupants of prams/buggies and those who get out of a vehicles and are then injured.
PIC's	Personal Injury Crash i.e. a crash where someone sustained a slight, serious or fatal injury.
Riders	People in control of pedal cycles or two wheeled motor vehicles.
Road user group	A distinction between different types of driver, riders, passengers and pedestrians.
Rural road	A road with a speed limit above 40 mph.
Safer routes to School	Projects carried out at individual schools to assist children to travel to and from school more safely, particularly by walking or cycling.
Safety audit	The formal evaluation and inspection of new road schemes from design to completion to detect potential safety hazards before it is opened to the public.
Serious casualty	Someone whose injuries result in: <ul style="list-style-type: none"> - death 30 days or more after the crash - detention in hospital as an in-patient - fractures, concussion, internal injuries, crushings, severe cuts and severe general shock requiring treatment.
Slight casualty	Someone whose injuries are neither fatal nor serious such as a sprain, bruise or cuts which are not severe or slight shock only needing roadside attention.
Trunk road	A road which is the responsibility of Central Government e.g. the Scottish Executive
Urban Road	A road with a speed limit of 40 mph or less.
Vulnerable road users	People who are more at risk because their injuries tend to be more serious and they take longer to recover from crashes i.e. older people, children, pedestrians, cyclists and motorcyclists.



Pass Plus was subsidised by the council to ensure more young drivers participated in 2003/2006

Appendix Three

Useful Website Contacts/References

Listed below are details of a number of websites that may be of interest to anyone wanting to find out more about road safety.

The websites are listed alphabetically and a brief description of the site and/or its contents is also included. Shetland Islands Council accept no responsibility for the contents and security of these websites.

www.airso.org.uk

This is the website of the Association of Industrial Road Safety Officers (AIRSO), which aims to present a comprehensive national road safety diary on behalf of all road safety organisations.

www.arrivealive.info

A supplementary Driving standards Agency Website, dedicated to influencing young peoples' attitudes towards learning to drive and passing the driving test.

www.brake.org.uk

Brake promotes safe use of roads by addressing the skills and attitudes of road users, enforcement of traffic rules and appropriate punishment and education of road users who break the law.

www.capt.org.uk

CAPT – the Child Accident Prevention Trust

www.dsa.gov.uk

The Driving Standards Agency conducts driving tests in Great Britain for cars, motorcycles, lorries, buses and other

vehicles, and also maintains a register of car driving instructors and checks standards of tuition.

www.getinlane.com

The one stop site for all driving information for young drivers from Road Safety Scotland

www.irso.org.uk

The Institute of Road Safety Officers (IRSO) is a central organisation for all persons actively engaged in the promotion of road safety.

www.kerbcraft.org.uk

Kerbcraft is a national pilot child pedestrian training scheme organised by the Department for Transport, which aims to demonstrate how an effective child pedestrian training scheme can be established and sustained.

www.larsoa.org.uk

LARSOA is a national road safety organisation that represents the Road Safety Officers (RSOs) across the UK, aiming to reduce the number and severity of road crashes through education, training and publicity policies and programmes.

www.learnandlive.org.uk

“Learn and Live” is a pressure group, formed in 1989, committed to improving road safety, particularly among young and inexperienced drivers.

www.orsa.org.uk

The website of the ‘Occupational Road Safety Alliance’ (ORSA), which was established in April 2002 to represent the key stakeholders in road safety and occupational safety.

www.pacts.org.uk

PACTS promotes transport safety legislation to protect human life.

www.protectchild.co.uk

This site is part of a major In-car child safety initiative across Scotland aimed at increasing awareness of the dangers of ill-fitted, inappropriate car seats.

www.roadsafetyuk.co.uk

Independent road safety website for information about speed, child safety young drivers, the theory test, drinking and driving, etc.

www.roads.dft.gov.uk

The Department for Transport’s roads, vehicles and road safety home page, covering all issues relating to drivers, vehicles and road safety policy and research, primarily in England and Wales, but some National issues are also covered.

www.rospa.co.uk/

The Royal Society for the Prevention of Accidents website provides information, advice, resources and training for the

promotion of safety in all areas of life – at work, in the home, and on the roads, in schools, at leisure and on or near water.

www.safetymatters.renault.co.uk A road safety education site for children aged 7-11 years, their teachers and parents.

www.scotland.gov.uk This is the website of the Scottish Executive, who are responsible for strategic policy setting for roads and transportation issues in Scotland.

www.srsc.org.uk/ Road Safety Scotland is funded by the Scottish Executive and its remit is to develop and co-ordinate Scotland-wide road safety initiatives and campaigns.

www.thinkroadsafety.gov.uk/ The Think! Road safety campaign website.

www.travelwise.org.uk The website of the National TravelWise® Association and UK-EPOMM (European Platform on Mobility Management) offering a 'one-stop shop for all travel awareness needs'.

www.zettrans.org.uk Website of the regional transport partnership for Shetland. Here you can find details of the Regional Transport Strategy.

Appendix Four

Figure One

Number of seatbelt and speeding offences in Shetland 2000-2007

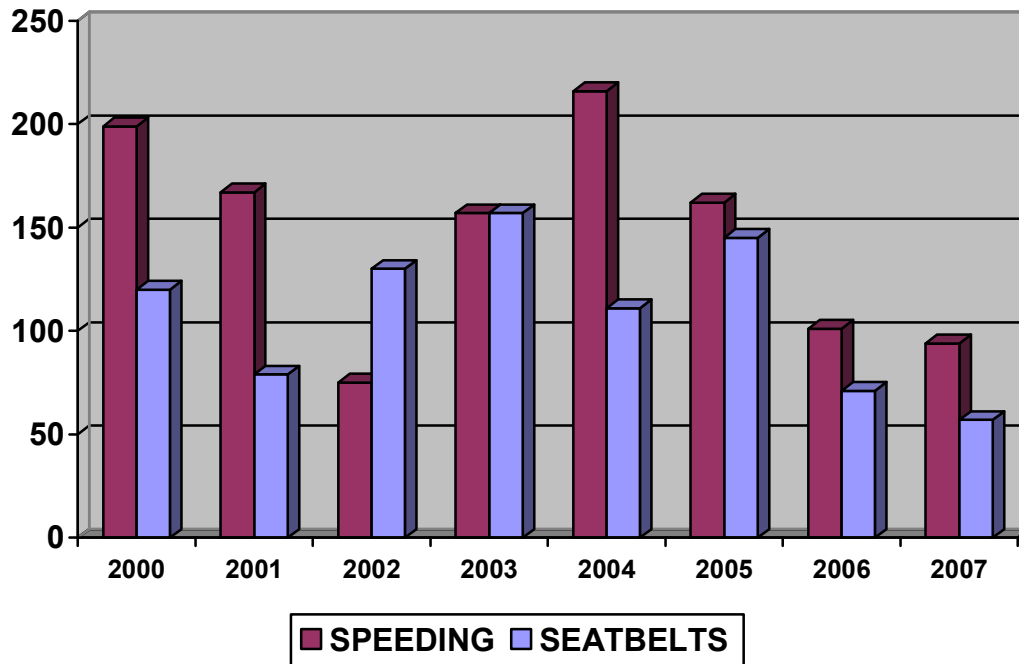


Figure Two

Number of Seatbelt Offences in Shetland 2000-2007

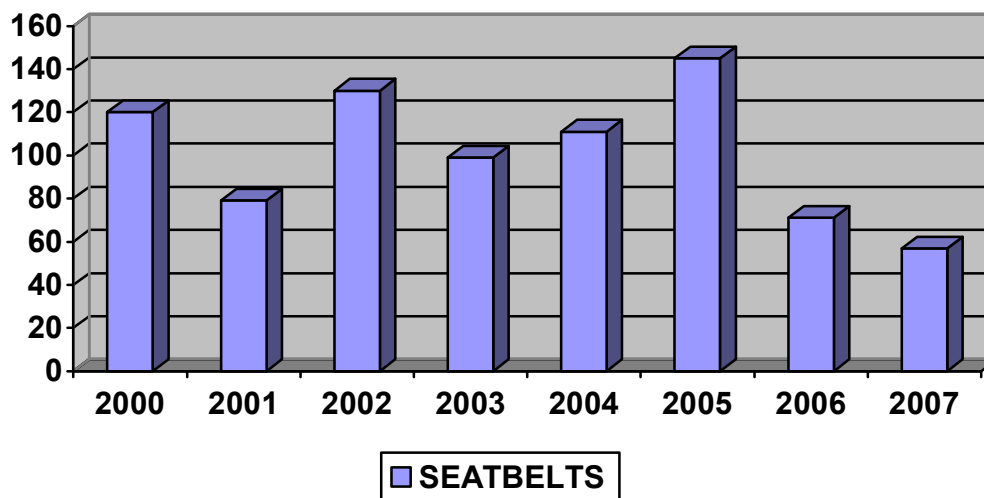


Figure Three
No of speeding offences in Shetland 2000-2007

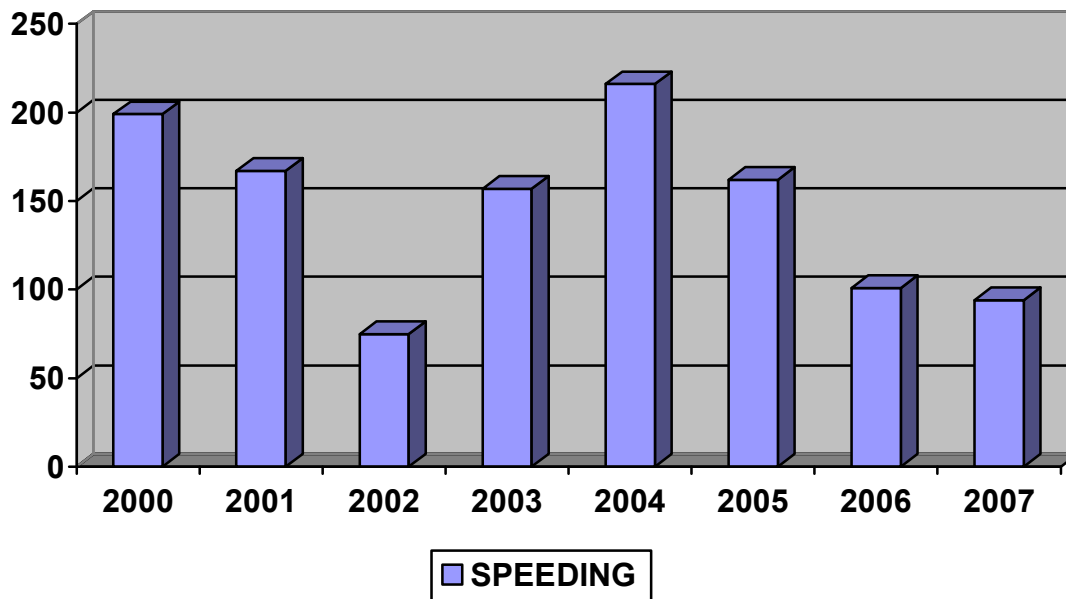


Figure Four
Drink/Drug Driving Offences 2000-2007

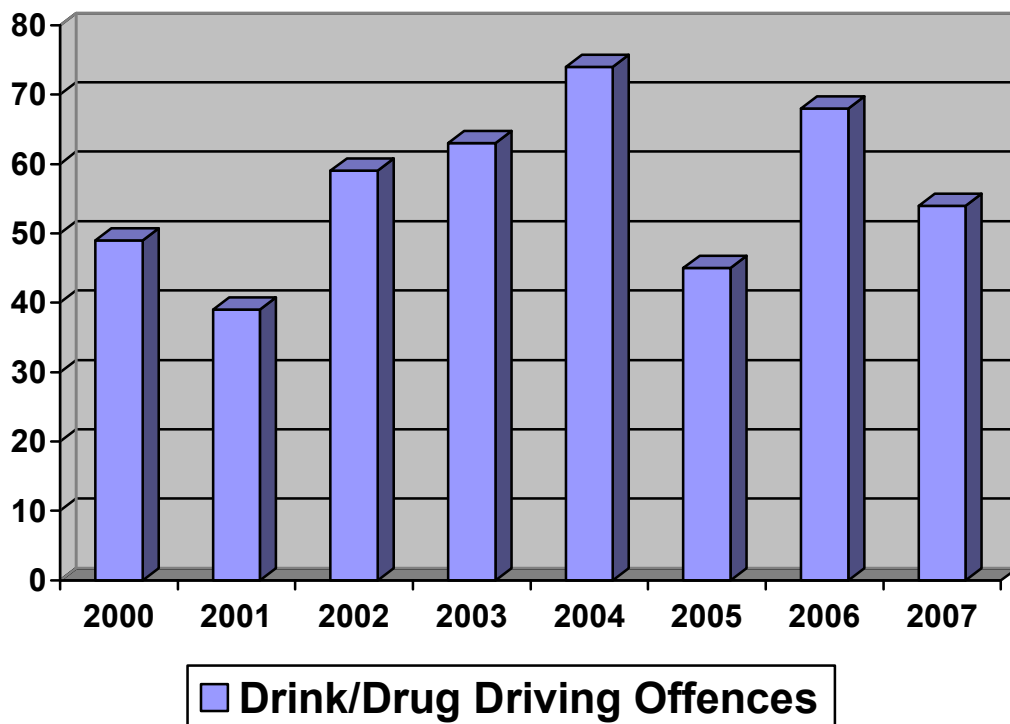


Figure Five
Casualties for Island Areas 2006

Casualties 2006

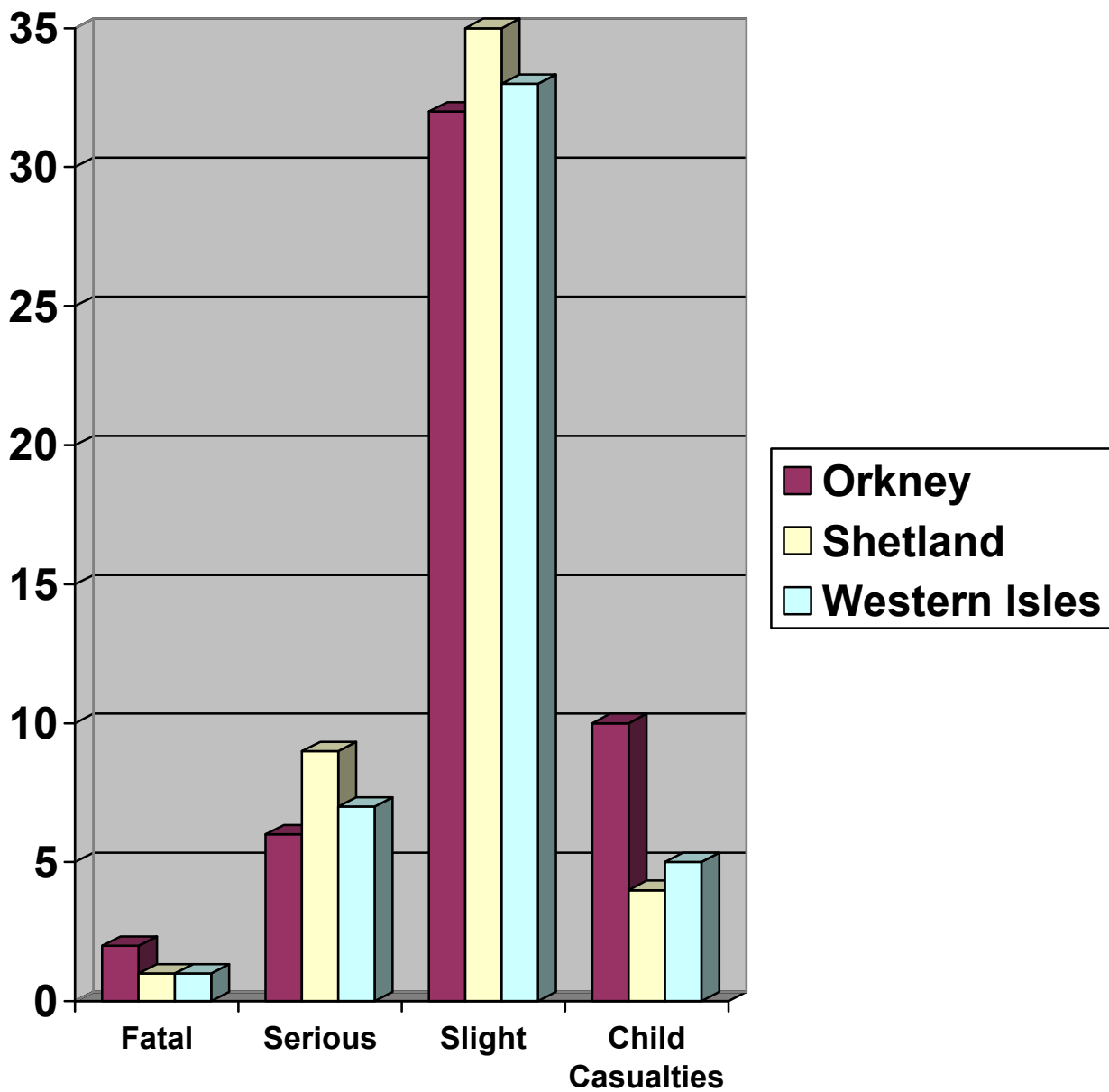


Table One

Number of *Accidents* for Shetland area and severity
1981-2006

	Fatal	Serious	Slight	All Severities
1981	2	60	30	92
1982	2	47	33	82
1983	3	30	30	63
1984	4	21	29	54
1985	2	28	42	72
1986	3	15	32	50
1987	4	24	46	74
1988	5	22	33	60
1989	-	33	61	94
1990	1	30	37	68
1991	2	23	45	70
1992	2	12	41	55
1993	2	21	32	55
1994	4	15	31	50
1995	4	14	46	64
1996	1	18	38	57
1997	4	17	33	54
1998	-	15	41	56
1999	-	12	32	44
2000	4	6	25	35
2001	3	8	21	32
2002	2	9	17	28
2003	2	3	26	31
2004	1	6	29	36
2005	3	9	34	46
2006	1	9	35	45

Table Two

Number of *Casualties* for Shetland area by severity 1981-2006

	Killed	Serious	Slight	All	KSI	Child KSI	
1981	2	81	68	151		83	4
1982	2	70	50	122		72	6
1983	3	40	38	81		43	6
1984	4	25	44	73		29	4
1985	2	42	65	109		44	7
1986	3	20	51	74		23	3
1987	4	32	57	93		36	-
1988	6	33	63	102		39	4
1989	-	40	88	128		40	2
1990	1	35	57	93		36	1
1991	2	29	65	96		31	1
1992	3	12	51	66		15	3
1993	2	29	52	83		31	7
1994	5	20	45	70		25	1
1995	4	20	80	104		24	8
1996	1	21	49	71		22	6
1997	5	21	53	79		26	1
1998	-	21	65	86		21	2
1999	-	18	49	67		18	3
2000	4	6	38	48		10	-
2001	3	13	34	50		16	2
2002	2	13	25	40		15	5
2003	2	5	42	49		7	-
2004	1	6	40	47		7	1
2005	3	12	56	71		15	0
2006	1	11	49	61		12	1

Appendix Five

Table 1 - Accidents and Casualties for North of Scotland Area for 2006

Table 2 - Casualties by council, severity and road type
Years: 1994-1998 and 2002-2006 averages, 2002-2006

Table 3 - Casualties by council, severity and road type
Years: 1994-1998 and 2002-2006 averages, 2002-2006

Table 4 - Casualties by police force area, council and severity
Years: 1994-98 and 2002-2006 averages and 2006

Table 5 - Pedestrian casualties by police force area, council and severity
Years: 1994-98 and 2002-2006 averages and 2006

Table 6 - Killed & Seriously injured casualties: child casualties and all ages, by council and road type
Years: 1994-98 and 2002-2006 averages and 1997 to 2006

Table 7 - Slight casualties, estimated total volume of traffic, and slight casualty rate, by Council & road type
Years: 1994-98 and 2002-2006 averages and 1997 to 2006

Table One

Accidents and casualties for North of Scotland area 2006

Summary of accidents and casualties by police force area, council and severity: 2006

	Accidents				Casualties				Child casualties
	Fatal	Serious	Slight	Total	Killed	Serious	Slight	Total	All severities
Northern	27	134	586	747	30	178	849	1,057	81
Highland	23	112	486	621	26	151	704	881	62
Orkney Islands	2	6	32	40	2	9	43	54	10
Shetland Islands	1	9	35	45	1	11	49	61	4
Eilean Siar	1	7	33	41	1	7	53	61	5

Table 2 Casualties by council, severity and road type
Years: 1994-1998 and 2002-2006 averages, 2002-2006

	Killed					Killed & Serious						
	Trunk	Local Authority Non built-up	Built-up	Total Local Authority	Total All Roads	Trunk	Local Authority Non built-up Major	Minor	Built-up Major	Minor	Total Local Authority	Total All Roads
Shetland Islands												
1994-98 average	0	3	0	3	3	0	14	5	2	2	24	24
2002	0	2	0	2	2	0	11	0	3	1	15	15
2003	0	1	1	2	2	0	4	2	0	1	7	7
2004	0	1	0	1	1	0	5	0	0	2	7	7
2005	0	2	1	3	3	0	7	5	1	2	15	15
2006	0	0	1	1	1	0	9	0	0	3	12	12
2002-2006 average	0	1	1	2	2	0	7	1	1	2	11	11
% change on 1994-1998 average												
2006	-	-	-	-	-	-	-37	-	-	-	-49	-49
2002-2006 average	-	-	-	-	-	-	-49	-	-	-	-53	-53

**Table 3 Casualties by council, severity and road type
1994-1998 and 2002-2006 averages, 2002-2006**

Council	All Severities						
	Trunk	Local Authority				Total Local Authority	Total All Roads
		Non built-up Major	Minor	Built-up Major	Minor		
Shetland Islands							
1994-98 average	0	47	18	10	8	82	82
2002	0	20	5	6	9	40	40
2003	0	21	11	10	7	49	49
2004	0	26	7	3	11	47	47
2005	0	43	13	6	9	71	71
2006	0	38	11	5	7	61	61
2002-2006 average	0	30	9	6	9	54	54
% Change on 1994-1998 average							
2006	N/a	-19	-38	-	-	-26	-26
02-06 average	N/a	-37	-47	-	-	-35	-35

Percentage changes are not shown if the baseline (1994-98) is less than 10.

Table 4 Casualties by police force area, council and severity
Years: 1994-98 and 2002-2006 averages and 2006

Police force		1994-98 average			Numbers in 2006			2002-2006 average		
		Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities
Council										
Northern Totals		38	412	1,353	30	208	1057	30	250	1,158
	Highland	29	342	1,125	26	177	881	25	211	979
	Orkney Islands	2	17	52	2	11	54	1	9	52
	Shetland Islands	3	24	82	1	12	61	2	11	54
	Eilean Siar	3	29	94	1	8	61	3	18	72

Police force		2006 % change on 1994-98 average			2002-2006 % change on 1994-98 aver			2006 Rates per thousand population		
		Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities
Council										
Northern		-21	-49	-22	-20	-39	-14	0.11	0.73	3.73
	Highland	-12	-48	-22	-16	-38	-13	0.12	0.82	4.09
	Orkney Islands	-17	-35	3	-75	-46	0	0.10	0.56	2.73
	Shetland Islands	-67	-49	-26	-40	-53	-35	0.05	0.55	2.79
	Eilean Siar	-71	-73	-35	-6	-37	-23	0.04	0.30	2.31

Table 5 Pedestrian casualties by police force area, council and severity
Years: 1994-98 and 2002-2006 averages and 2006

Police force		1994-98 average			Numbers in 2006			2002-2006 average		
		Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities
Council										
Northern		5	49	132	2	25	88	3	26	94
	Highland	2	38	102	2	22	70	2	21	74
	Orkney Islands	1	3	8	-	3	9	-	2	7
	Shetland Islands	1	4	9	-	-	5	0	1	5
	Eilean Siar	1	4	13	-	-	4	-	2	7

Police force		2006 % change on 1994-98 average			2002-2006 % change on 1994-98 aver			2006 Rates per thousand population		
		Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities	Killed	Killed & Serious	All Severities
Council										
Northern		-57	-49	-33	-43	-48	-29	0.01	0.09	0.31
	Highland	-17	-41	-32	0	-45	-27	0.01	0.10	0.33
	Orkney Islands	-100	-6	15	-100	-50	-5	-	0.15	0.46
	Shetland Islands	-100	-100	-70	-100	-100	-47	-	-	0.23
	Eilean Siar	-100	-100	-70	-100	-100	-47	-	-	0.15

Table 6 Killed & Seriously injured casualties: child casualties and all ages, by council and road type
Years: 1994-98 and 2002-2006 averages and 1997 to 2006

		Child (0-15)			All ages		
		Trunk roads	Local Authority roads	All roads	Trunk roads	Local Authority roads	All roads
Shetland Islands							
	1994-98 average	-	4	4	-	24	24
	1997	-	1	1	-	26	26
	1998	-	2	2	-	21	21
	1999	-	3	3	-	18	18
	2000	-	-	-	-	10	10
	2001	-	2	2	-	16	16
	2002	-	5	5	-	15	15
	2003	-	-	-	-	7	7
	2004	-	1	1	-	7	7
	2005	-	-	-	-	15	15
	2006	-	1	1	-	12	12
	2002-2006 average	-	1	1	-	11	11
	% Change on 1994-98 average						
	2006	N/a	-72	-72	N/a	-49	-49
	2002-2006 average	N/a	-61	-61	N/a	-53	-53

**Table 7 Slight casualties, estimated total volume of traffic, and slight casualty rate, by Council and road type
Years: 1994-98 and 2002-2006 averages and 1997 to 2006**

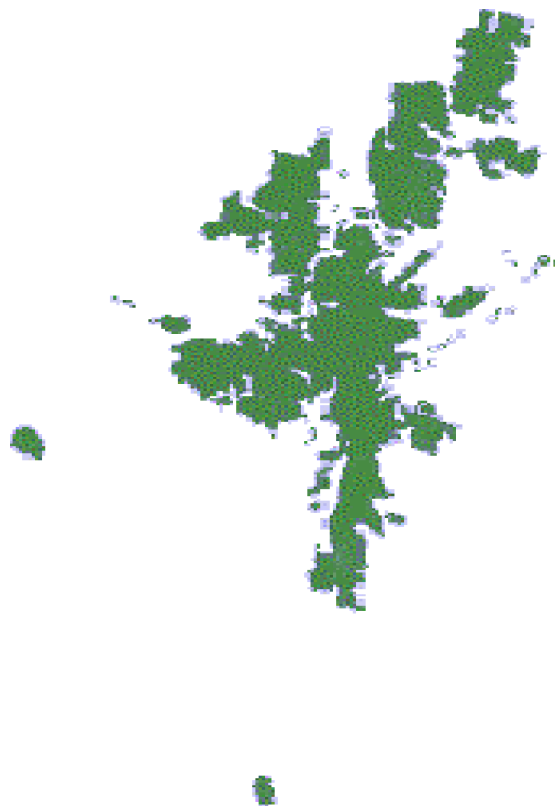
	Slight casualties			Estimated total volume of traffic (million vehicle-kilometres)			Slight casualty rate (per 100 million vehicle-kilometres)		
	Trunk roads	Local Authority roads	All roads	Trunk roads	Local Authority roads	All roads	Trunk roads	Local Authority roads	All roads
1994-98 average	-	58	58	-	168	168	-	35	35
1997	-	53	53	-	172	172	-	31	31
1998	-	65	65	-	174	174	-	37	37
1999	-	49	49	-	178	178	-	27	27
2000	-	38	38	-	178	178	-	21	21
2001	-	34	34	-	181	181	-	19	19
2002	-	25	25	-	190	190	-	13	13
2003	-	42	42	-	194	194	-	22	22
2004	-	40	40	-	195	195	-	21	21
2005	-	56	56	-	198	198	-	28	28
2006	-	49	49	-	202	202	-	24	24
2002-2006 average	-	42	42	-	196	196	-	22	22
% Change on 1994-98 average									
2006	-	-16	-16	-	20	20	-	-30	-30
2002-2006 average	-	-27	-27	-	16	16	-	-38	-38

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Road Safety Plan 2008-2010





REPORT

To: Infrastructure Committee

07 October 2008

**From: Energy Manager
Planning
Infrastructure Services Department**

ENERGY SUPPLY CONTRACT POLICY

1 Introduction

- 1.1 This report introduces amendments to the energy supply contracts policy as recommended to the Council on 30 August 2005 (min ref – 45/05).
- 1.2 The amendments, if approved would entail changes to the current tendering procedure specifically allowing Procurement Scotland to handle purchasing of electricity on behalf of the Council.
- 1.3 It also sets out reasons for not purchasing green electricity where it is charged at a premium and instead using an equivalent sum to the premium to supplement the Council's energy conservation budget.
- 1.4 The Energy Policy was adopted in December 2004 (Min Ref: 60/04) and is subject to further development and refinements in the light of experience gained through its implementation.

2 Links to Council Priorities

- 2.1 A Sustainable Organisation is one of the Corporate Plan's priorities by 'committing to ways of improving our business to make sure that the priorities outlined in the plan can be delivered in an efficient and sustainable way.'

3 Other Current Council Policy/Statement

- 3.1 The Council's Procurement Policy (Min Ref 36/05) contains the following principles:
 - **Environmental sustainability at a local and a global level.**
 - **Use of recycled and fair trade products, and renewables.**
 - **Waste minimisation.**
- 3.2 The Council approved a 'Statement of Principles' (Min Ref 29/04) concerning radioactive waste. The 2nd principle states the following:

‘The Council opposes any process or activity that involves new or additional radioactive discharges into the environment, as this is potentially harmful to the human and natural environment’.

Whilst the report specifically refers to Dounreay it can be argued that the generation of electricity from nuclear power produces nuclear waste that is then transported for storage or reprocessing, which is contrary to the 5th principle and states:

‘The Council is opposed to the unnecessary transport of radioactive and other hazardous wastes’.

- 3.3 The Council is a member of Nuclear Free Local Authorities (NFLA) whose mission statement reads:

‘The Committee is convinced that nuclear weapons and energy systems present extraordinary and unacceptable risks to the planet and its people: it works for a nuclear free future in practical ways within local government’.

“Energy systems” refers to nuclear electricity generating stations.

4 Tendering Arrangements - Background and Present Situation

- 4.1 **Current Energy Policy Statement** - The Council prefers to contract with companies whose business does not include the generation of electricity from nuclear power (this complements principles 2, 3 and 5 in the ‘Dounreay: Statement of Policy’ report and the Council’s membership of the NFLA).
- 4.2 The Council currently subjects the electricity supply contract to tender, under a procedure governed by EU regulations. There have been five fixed rate contracts awarded since 2000 with Scottish Power being the successful tenderer each time.
- 4.3 The ‘Instructions to Tenderers’ contains a statement referencing the Council’s award criteria (price, supply of green electricity, form and simplicity of billing and compliance with invitation to tender) on the electricity to be supplied. Currently no weighting is applied to these award criteria although they are listed in order of importance.
- 4.4 During the 2004 tender process British Energy (which operates the majority of nuclear generating facilities in Britain) submitted an initial expression of interest. It subsequently failed to provide the required financial details and so did not make the final shortlist. However, the wording in the tender documents and also the wording in the Council’s Energy Policy extant at that time meant that, had British Energy been awarded the contract, the Council would have been supporting a company whose main business is the generation of electricity from nuclear sources, contrary to current Council policy in

other areas (see section 3). As a result the original energy supply contract policy (as noted in section 1.1) was adopted.

- 4.5 Previous and subsequent tender exercises have not produced the level of competition expected in a deregulated market. Scottish Power tendered for and was awarded the latest contract (commencing 1 April 2008). Not since the first tender exercise in 2000 has any of the electricity suppliers set up since deregulation of the electricity market submitted a tender and also very few of the larger generator/suppliers.
- 4.6 In 2007 Scottish Power merged with Iberdrola, a large Spanish utility company with a portfolio of nuclear generation facilities. It is therefore clear that whilst the current Council policy can remain as a statement of principle it is increasingly difficult to apply due to the lack of competition through the tendering procedure.

5 Green Electricity/Climate Change Levy - Background and Present Situation

- 5.1 **Current Energy Policy Statement** - The Council supports in principle an electricity supply contract supplied from 100% green sources (accords with the Council's Procurement Policy).
- 5.2 **Current Energy Policy Statement** - In general the Council supports a combination of renewable and alternative generation of UK energy requirements, and large-scale investment in energy efficiency across all sectors as the main solutions for limiting the effects of climate change.
- 5.3 The current mechanism for supporting climate change programmes (charged as a unit rate on electricity bills) is the Climate Change Levy (CCL). The CCL came into effect on 1st April 2001 and applies to all electricity except domestic consumption. The current rate is 0.456p/kWh.
- 5.4 The CCL was set up to encourage the business and public sector to improve energy efficiency and reduce emissions of greenhouse gases through a price based signal on energy usage.
- 5.5 The package of measures introduced with the CCL included the set up and operation of the Carbon Trust and the Government's Enhanced Capital Allowances (ECAs) Scheme for investments in energy saving technologies and products. Both help businesses reduce their energy use and the development and adoption of low carbon technologies.
- 5.6 In previous contracts the cost of green electricity has been offset by an equal reduction in the CCL however in the latest contract green electricity is being charged at a premium equivalent to £30,000 per annum in electricity supply costs (0.2p/kWh) i.e. the equivalent of the current rate of CCL plus 0.2p/kWh. This premium cost is not linked to the additional cost of generating green electricity but rather the

demand for green electricity i.e. consumer demand is increasing faster than new green electricity generating facilities therefore the price is being pushed up.

- 5.7 At the current time it is very likely that premiums paid on green energy would support the development of wind farms on the UK mainland.
- 5.8 Wind farm projects if successfully completed will receive renewable obligation certificates (ROC) and payments as a result for every MWh of electricity generated. The business case for electricity generated from wind power exists and Scottish Power as with other companies is likely to pursue projects of this type due to current market conditions i.e. ROC payments and pressure from the Government to do so and to a lesser extent because of the demand for green energy from consumers.
- 5.9 Whilst the Council agrees with the development of alternative energy sources (as per its policy statement) the above support does not present a good business case for investment. As the Council is already paying climate change levy it is already contributing to the schemes put in place by the Government to assist in energy reduction.
- 5.10 As stated in the current policy statement: “**and large-scale investment in energy efficiency across all sectors as the main solutions for limiting the effects of climate change**”. Reducing demand for energy at source is generally a more cost-effective solution for carbon reduction and by investing a sum equivalent to the green electricity premium in the Council stock will reduce the Council’s energy demand thereby reducing energy spend *on a continuing basis*. This investment would reduce consumption to save energy and costs directly rather than paying out money for at what are at best, unknown benefits.
- 5.11 This could be reported on to CPRT and included in the energy conservation budget for the following financial year.

6 Procurement Scotland

- 6.1 Procurement Scotland is part of the Scottish Government and was launched in March 2008 with a remit of developing and implementing procurement strategies for Category A¹ commodities on behalf of all Scottish public bodies. The organisation has been established within the framework of the Scottish Government’s Public Procurement Reform Programme, which views national and sectoral Centres of Expertise (CoEs) as the major vehicle for driving collaborative, advanced procurement in the public sector.
- 6.2 In October 2007, the First Minister approved a recommendation developed in conjunction with sectoral procurement CoEs that a

¹ Category A means a national contract where the supply concerned is common to all public bodies.

phased approach to collaborative electricity procurement should be adopted, with national contractual arrangements commencing in September 2009.

6.3 The Strategic Sourcing Plan that was endorsed by sectoral CoEs in early August 2008 harnesses the combined purchasing power of Scottish public bodies to realise significant financial, environmental and service benefits. The model adopted aims to reduce and manage financial risk in the current volatile market conditions by adopting a flexible procurement model. This involves purchasing tranches of energy over a longer period within a risk management framework. Key aspects of the Strategic Sourcing Plan are as follows:

- National cross-sector sourcing exercise was commenced with the issuing of a Contract Notice under the EU Open Procedure on 18 August 2008, with contract award due at the turn of the year, and purchases from the wholesale market made from January 2009 onwards.
- Purchasing in tranches prior to the period of consumption via the appointed supplier(s), guaranteeing certainty of pricing in advance for budget holders.
- Suppliers are to be invited to bid on four national 'baskets', offered in parallel. The baskets are to be:
 - Half hourly metered supplies.
 - Non half hourly metered supplies.
 - Non metered supplies (street lighting).
 - Domestic electricity supplies.
- Contract(s) to cover an initial period of three years (1 October 2009 to 30 September 2012) with options to extend by a further year.
- End user organisations to be given the option to buy a portion of "Green" electricity, dependant on availability and payment of appropriate premiums.
- Access to energy management measures, generation from renewable sources and advanced metering, as well as providing support for micro-generation initiatives.

6.4 Since electricity will be purchased in forward markets, a commitment to participate from public sector bodies will be required before electricity is bought. This means putting governance arrangements in place during 2008, which will take the form of an Agency Agreement where Procurement Scotland is acting "for and on behalf of" those public bodies who sign up. The Agreement has been forwarded to Legal Services for comment.

- 6.5 Such an approach is critical in dealing with volatile, fast moving commodity markets where procurement decisions are required to be appropriately delegated to ensure market opportunities are not missed. The Agency Agreement will be complemented by a collaboratively developed Risk Management Policy that will be overseen by a cross-sectoral Risk Management Policy Group. Procurement Scotland will only be authorised to make purchase decisions in accordance with the Policy. A draft copy will be available shortly.
- 6.6 It is currently the aim of Procurement Scotland to attain sign-up to the Agreement from public sector organisations by the end of October 2008.
- 6.7 As stated in paragraph 4.2 the Council has awarded fixed rate contracts at each renewal date. There has been a marked rise in cost at each renewal since 2004. For metered and non-metered consumption respectively current prices are approximately 50% and 148% higher than the 2004 prices.
- 6.8 The Council does not have the necessary in-house expertise (i.e. that of a market analyst) to manage flexible contracts in forward markets.
- 6.9 Agreeing to enter into an agreement with Procurement Scotland would complement the decision for the Council to join Scotland Excel as per the Council decision on 10 September (min ref - 125/08).
- 6.10 The current street lighting contract runs to the 30 September 2009 and will tie in with the start of the Procurement Scotland contract. The current main Council contract ends on the 31 March 2009, six months before the start of a national contract, therefore, if in the absence of market interest in a 6-month contract, there will be a requirement to ensure electricity is supplied to the Council and at a reasonable rate. The following are the main options:
- EU tendering exercise.
 - Extension of contract with existing supplier at negotiated rates.
 - Negotiated contract with existing supplier and other suppliers.
 - Joining an existing consortium contract e.g. through Scotland Excel or the Office of Government Commerce (OGC).

7 Proposals

- 7.1 The following are the concluding proposals based on the above sections:
- The Council prefers to contract with companies whose business does not include the generation of electricity from nuclear power (this complements principles 2, 3 and 5 in the 'Dounreay: Statement of Policy' report and the Council's membership of the NFLA).

- In general the Council supports a combination of renewable and alternative generation of UK energy requirements, and large-scale investment in energy efficiency across all sectors as the main solutions for limiting the effects of climate change.
- The Council supports in principle an electricity supply contract supplied from 100% green sources (accords with the Council's Procurement Policy) at a rate, not greater than the CCL and where the CCL is reduced at an equal amount to green electricity as a result.
- Where green electricity is charged at a premium that the Council contracts for brown electricity and instead increases the energy conservation budget in the following year by an equivalent sum to the premium to be used on energy efficiency projects within its own stock thereby maintaining the Council policy of reducing energy usage and promoting alternatives to standard systems. A spend to save budget such as this would be a more cost effective use of Council resources.
- That the Council, subject to review of Agency Agreement and Risk Management Policy, signs up to a national contract with Procurement Scotland to purchase electricity on the Council's behalf.
- That the energy contracts section of the Council's Energy Policy (see Appendix 1) is amended to support the above proposals.
- Authority is delegated to the Executive Director of Infrastructure Services or his appointed nominee to progress the options detailed in paragraph 6.10 with advice from Contract Compliance and Legal Services.

8 Financial Implications

- 8.1 Procurement of electricity through a national contract employing the level of expertise noted should result in the most competitive rates being received for the purchase of electricity.
- 8.2 Increasing the energy conservation budget in the financial year following a contract award if the supply of green electricity is charged at a premium. The budget would depend on the level of the premium.

9 Policy and Delegated Authority

- 9.1 The Infrastructure Committee has full delegated authority to act on all matters within its remit, Section 12.0 of the Council's Scheme of Delegations, and for which the overall objectives have been approved by the Council, in addition to appropriate budget provision. However, the Committee does not have authority to approve policy and, therefore, a decision of the Council is required.

- 9.2 Standing Orders shall be operated in such manner as will comply in all respects with any relevant directives of the Council or the Commission of the European Communities from time to time in force.
- 9.3 Where the appropriate Director considers that a tender should be negotiated with one person, he shall, before entering into negotiations, obtain the approval of the appropriate Committee both in respect of the negotiation and of the person with whom the tender is to be negotiated.
- 9.4 Where the appropriate Director considers that an existing contract should be extended and that a tender should be negotiated with the existing contractor, he shall before entering into negotiations, obtain the approval of the appropriate Committee both in respect of the extension and of the negotiation with the existing contractor.

10 Recommendation

I recommend that:

- 10.1 The Infrastructure Committee recommend to the Council that it adopt the attached amendments to the Council's Energy Policy.
- 10.2 The Infrastructure Committee delegates authority to the Executive Director of Infrastructure Services or his appointed nominee to implement one of the options outlined in 6.10 for the six month period from April to September 2009 and to take appropriate steps to have future years electricity to be purchased on behalf of the Council by Procurement Scotland.

Report Number: PL-39-08-F

Proposed Revisions to the Energy Policy Report**3.5 Contracts****3.5.1 General Electricity**

The Council currently subjects the electricity supply contract to tender, under a procedure governed by EU regulations. There have been five fixed rate contracts awarded to date with Scottish Power being the successful tenderer each time.

The Council supports in principle an electricity supply contract supplied from 100% green sources. The Council also holds the view that the most cost effective means (relating to building consumption of energy) to limit the impacts of climate change are as follows:

- Absolute reductions in energy demand (efficiency generally saves electricity more cheaply than any sort of power plant can produce it).
- Decentralised, alternative and renewable sources of energy.
- Development of offshore technologies.

The cost of a new generation of nuclear power stations will be in direct conflict with this and therefore the Council prefers to contract with electricity supply companies who are not directly involved in the generation of electricity from nuclear facilities. This policy complements the following:

- The Council's membership of the Nuclear Free Local Authorities group (NFLA).
- The Council's adoption of a statement of principles from the 'Dounreay: Statement of Policy' report concerning nuclear waste.
- The Council's adoption of the 'Procurement Policy'.

Previous and subsequent tender exercises have not produced the level of competition expected in a deregulated market. Scottish Power tendered for and was awarded the latest contract (commencing 1 April 2008). Not since the first tender exercise in 2000 has any of the electricity suppliers set up since deregulation of the electricity market submitted a tender and also very few of the larger generator/suppliers.

In 2007 Scottish Power merged with Iberdrola, a large Spanish utility company with a portfolio of nuclear generation facilities. It is therefore clear that whilst the current Council policy can remain as a statement of principle it is increasingly difficult to apply due to the lack of competition through the tendering procedure.

Procurement Scotland is part of the Scottish Government and was launched in March 2008 with a remit of developing and implementing procurement strategies for Category A¹ commodities on behalf of all Scottish public

¹ Category A means a national contract where the supply concerned is common to all public bodies.

bodies. The organisation has been established within the framework of the Scottish Government's Public Procurement Reform Programme, which views national and sectoral Centres of Expertise (CoEs) as the major vehicle for driving collaborative, advanced procurement in the public sector.

In October 2007, the First Minister approved a recommendation developed in conjunction with sectoral procurement CoEs that a phased approach to collaborative electricity procurement should be adopted, with national contractual arrangements commencing in September 2009.

The Strategic Sourcing Plan that was endorsed by sectoral CoEs in early August 2008 harnesses the combined purchasing power of Scottish public bodies to realise significant financial, environmental and service benefits. The model adopted aims to reduce and manage financial risk in the current volatile market conditions by adopting a flexible procurement model. This involves purchasing tranches of energy over a longer period within a risk management framework. Key aspects of the Strategic Sourcing Plan are as follows:

- National cross-sector sourcing exercise was commenced with the issuing of a Contract Notice under the EU Open Procedure on 18 August 2008, with contract award due at the turn of the year, and purchases from the wholesale market made from January 2009 onwards.
- Purchasing in tranches prior to the period of consumption via the appointed supplier(s), guaranteeing certainty of pricing in advance for budget holders.
- Suppliers are to be invited to bid on four national 'baskets', offered in parallel. The baskets are to be:
 - Half hourly metered supplies.
 - Non half hourly metered supplies.
 - Non metered supplies (street lighting).
 - Domestic electricity supplies.
- Contract(s) to cover an initial period of three years (1 October 2009 to 30 September 2012) with options to extend by a further year.
- End user organisations to be given the option to buy a portion of "Green" electricity, dependant on availability and payment of appropriate premiums.
- Access to energy management measures, generation from renewable sources and advanced metering, as well as providing support for micro-generation initiatives.

Therefore it is proposed that the Council, subject to review of Agency Agreement and Risk Management Policy, signs up to a national contract with Procurement Scotland to purchase electricity on the Council's behalf.

In previous contracts the cost of green electricity has been offset by an equal reduction in the CCL however in the latest contract green electricity is being charged at a premium equivalent to £30,000 per annum in electricity supply costs (0.2p/kWh) i.e. the equivalent of the current rate of CCL plus 0.2p/kWh. This premium cost is not linked to the additional cost of generating green electricity but rather the demand for green electricity i.e. consumer demand is increasing faster than new green electricity generating facilities therefore the price is being pushed up.

At the current time it is very likely that premiums paid on green energy would support the development of wind farms on the UK mainland.

Wind farm projects, if successfully completed, will receive renewable obligation certificates (ROC) and payments as a result for every MWh of electricity generated. The business case for electricity generated from wind power exists and Scottish Power as with other companies is likely to pursue projects of this type due to current market conditions i.e. ROC payments and pressure from the Government to do so and to a lesser extent because of the demand for green energy from consumers.

Whilst the Council agrees with the development of alternative energy sources (as per its policy statement) the above support does not present a good business case for investment. As the Council is already paying climate change levy it is already contributing to the schemes put in place by the Government to assist in energy reduction.

As stated in the current policy statement **“and large-scale investment in energy efficiency across all sectors as the main solutions for limiting the effects of climate change”**.

Reducing demand for energy at source is generally a more cost-effective solution for carbon reduction and by investing a sum equivalent to the green electricity premium in the Council stock will reduce the Council's energy demand thereby reducing energy spend *on a continuing basis*. This investment would reduce consumption to save energy and costs directly rather than paying out money for at what are at best, unknown benefits.

This could be reported on to CPRT and included in the energy conservation budget for the following financial year.

3.5.2 Sheltered Housing Electricity

An electricity supply contract is now also in place for sheltered housing and is in a monthly statement billing format therefore saving officer time.

3.5.3 Other Contracts

All relevant contracts will be reviewed e.g. office equipment (photocopiers etc) so as to ensure that energy efficiency standards are included as an award criteria in tender documents. However these may be subject to national contracts also.



REPORT

To: Infrastructure Committee

7 October 2008

**From: Head of Transport
Infrastructure Services Department**

FUEL STUDY – CONCLUSIONS AND RECOMMENDATIONS

1. Introduction

- 1.1. On 10 June 2008, the Infrastructure Committee asked the Transport Service to develop proposals to address the increasing cost of running the Council's Transport Service in the light of rising fuel costs.
- 1.2. It was requested that the Transport Service return to Infrastructure Committee on 7 October 2008 with proposals for how efficiencies can be made across the network. It was also asked that the impact of these proposals be understood.
- 1.3. This report summarises the work carried out, the conclusions reached and offers recommendations to the Committee for consideration.

2. Links to Council Priorities

- 2.1. The Council's Corporate Plan states

"Shetland's communities are scattered and have a diverse set of needs. To best address those, we must have sustainable road, sea and air transport systems, both internal and external, that ensure everyone is able to access the places, services and opportunities they need."

3. Background

- 3.1. The following two paragraphs were included in the previous report to the Committee and I feel they are useful to refresh memories of the context to this piece of work.
- 3.2. Fuel Costs have been increasing rapidly over recent months, and although we have seen modest decreases in the last few weeks, predictions indicate that we will not see the return of fuel prices to the levels of a year ago. This is impacting on the cost of providing transport services (buses, inter-island air and ferries), as well as the cost of running the Council's own fleet of vehicles.

- 3.3. It is also impacting on the residents of Shetland, in terms of whether they are able to continue to afford to use private transport to the same extent, or at all in some cases. This is often key to access in remote rural areas like Shetland. Anecdotal evidence suggests that more and more people are making choices about what they can afford to access and some are making choices as to whether they are financially better off to stay at home, rather than drive to work.
- 3.4. The study carried out by the Transport Service was conducted between mid-June and mid-September and looked not just at means of mitigating the effects of the rising costs of fuel but also the great many issues that the Council, the Government, communities and users have asked the service to address in the short, medium and long term planning and delivery of Transport to meet economic, social and environmental objectives.
- 3.5. For detail on the scope and methodology for the study Members are referred to report TR-21-08-F to the Infrastructure Committee on 26 August 2008.
- 3.6. From that report the Infrastructure Committee established a short life Transport Focus Group to consider the findings of the study and provide guidance on how the conclusions and recommendations of the study should be reported and implemented.

4. Methodology, Conclusions and Recommendations of the Study

- 4.1. In line with the expectations of the Infrastructure Committee the study adopted a “no holds barred” approach to the development and appraisal of options to address the impacts of the rising cost of fuel and the consequent cost to the Council.
- 4.2. Recognising that the Council has also committed to the economic, social and environmental sustainability of Shetland and its communities (as articulated through its Corporate Plan, Single Outcome Agreement, the Shetland Resolution, etc.) the study also included many options for the development of transport services and infrastructure to support the Council’s wider aims and objectives.
- 4.3. This resulted in a very broad range of options with greatly varying degrees of impact.
- 4.4. As agreed by the Infrastructure Committee the findings and draft conclusions of the study were reported to the Transport Focus Group initially and their guidance was sought on how the various options should be developed and progressed.
- 4.5. To simplify the reporting, the options were grouped according their likely impacts and ease of implementation so that Members could quickly understand and assess which options should be recommended for further development and implementation. The three broad categories of impact are: -
 - (1) No impact/ easy to implement – i.e. the proposals could be implemented through minor reconfiguration of existing resources, no need for specific political support and with no perceived

impact on communities or staff. Also they would not contradict the objectives of the Shetland Transport Strategy or the Council's corporate objectives.

- (2) Significant Impact/ moderately difficult to implement – i.e. it would take a restructuring of resources to implement, significant political backing would be required, there would be significant reductions in service leading to impacts on individuals, some impact on communities and some impact on staff. Some of the options would contradict the strategic objectives of the Shetland Transport Strategy or the Council's corporate objectives.
- (3) Major Impact/ difficult to implement – i.e. implementation would take major restructuring of resources, substantial political support would be required, there would be substantial reductions in service leading to negative social and economic impacts on entire communities and major impacts on staff in terms of potential job losses. Most of the measures would contradict the strategic objectives of the Shetland Transport Strategy or the Council's corporate objectives.

- 4.6. The options in category (1) are contained in Appendix 1 to this report. The total opportunity for savings from these options in a full financial year is £465,000 to £525,800. Not all of these savings can be attributed directly to the Transport Service, but relate to services across the Council who use the services of the Fleet Management Unit (FMU).
- 4.7. The Transport Focus Group considered the options in categories (2) and (3) and decided that these should not be recommended for further development and implementation.
- 4.8. The rationale that supports this view is that the transport services that would be affected by the proposals would have significant to substantial negative social and economic impacts and unless the Council is asking all services to make cuts then to develop and implement these options further would be indiscriminate and out of context. In turn this is likely to lead to unnecessary concern amongst staff and communities and a consequent undermining of confidence that in itself could have unpredictable social and economic impacts.
- 4.9. However, the Transport Focus Group recognised that, with this work having been done, the Transport Service is well placed to respond quickly to any Council wide initiative to cut costs and provide Members with information on opportunities and the impacts of those (I must caveat this with the fact that no consultation on the detail of the options has taken place).
- 4.10. Recognising the recommendation of the Transport Focus Group an abridged version of the Fuel Study report has been placed in the Members Room. This report details the methodology adopted in the study and gives a wider context to Transport than the current focus on fuel costs alone.

- 4.11. Members should note that this study was closely coordinated with the work also being carried out by the Energy Manager and the study by the Audit and Scrutiny Committee into the use of Council vehicles.

5. Proposed Way Ahead

- 5.1. It is proposed that the Infrastructure Committee supports the Transport Service in implementing the proposals in Appendix 1 and that measures resulting in cuts to services are not pursued at this time.
- 5.2. However, it is recognised that this in itself will not necessarily address a continuous year on year need to continually grow the efficiency of the service and tackle a trend of upward pressure on costs. At the same time consultations with communities over the last few years have indicated that we are not currently addressing need in terms of transport to enable individuals to access services, employment and leisure. Therefore it is proposed to analyse the processes and systems within the Transport Service to find opportunities for sustained improvements in efficiency that can release resources to put into other areas of priority.
- 5.3. At a recent training event it was suggested that up to 60% of activity in the public sector can be considered as “non value adding” and therefore could be considered as wasteful activity. I do not suggest this is the case in Shetland Islands Council but if we accept that this is the case to some degree or other then this is where I see meaningful opportunities to generate cash releasing savings.
- 5.4. This cannot be achieved without considering our related activity with other Council services.
- 5.5. The Transport Service, as one of the significant areas of expenditure in the Council, will continue to examine and analyse our systems of work and from that develop modified systems and processes to promote increased efficiency on an ongoing and permanent basis.

6. Financial Implications

- 6.1. The original estimate of the likely impact of rising fuel costs on Council Transport budgets in 2008/09 was £1.034 million. Despite no further rise in fuel costs since August, it is still prudent to estimate this increase in costs if no further action is taken this year. If Committee approve the recommendations of this report the Transport Service will do all it can to minimise the effects of these increases during 2008/09.
- 6.2. At the end of August the Council was underspent on salary costs by £495K (after removal of full year budgeted savings required of £1.312m) on its General Fund, Support and Recharged Ledgers. As salary costs are profiled evenly throughout the year this constitutes real savings of approximately £360K per month which, when projected to year end, could be used to offset the increase in fuel costs identified. As the year progresses if this is not the continuing pattern a further report to Council will be submitted to re-address the situation.

7. Policy and Delegated Authority

- 7.1. The Infrastructure Committee has full delegated authority to act on all matters within its remit, Section 12.0 of the Council's Scheme of Delegations, and for which the overall objectives have been approved by the Council, in addition to appropriate budget provision.
- 7.2. Shetland's Transport Strategy is a statutory document and the Council, as a constituent Council of Zetland Transport Partnership, must perform its functions which relate to or which affect, or are affected by transport consistently with the transport strategy.

8. Recommendations

I recommend that Infrastructure Committee:

- 8.1. support staff in the Transport Service and other services to undertake the necessary actions outlined in Appendix 1 in order to be able to achieve the £465,800-£525,800 savings for 2009/10;
- 8.2. support staff to do what they can during the remainder of 2008/09 to minimise the impact of rising fuel costs on Council revenue budgets;
- 8.3. note that the Transport Service will continue to look for and achieve any efficiencies, on an ongoing and routine basis, working with all staff in the Transport service and other services in the Council; and
- 8.4. bearing in mind the point made in section 5.2 that consultation tells us that Transport is not currently meeting the needs of communities, the Committee provides guidance on the extent to which these savings or resources diverted from elsewhere in the Council be reinvested in the service, where needs have been identified in recent years, such as to increase the number of mainline and feeder buses and reduce ferry fares for commuters.

Report No: TR-30-08-F

Appendix 1: No Impact/Easy to Implement (Category 1)

Action	Saving	Timescale
TS1: Minimise Staffing and Accommodation Costs	£15,800/yr from accommodation. ZetTrans funding available for transport efficiencies.	Budget for 2009-10
TS2: Review Purchase of Fuel Across the Service, Other Council Services and Other Organisations	Unable to quantify, but savings likely	Ongoing, due to contracts currently in place
FS1a: Reduce Speed of Vessels on Sailings, without impact on timetables	£160,000 year	Budget for 2009-10
FS2: Explore the Use of Alternative Fuels	£95,000	Dependent on trials, currently ongoing. Potential for 2010-11
FS3a: Skerries South Mouth	£14,500 / year possible (£185,000 capital spend required)	Dependent on capital funding and operational constraints
FS5: Optimise the Crewing of Vessels	£50,000-£100,000	Most by 2009-10, but full potential reached by 2010-11
AS1 - Align Tendering of Air Services Contract with Orkney	Potential for significant savings, but difficult to estimate due to uncertainty on how market will respond.	Budget for 2009-10
BS1: Optimise Number, Size and Use of Vehicles Used for Timetabled Services	No change, more efficient use of resources to improve service levels	Implement when contractual opportunities arise, from 2009-10
BS3: Optimise Number, Size and Use of Community Transport (ASN, Community Care Buses, Community Work Buses)	No change, more efficient use of resources to improve service levels	Pilot under development. Implement and rollout 2008-10
BS4: Change Fare Levels and Improve Promotion of Services	No change	Project underway, with new promotional materials by May 2009
TOTAL SAVINGS (Direct to Transport Service Budgets)	£320,800-£370,800 with other opportunities for further savings	Most by 2009-10 budgets, some in the following years
FMU1: Increase Use of Fuel and/or Engine Oil Additives	£120,000/year	Most by 2009-10, but full potential reached by 2010-11
*FMU2: Improve Employees' Awareness of Fuel Consumption & FMU3: Decrease Vehicle Fuel Consumption	£35,000 in first year Additional £31,000 in second year Additional £29,000 in	Budget for 2009-10 Budget for 2010-11 Budget for 2011-12

	third year	
FMU4: Reduce Maintenance Costs	Unable to quantify, but savings likely	Most by 2009-10, but full potential reached by 2010-11
*FMU5: Reduce the Number and Cost of Vehicles Required	Unable to quantify, but savings likely	Most by 2009-10, but full potential reached by 2010-11
TOTAL SAVINGS (Indirect, i.e. savings to budgets elsewhere in the Council)	£155,000, with other opportunities for further savings.	Most by 2009-10 budgets, some in the following years
TOTAL SAVINGS	£465,800-£525,800 with other opportunities for further savings.	Most by 2009-10 budgets, some in the following years

*NB. Council is asked to support Audit and Scrutiny Committee in their recommendations to Council, to be discussed at their meeting of 8th October.



REPORT

To: Infrastructure Committee

7 October 2008

From: Head of Transport

BLUEMULL STAG APPRAISAL – SUMMARY AND EMERGING FINDINGS

1. Introduction

- 1.1 This report presents the final outcomes of the STAG appraisal for Bluemull Sound. The appraisal has been undertaken by Faber Maunsell on behalf of ZetTrans. The Executive Summary of the appraisal is attached to this report as Appendix 1.
- 1.2 The appraisal has considered a range of different options for continuing to link the islands of Yell, Unst and Fetlar, in the context of the requirement to replace existing ferries and terminals, and the potential opportunity afforded by a fixed link between Yell and Unst.
- 1.3 The full appraisal document is available in the Members' Room.

2. Links to Council Priorities

- 2.1 The Council's Corporate Plan states *"Shetland's communities are scattered and have a diverse set of needs. To best address those, we must have sustainable road, sea and air transport systems, both internal and external, that ensure everyone is able to access the places, services and opportunities they need."*

3. Background to the Study

- 3.1 The study has been undertaken following the principles of the Scottish Transport Appraisal Guidance (STAG) which is the Government standard for appraisal of transport services and infrastructure projects. It provides an evidence-based framework to use in the development and assessment of options against Government and local objectives. Since July 2003 it is a requirement of the Scottish Executive (now Scottish Government) that all projects for which it provides support or approval are appraised in this way. The Guidance was recently updated in May 2008.
- 3.2 Shetland's Regional Transport Strategy, approved by Scottish Ministers in July 2008, included a commitment to *"undertake a Bluemull Sound STAG appraisal examining the full range of options for this link, including fixed links, ferry terminal replacement, replacement ferries,*

berthing arrangements and alternative crewing and timetabling arrangements.”

- 3.3 A second piece of work, which has been completed, was to explore the requirements for and practical implications of basing a ferry on Fetlar and the development of facilities to accommodate that. This study recommended the provision of funding towards the construction of a breakwater and small boat berthing facility in Fetlar, in recognition of the benefits to Fetlar and the North Isles in terms of improved service delivery, and as a catalyst to Fetlar’s social and economic development.
- 3.4 A third strand of work that has also influenced the study has been the outcomes of studies considering tunnel engineering, costs and issues, and associated risk assessment work.
- 3.5 A Bluemull Sound STAG Group has monitored and guided the study. Membership has included the North Isles Councillors, representatives of the North Isles Community Councils and representatives of the Bluemull Service ferry crew. The group was chaired by the Chair of ZetTrans, and was also attended by officers of ZetTrans, SIC Ferries, SIC Community Learning and Development, HIE Shetland and I@TE North Isles.
- 3.6 The wider community and ferry crews have been involved from an early stage, in developing the issues, problems and opportunities presented by the transport links across Bluemull Sound. Since this time, they have been kept informed with regular updates. This has included meetings informing the community of the emerging findings on 12 August 2008.

4. Key Issues to be Addressed

- 4.1 From a service delivery perspective, the most immediate issue arising from the study is the requirement to plan for the replacement of existing vessels and terminals, and the associated capital and revenue expenditure implications of this. Vessels being used on the route are nearing the end of their economic life, and face future regulatory compliance issues. Whilst overhauls can be undertaken to extend the operational life of the vessels, it is noted, that does not guarantee continued operational reliability or regulatory compliance. Specific problems have also recently been experienced with the structural viability of the terminals at Gutcher and Belmont. These terminals were constructed for the original Ro-Ro services, introduced in the 1970s, and are now also reaching the end of their economic life.
- 4.2 From a users’ perspective, the fundamental issues to be considered are how the different transport options will influence the economic and social viability of Unst and Fetlar. Seasonal capacity constraints getting to and from Unst were also frequently raised. Specific concerns were raised on Fetlar regarding the ability to access employment opportunities in the North Isles, and also on Shetland Mainland.
- 4.3 Other issues were also identified during the study including the delivery of a more easily understandable pattern of services, reducing the

impact of being reliant on two ferry services to reach the main service centre of Shetland; affordability (including fares), and ensuring a coherent relationship with the wider transport network.

- 4.4 These issues are being considered within the context of revenue and capital budgetary constraints being experienced within Shetland, reduced funding for infrastructure schemes from the European Union, and likely constraints in funding from the Scottish Government.
- 4.5 Furthermore, the outcomes of the appraisal will require to be considered in the light of the outcomes from the recently completed Bressay and Whalsay Inter-Island link STAG Appraisals.

5. Options Under Consideration

- 5.1 Following an option development, sieving, and initial appraisal process, the options considered to be worthy of detailed appraisal were as follows:

- **Option 1 – Do Minimum – Replacement of Gutcher and Belmont terminals and *MV Bigga* and *MV Geira***

This option would involve providing two replacement ro-ro vessels, which are compliant with legislation and able to cope with forecast vehicle and passenger demand over the appraisal period. The Do Minimum is a viable option in its own right, and also is a benchmark for comparison against other options.

- **Option 2 – Replacement of Gutcher and Belmont terminals, *MV Bigga* and *MV Geira* + development of Fetlar breakwater**

This option is similar to option 1, but also includes the development of a breakwater at Fetlar.

- **Option 4 – Replacement of Gutcher and Belmont terminals, *MV Bigga* and *MV Geira* + introduction of an additional crew (1 x FT)**

This option is similar to option 1, but also includes the introduction of one additional full-time crew, providing a more frequent service.

- **Option 5 – Replacement of Gutcher and Belmont terminals, *MV Bigga* and *MV Geira* + introduction of an additional crew (1 x PT)**

This option is similar to option 1, but also includes the introduction of one additional part-time crew, providing a more frequent service.

- **Option 8 – Unst-Yell Tunnel with 2 x Fetlar crew**

This option involves the development of a fixed link tunnel between Unst and Yell, in addition to the operation of a dedicated Fetlar ferry service, operated by two crews running from Fetlar to either an upgraded terminal at Belmont or Gutcher. This option also assumes the development of a breakwater at Fetlar.

- **Option 9 – Unst-Yell Tunnel with 3 x Fetlar crew**

This option involves the development of a fixed link tunnel between Unst and Yell, in addition to the operation of dedicated

Fetlar ferry service, operated by three crews running from Fetlar to either an upgraded terminal at Belmont or Gutcher. This option also assumes the development of a breakwater at Fetlar.

- 5.2 Prior to detailed appraisal, the details of each option were refined by undertaking work on draft timetables, capital and operational costs, ferry terminal design options, identification of a possible tunnel alignment, consultation with the communities, and discussions with landowners who could be potentially affected by the proposals.

6. Appraisal

- 6.1 The detailed appraisal considered the performance of each of the options against the Government's transport appraisal criteria: Environment, Safety, Economy, Integration and Accessibility.
- 6.2 The Environmental Appraisal did not lead to the rejection of any of the proposed options, although highlighted potential adverse impacts arising from the disposal of tunnel spoil, impacts on established SSSI(s), and landscape impacts.
- 6.3 The appraisal of safety impacts did not identify specific issues with any of the options being considered. It is noted that a tunnel would be predicted to increase vehicular travel from Unst, and onward to Yell and Shetland Mainland, and this in turn could lead to an overall increase in road accidents. However, the construction of a tunnel would also remove some of the current hazard associated with drivers speeding to catch a specific ferry departure.
- 6.4 The Economic appraisal was found to be the most significant criterion. Two elements were considered: Transport Economic Efficiency (TEE) and Economic and Activity Location Impacts (EALI).
- 6.5 The TEE appraisal considers the overall monetised costs and benefits of the different options, relative to the Do Minimum, over a period of 60 years. It is primarily measured using Net Present Value (NPV), which is calculated as the Present Value of Benefits (PVB) minus the Present Value of Costs (PVC). It therefore calculates the net benefit (or net cost) to society. In an ideal world, any scheme with a positive NPV would be implemented, as society gains. However, as funds are scarce, another indicator is required. The Benefit to Cost Ratio (BCR) is the Present Value of Benefits divided by the Present Value of Costs multiplied by negative one. This therefore presents the amount of benefit society gets from each pound spent on the project.
- 6.6 The incremental benefits of the various options, relative to the Do Minimum are presented below. The main factors influencing the performance of the various options are the differences in capital investment, and the ongoing operational costs. Whilst various other benefits are associated with the different options (such as travel time savings) they were found not to significantly influence the appraisal outcome. The options all produce negative NPV and BCRs of less than 1. This is reflective of the rural nature of this project and many benefits, which arise out of such a project, cannot be monetised.

	PVB	PVC	Net Present Value	Benefit to Cost Ratio
Option 1	£0	£0	£0	-
Option 2	£416,793	-£2,732,064	-£2,315,270	0.15
Option 4	-£454,252	-£8,325,773	-£8,780,025	-0.05
Option 5	-£356,111	-£6,221,334	-£6,577,446	-0.06
Option 8	£13,967,754	-£23,778,470	-£9,810,716	0.59
Option 9	£13,798,631	-£32,638,344	-£18,839,713	0.42

- 6.7 The results of the TEE appraisal confirm that in economic terms, none of the alternative options out-perform the Do-Minimum, with all options having a negative Net Present Value (this means they all cost relatively more than the cost of providing the Do Minimum option). This is due to the very high capital and operating costs of all the options, relative to the levels of use of the proposed infrastructure. Although the tunnel proposals replace the requirement to service the link between Unst and Yell, a significant amount of infrastructure is still required to service the link to Fetlar.
- 6.8 An EALI appraisal was also undertaken. This considered wider impacts on the economies of the area. This appraisal revealed that there were no significant impacts related to any of the ferry options, although they would secure ongoing employment of four ferry crews, equivalent to 21 full time posts.
- 6.9 The Tunnel options meant the loss of between 6 and 11 ferry jobs (dependent on the service configuration adopted for Fetlar). However, these options facilitated a step change in access between Yell and Unst. This would encourage an upturn in visitors – many may stay longer during the day, but they might not necessarily stay overnight. The appraisal demonstrated the potential for a fixed link to provide between 12 to 35 additional tourist related jobs, as well as create additional gross turnover of between £0.8m to £2.3m per annum. It should be highlighted that this additional activity on Unst may be to the partial detriment of tourist activity/ expenditure elsewhere.
- 6.10 A tunnel would provide a more secure basis for Unst families, however there is also the potential for increased leakage of expenditure from Unst. Overall, the provision of a fixed link would provide a positive impact for many Unst enterprises.
- 6.11 The appraisal of accessibility and social inclusion impacts was an appraisal criterion, which was found to have a significant bearing on the outcome of the appraisal. For public transport users, there would be no significant impacts unless public transport provision was developed to complement an enhanced frequency of ferry departures. However, benefits would be delivered with a fixed link, with the introduction of more “through” services linking Yell and Unst. All ferry options would have no impact on cyclists and pedestrians, although the introduction of a tunnel would effectively sever the existing link for users of these modes. Mitigation would include a revised public transport service, potentially with the ability for bikes to be transported through a tunnel either on a bus, van or trailer.

- 6.12 For motorists on Unst, the fixed link would significantly improve accessibility between Unst and Yell, and enable a step change in levels of accessibility on and off the island, and onto Shetland Mainland. It would be far more convenient to catch the full range of flight departures from Sumburgh, for example, as well as attend events on Shetland Mainland without the need for overnight accommodation.
- 6.13 For Fetlar residents, the provision of a Fetlar Breakwater (assumed in Option 2, 8 and 9) opens up opportunities for year round overnight berthing of the Day Vessel. Dependent upon issues such as crewing, and the resumption of fares on Bluemull, this facilitates additional services from and to Fetlar in the morning and evening. It also holds out the prospect (subject to wider considerations) of the introduction of an earlier morning departure from Fetlar, enabling reliable access to employment on Yell or Shetland Mainland.
- 6.14 The appraisal of integration impacts did not specifically highlight any significant impacts.

7. Risks and Deliverability

- 7.1 The STAG appraisal has also considered issues of risk and deliverability. It is apparent, that for the communities of Unst and Fetlar, the biggest risk is the risk of continuing to adopt a “Do Nothing” approach. This risks a significant reduction in service levels, and decrease in service reliability, and the possibility of a need for temporary arrangements to overcome vessel or terminal failure.
- 7.2 Of the options being considered, the principal risks are as follows:
- Option 1 – No significant operational risks. Some construction related risk related to terminals.
 - Option 2 – Some operational risk related to sustaining a Fetlar based crew. Some construction risk related to terminals.
 - Option 4 - No significant operational risks. Some construction related risk related to terminals.
 - Option 5 - No significant operational risks. Some construction related risk related to terminals.
 - Option 8 - Some operational risk related to sustaining a Fetlar based crew, and split shift timetable. Higher levels of construction risk related to fixed link.
 - Option 9 – Some operational risk related to sustaining a Fetlar based crew, and split shift timetable. Higher levels of construction risk related to fixed link.
- 7.3 In line with HM Treasury, and Scottish Government Guidance, account has been taken of the varying levels of risk associated with each option through the application of “Optimism Bias” uplifts, applied to the capital cost elements of each option. They range from 66% uplift for tunnelling work, through to 44% for access roads and terminal construction.

- 7.4 In respect of deliverability, the key constraints are related to affordability. Given that the tunnel options perform less well than the Do Minimum (in relation to Net Present Value), it will be particularly difficult to gain funding support from the Scottish Government for these options based on that measure of value alone.

8. Sensitivity Testing of the Appraisal Outcomes

- 8.1 Transport appraisal is, by its nature, a process that is based on assumptions and professional judgement, as well as more clinical analysis that attempts to predict future conditions. Therefore, it is important that we test how sensitive the results are to variations in the assumptions and judgements made. The following paragraphs explore the effects on the appraisal outcomes if we change some of the main parameters used in the appraisal.
- 8.2 The robustness of the outcomes of the appraisal have been firstly tested through the application of higher fuel costs, the re-introduction of fares, and also fares and higher fuel costs in combination. These tests did not alter the outcomes of the appraisal therefore the process is not sensitive to changes in these areas.
- 8.3 Further sensitivity testing was also undertaken with respect to varying the alternative assumptions made with respect to the application of optimism bias, and contingency allowances. Whilst these changes did impact upon the relative magnitudes of the Net Present Values of each of the options, they did not alter the ranking of the options.
- 8.4 In recognition of the public and local political interest related to the provision of fixed link between Yell and Unst, a further sensitivity was undertaken to test the performance (in relation to the cost benefit analysis) of a conceptual single bore, single lane tunnel. This has been named option 8b. This would provide 24hr access between Yell and Unst, although would be subject to directional controls. It was found that in this instance, that lower capital costs associated with such a proposal had the potential to significantly outperform other options included within the appraisal. However, it is noted that this option has not been subject to community consultation, operational risk assessment, or specific engineering feasibility review.

9. Key Findings

- 9.1 The outcomes of the appraisal are:
- a. At present, there is a significant risk of severe and costly disruption on the route should either the terminals or the ferries fail to be able to operate for legislative reasons or deterioration in condition. This would have particularly detrimental consequences for the communities of Unst and Fetlar.
 - b. Taking into account the outcomes of the appraisal, and issues such as risk and deliverability, Option 2 (replacement of Gutcher and Belmont terminals and *MV Bigga* and *MV Geira*, plus the

development of a Fetlar breakwater) has emerged as the most favourable of the options considered within the appraisal.

- c. In combination with proposals for a small berth facility, the provision of a breakwater at Fetlar provides an opportunity to deliver a more reliable, and more island centred service to this island, as well as to Unst, with associated socio-economic benefits. In particular, this could secure significant additional accessibility benefits to both islands, subject to issues of crewing / operational sustainability being addressed.
- d. There is the potential for the development of a single bore, single lane tunnel to be constructed. Sensitivity testing has confirmed that this has the potential to outperform the range of options that have been included within the appraisal. However, this option has not been subject to community consultation, risk assessment, or engineering feasibility work.

10. Financial Implications

- 10.1 Costs associated with the work detailed in this report have been met from existing budgets (GCY7552).
- 10.2 Should the Committee endorse the proposal to carry out a limited amount of further community consultation, risk assessment, and engineering feasibility work in relation to a single lane, single bore tunnel it is anticipated that this can be accommodated within existing approved budgets.

11. Policy & Delegated Authority

- 11.1 The Infrastructure Committee has full delegated authority to act on all matters within its remit, Section 12.0 of the Council's Scheme of Delegations, and for which the overall objectives have been approved by the Council, in addition to appropriate budget provision. However a decision of the Council is required in order to progress to the next stage.
- 11.2 The Shetland Transport Strategy is a statutory document and the Council, as a constituent Council of Zetland Transport Partnership, must perform its functions which relate to or which affect, or are affected by transport, consistently with the transport strategy.

12. Conclusions and Implementation

- 12.1 The option that performs best in the Bluemull Sound STAG process is Option 2. In effect this means replacing the current infrastructure and ferries to meet the needs of the islands for the foreseeable future, and developing a breakwater on Fetlar.
- 12.2 However, it is recognised that this option does not entirely meet the expectations of the communities and this prompted consideration of a single bore, single lane tunnel option (controlled by traffic lights) which, if technically and operationally feasible, out performs all other options

due to significantly lower capital costs than the single bore two lane tunnel option.

12.3 Since it is not operationally imperative that the planning and design of terminals and ferries on Bluemull Sound starts immediately, there is an opportunity to explore a single bore, single lane tunnel further and report back to Members before the end of this financial year whether or not this is a viable alternative to the ferry.

12.4 Once this is done the final decision will be included in an implementation plan that covers Bluemull Sound, Whalsay and Bressay to provide the Council with the information it needs to prioritise these projects against other projects in the Council's Capital Programme.

12.5 The Fetlar breakwater should be progressed independently of a decision regarding a fixed link between Yell and Unst.

13. Recommendations

I recommended that Infrastructure Committee: -

13.1 notes the findings of the Bluemull STAG 2 appraisal, recognising that the outcome of the work supports the continuation of a two-ferry service on Bluemull Sound, linking Yell, Unst and Fetlar.

13.2 supports the provision of a breakwater for Fetlar, opening up the prospect of year-round overnight berthing in Fetlar.

13.3 on the basis that there is not an urgent need to begin design of ferries and terminals for Bluemull Sound, endorses a proposal to carry out a limited amount of further community consultation, risk assessment, and engineering feasibility work, to enable a robust comparison to be made between the Do Minimum option (Replacement of Gutcher and Belmont terminals and *MV Bigga* and *MV Geira*) and Option 8b (single lane, single bore tunnel).

13.4 notes that once this is complete the final decision will be included in an overall implementation plan that will include Bressay and Whalsay also.

Report Number: TR-29-08-F

Executive Summary

1 Introduction

- 1.1 Zetland Transport Partnership (ZetTrans) commissioned Faber Maunsell to undertake a Scottish Transport Appraisal Guidance (STAG) assessment to examine options for the future of the transport links across Bluemull Sound, connecting the North Isles of Unst, Fetlar and Yell. A STAG Part 1 appraisal report was completed in June 2008, outlining the objectives that the study should address and the results from an initial appraisal of the long list of options that were identified to improve the transport link. Those options that performed best against the study objectives were taken forward to more detailed appraisal as part of the STAG Part 2 appraisal process. This Executive Summary summarises the STAG Part 2 appraisal process, and presents the recommendations for improving the transport link across Bluemull Sound.

2 Key Findings

- 2.1 The results from the appraisal suggest that doing nothing is not feasible due to the impacts and costs of continuing to operate ageing ferry and terminal infrastructure beyond its lifespan. This represents a significant risk to service delivery, not only for the transport link, but also for the viability of the communities of Fetlar and Unst.
- 2.2 While there are pros and cons with each of the options considered, overall, the outcome from the study is that Option 2 should be the preferred option. This option involves the replacement of the Gutcher and Belmont terminals and the provision of two replacement Ro-Ro vessels which are compliant with legislation and able to cope with forecast vehicle and passenger demand over the appraisal period. In addition to this, this option includes the development of the Fetlar breakwater.
- 2.3 However, within the context of strong political will for the development of fixed links in Shetland and the consultation findings that support this, it is also recommended that prior to fully implementing the above recommendation, an investigation is undertaken to examine the potential for developing a single lane, single bore tunnel between Unst and Yell. Outcomes from initial sensitivity testing confirm that this option has the potential to offer clear economic advantages relative to the other options considered. However, it is necessary to undertake additional work to assess the viability of this option in terms of risk assessment, community consultation, and engineering feasibility. This investigation should not, however, delay the commencement of work on the Fetlar breakwater.

3 Background to the Study

- 3.1 The study has been undertaken following the STAG guidance provided by the Scottish Government. STAG is the Government standard for appraisal of transport services and infrastructure projects and provides an evidence-based framework to use in the development and assessment of options against Government and local objectives. Since July 2003 it is a requirement of the

Scottish Executive (now Scottish Government) that all projects for which it provides support or approval are appraised in this way. The guidance was recently updated in May 2008.

- 3.2 The Bluemull STAG study has emerged following the development of Shetland's Regional Transport Strategy (RTS), initially developed in April 2007 and finally approved by Scottish Ministers in July 2008. In the context of examining options for improving inter-island connections across the Bluemull Sound, the RTS outlined ZetTrans' intention to "*undertake a Bluemull Sound STAG appraisal examining the full range of options for this link, including fixed links, ferry terminal replacement, replacement ferries, berthing arrangements and alternative crewing and timetabling arrangements.*"
- 3.3 Further to this, two other (now completed) studies committed to within the RTS have informed the preparation of the Bluemull STAG appraisal. The first piece of work involved a study exploring the requirements for and practical implications of basing a ferry on Fetlar and the development of facilities to accommodate this. This study recommended the provision of funding towards the construction of a breakwater and small boat berthing facility in Fetlar, in recognition that infrastructure could help to deliver an improved ferry service and act as a catalyst to Fetlar's social and economic development. The second strand of work that has influenced the study has been the outcomes of studies considering the feasibility of developing tunnels in Shetland, in terms of engineering costs and issues, and associated risk assessment work. The results from these studies have been taken on board in finalising the Bluemull STAG study.
- 3.4 At the outset of the STAG process, in December 2007, a joint working group involving representatives from ZetTrans, local Councillors, local Community Councillors and ferry crews was set up, adopting the title 'The Bluemull Sound STAG Group'. This group agreed the overall study objective '*To identify means of providing sustainable efficient transport links across Bluemull Sound for the long-term and identify the most appropriate actions to carry forward to implementation for the benefit of Shetland as a whole*'. This group has been consulted throughout the STAG process, providing guidance at each of its main stages.
- 3.5 Throughout the STAG study, the importance of ongoing consultation has been recognised. In addition to consultation with the STAG Group, the local community, including North Isles residents and other local stakeholders, have been involved at key stages of the process. This has included the completion of questionnaires in February 2008 to understand problems and issues with the current service, right through to public meetings to update on the findings of the STAG Part 1 study in July 2008 and meetings informing of the emerging findings from the Final STAG study, as held in August 2008.

4 Key Issues to be Addressed

- 4.1 This study has emerged from the requirement to address a number of key issues.
- 4.2 From a service delivery perspective, the most immediate issue arising from the study is the requirement to plan for the replacement of existing vessels and terminals, and the associated capital and revenue expenditure implications of this. Of the vessels used on the route, the *MV Bigga* and *MV Geira* will shortly reach or pass their nominal economic life expectancy of 20 years, while the *MV Fivla* and *MV Hendra* have passed this milestone. The *MV Thora*, which is deployed on this route as a relief vessel, is currently significantly beyond this age.

- 4.3 The ferry terminals at Gutcher and Belmont were designed for the first generation of ferries and were constructed in the 1970s. They are now at the limits of their operation due to the increased size of vessels utilising them and consequential increased berthing pressures. While the Fetlar ferry terminal at Hamars Ness is relatively new, opening in 2004, the terminal lacks a breakwater which exposes it to swell, posing difficulties when vessels try to berth during periods of adverse weather, and also limiting the viability of overnight berthing in inclement weather. As the vessel cannot be berthed overnight at Fetlar during the winter, this reduces opportunities for the introduction of a more island centred service for Fetlar.
- 4.4 From a user perspective, a key focus of this study has been on how the different transport options will influence the economic and social viability of Unst and Fetlar. Economically, it is known that frequent and accessible ferry services can bring benefits to local producers, retailers, local hauliers and transport providers. A good ferry service is also a prerequisite for any growth in tourism activity. However, there are wider social benefits. This can include community confidence, increased levels of social interaction between groups on and off the island, improved access to services including health and training, as well as changes in perception of inclusion. This is particularly significant for Fetlar.
- 4.5 With concern over the future vitality and viability of Unst, Fetlar and Yell due to the continuing depopulation of the islands, and ageing profile of residents, this study has also considered the potential impact of the different transport options on releasing wider positive impacts in terms of economic development and social integration, by improving access to jobs on and off the islands.
- 4.6 Other issues have also been identified during the study including timetabling issues; access to employment opportunities; reducing the impact of being reliant on two ferry services to reach the main service centre of Shetland; affordability; and ensuring a coherent relationship with the wider transport network.
- 4.7 The issues have been considered within the context of revenue and capital budgetary constraints being experienced within Shetland, reduced funding for infrastructure schemes from Europe, and likely constraints in funding from the Scottish Government.

5 Options Appraised

- 5.1 Following the option development, sieving, and initial appraisal undertaken within the STAG Part 1 framework, the options considered to be worthy of more detailed appraisal as part of this STAG Part 2 study were as follows:
- Option 1 – Do Minimum – Replacement of Gutcher and Belmont terminals and *MV Bigga* and *MV Geira*
 This option would involve providing two replacement Ro-Ro vessels which are compliant with legislation and able to cope with forecast vehicle and passenger demand over the appraisal period. The Do Minimum acts as a viable option in its own right, and also as a benchmark for comparison against other options.
 - Option 2 – Replacement of Gutcher and Belmont terminals, *MV Bigga* and *MV Geira* + development of Fetlar breakwater
 This option is similar to option 1, but also includes the development of a breakwater at Fetlar.
 - Option 4 – Replacement of Gutcher and Belmont terminals, *MV Bigga* and *MV Geira* + introduction of an additional crew (1 x FT)

This option is similar to option 1, but also includes the introduction of one additional full-time crew, providing a more frequent service.

- Option 5 – Replacement of Gutcher and Belmont terminals, *MV Bigga* and *MV Geira* + introduction of an additional crew (1 x PT)

This option is similar to option 1, but also includes the introduction of one additional part-time crew, providing a more frequent service.

- Option 8 – Unst-Yell Tunnel with 2 x Fetlar crew

This option involves the development of a fixed link tunnel between Unst and Yell, in addition to the operation of a dedicated Fetlar ferry service, operated by two crews running from Fetlar to either an upgraded terminal at Belmont or Gutcher. This option also assumes the development of a breakwater at Fetlar.

- Option 9 – Unst-Yell Tunnel with 3 x Fetlar crew

This option involves the development of a fixed link tunnel between Unst and Yell, in addition to the operation of dedicated Fetlar ferry service, operated by three crews running from Fetlar to either an upgraded terminal at Belmont or Gutcher. This option also assumes the development of a breakwater at Fetlar.

- 5.2 Prior to detailed appraisal, the details of each option were refined by undertaking work on sample timetables, capital and operational costs, ferry terminal design options, identification of a possible tunnel alignment, community consultation, and discussions with landowners who could be potentially affected by the proposals.

6 STAG Part 2 Appraisal

- 6.1 The detailed appraisal considered the performance of each of the options against the Government's transport appraisal criteria: Environment, Safety, Economy, Accessibility and Social Inclusion, and Integration.
- 6.2 The **environmental** appraisal did not exclude any of the proposed options, although highlighted potential adverse impacts arising from the disposal of tunnel spoil, impacts on established SSSIs, and landscape impacts.
- 6.3 The appraisal of **safety** impacts did not identify specific issues with any of the options being considered. It was noted however that the development of a tunnel would be predicted to significantly increase vehicular travel from Unst, and onward to Yell and Shetland Mainland, which in turn would lead to an overall increase in road accidents. However, the construction of a tunnel would also remove some of the current hazard associated with drivers speeding to catch a specific ferry departure.
- 6.4 Two elements were considered as part of the **economic** appraisal: Transport Economic Efficiency (TEE) and Economic and Activity Location Impacts (EALI).
- 6.5 The TEE appraisal considers the overall monetised costs and benefits of the different options, relative to the Do Minimum. It is primarily measured using Net Present Value (NPV), which is calculated as the Present Value of Benefits (PVB) minus the Present Value of Costs (PVC). It therefore calculates the net benefit to society. In an ideal world, any scheme with a positive NPV would be implemented, as society gains. However, as funds are scarce, another indicator is required. The Benefit to Cost Ratio (BCR) is the Present Value of Benefits divided by the Present Value of Costs multiplied by negative one. This therefore presents the amount of benefit society gets from each pound spent on the project.
- 6.6 The incremental benefits of the various options, relative to the Do Minimum are presented in the table below. The main factors influencing the performance of

the various options are the differences in capital investment, and the ongoing operational costs. Whilst various other benefits are associated with the different options (such as travel time savings) they were found not to significantly influence the appraisal outcome.

60 year appraisal period	Net Present Value	Benefit to Cost Ratio
Option 1 – Do Minimum	£0	-
Option 2 – Replacement of Gutcher and Belmont terminals, <i>MV Bigga</i> and <i>MV Geira</i> + development of Fetlar breakwater	£-2,315,270	0.15
Option 4 – Replacement of Gutcher and Belmont terminals, <i>MV Bigga</i> and <i>MV Geira</i> + introduction of an additional crew (1 x FT)	£-8,780,025	-0.05
Option 5 – Replacement of Gutcher and Belmont terminals, <i>MV Bigga</i> and <i>MV Geira</i> + introduction of an additional crew (1 x PT)	£-6,577,446	-0.06
Option 8 – Unst-Yell Tunnel with 2 x Fetlar crew	£-9,810,716	0.59
Option 9 – Unst-Yell Tunnel with 3 x Fetlar crew	£-18,839,713	0.42

- 6.7 The Net Present Value demonstrates that over 60 years, all options appraised perform less well than the Do Minimum option. Taking into account all capital and operational costs over 60 years, offset by benefits such as the value of journey time savings, all options are more costly than the Do Minimum option. The Benefit to Cost ratio indicates that for *all options*, each additional pound invested over and above the Do Minimum, returns a fractional amount of benefit, or merely increases costs.
- 6.8 The EALI appraisal considered the economic impacts that may accrue from the various transport options in both employment and GDP terms. For residents, it is considered that the ferry options could help to improve access to jobs in the North Isles through the provision of more reliable infrastructure and, under some of the options, a more accessible service. The tunnel options would increase access to employment for North Isles residents, making commuting to jobs on other North Isles and Shetland Mainland easier. For residents of Fetlar, the development of a breakwater and dedicated ferry service could allow the timetable to be arranged so that commuting from Fetlar to Yell and Unst is more viable. In combination with a small berth facility, this option could secure wider socio-economic benefits for Fetlar.
- 6.9 Businesses could also benefit from the provision of a more reliable and accessible link facilitated by improved ferry services or a tunnel. Potential impacts identified include new business start-ups, increased staff productivity and reduced freight costs. The main negative impact relates to the loss of ferry jobs associated with construction of a fixed link – although this option is also the most accessible and therefore offers the greatest potential economic benefits.
- 6.10 The potential impacts of the various options on the development of tourism in the North Isles have also been considered with results from appraisal suggesting that while each of the options could support increases in tourist numbers, a tunnel would deliver the greatest economic benefits in terms of gross effects on the economy and number of jobs safeguarded. It is important to highlight however that while Unst would be significantly positively affected by increases in tourism on the back of the development of a tunnel, this option could have negative impacts elsewhere in terms of a loss of ferry jobs and transferral of tourist activity from elsewhere in Shetland.
- 6.11 Appraisal has also considered the impacts of the different options on levels of **accessibility and social inclusion**. The provision of a Fetlar breakwater opens up accessibility to Unst, Yell and Lerwick by enabling an earlier morning ferry

sailing from Hamars Ness. Under those options which would regularise the timetable, public transport access would only be enhanced with matching enhancements to the existing public transport services.

- 6.12 While the utility and convenience of public transport could be enhanced between Unst and Yell through the development of a tunnel, these options do not necessarily facilitate any improvement in public transport accessibility without timetable improvements. However, for those with access to a car, the tunnel options would provide 24 hour access to and from Unst. However a tunnel connecting Unst and Yell would prohibit pedestrian and cyclist access for safety reasons. Access for these user groups would require more detailed consideration as part of the design process, should tunnelling options be pursued in the future.
- 6.13 Other groups, such as visitors to the North Isles, would benefit from improved accessibility through a regularised ferry timetable, or a tunnel between Unst and Yell.
- 6.14 The appraisal of **integration** impacts did not specifically highlight significant impacts. In terms of transport integration, the appraisal identified that the main positive impacts would result from the provision of a tunnel which could deliver "seamless" journeys between Unst and Yell.

7 Risks and Deliverability

- 7.1 The STAG appraisal has also considered issues of risk and deliverability. It is apparent, that for the communities of Unst and Fetlar, the biggest risk is the risk of continuing to adopt a "Do Nothing" approach. This risks a significant reduction in service levels, and increase in service unreliability, and the possibility of temporary arrangements to overcome vessel or terminal failure.
- 7.2 Of the options being considered, the principal risks are as follows:
- Option 1 – No significant operational risks. Some construction risk related to terminals.
 - Option 2 – Some operational risk related to sustaining a Fetlar based crew. Some construction risk related to terminals.
 - Option 4 – No significant operational risks. Some construction risk related to terminals.
 - Option 5 – No significant operational risks. Some construction risk related to terminals.
 - Option 8 – Some operational risk related to sustaining a Fetlar based crew, and split shift timetable. Higher levels of construction risk related to fixed link.
 - Option 9 – Some operational risk related to sustaining a Fetlar based crew, and split shift timetable. Higher levels of construction risk related to fixed link.
- 7.3 In line with HM Treasury, and Scottish Government Guidance, account has been taken of the varying levels of risk associated with each option through the application of "Optimism Bias" uplifts, applied to the capital cost elements of each option. They range from 66% uplift for tunnelling work, through to 44% for access roads and terminal construction.
- 7.4 In respect of deliverability, the key constraints are related to affordability. Given that the tunnel options perform less well than the Do Minimum (in relation to Net Present Value), it will be particularly difficult to gain funding support from the Scottish Government for these options.

8 Sensitivity Testing

- 8.1 The robustness of the outcomes of the appraisal have been firstly tested through the application of higher fuel costs, the re-introduction of fares, and also fares and higher fuel costs in combination. These tests did not alter the outcomes of the appraisal.
- 8.2 Further sensitivity testing was also undertaken with respect to varying the alternative assumptions made with respect to the application of optimism bias, and contingency allowances. Whilst these changes did impact upon the relative magnitudes of the Net Present Values of each of the options, they did not alter the ranking of the options.
- 8.3 In recognition of the public and local political interest related to the provision of a fixed link between Yell and Unst, a further sensitivity test was undertaken to test the performance (in relation to the cost benefit analysis) of a conceptual single bore, single lane tunnel. This would provide 24hr access between Yell and Unst, although would be subject to directional controls. It was found that in this instance, the lower capital costs that would be associated with such a proposal had the potential to significantly outperform other options included within the appraisal. However, it is noted that this sensitivity option has not been subject to community consultation, operational risk assessment, or specific engineering feasibility review.

9 Summary and Conclusions

- 9.1 The STAG appraisal study has examined the cost, benefits and risks associated with each of the option packages. Through careful appraisal as part of the STAG Part 2 appraisal framework, the following conclusions emerge:
 - a) At present, there is a significant risk of severe and costly disruption on the route should either the terminals or the ferries fail to be able to operate for legislative reasons or deterioration in condition. This would have particularly detrimental consequences for the communities of Unst and Fetlar.
 - b) Taking into account the outcomes of the appraisal, and issues such as risk and deliverability, Option 2 (replacement of Gutcher and Belmont terminals and *MV Bigga* and *MV Geira*, plus the development of a Fetlar breakwater) has emerged as the most favourable of the options considered within the appraisal.
 - c) In combination with proposals for a small berth facility, the provision of a breakwater at Fetlar provides an opportunity to deliver a more reliable, and more island centred service to this island, as well as to Unst, with associated socio-economic benefits. In particular, this could secure significant additional accessibility benefits to both islands, subject to issues of crewing / operational sustainability being addressed.
- 9.2 Whilst Option 2 emerges as the preferred recommendation based on the results of the STAG Part 2 appraisal, it is recommended that further work is undertaken to investigate the potential of a single lane, single bore tunnel between Unst and Yell. Outcomes from initial sensitivity testing confirmed that this option has the potential to offer clear economic advantages relative to the recommended option. However, prior to confirming the viability of a single bore tunnel, additional work assessing the operational risks associated with this option, and discussions with community representatives will be required. This work should not however delay the commencement of work on the Fetlar breakwater development, and also the provision of a replacement terminal at Belmont, which will both be required irrespective of the development of a tunnel.

- 9.3 The results of this study will require to be considered within the context of the emerging findings from the recent STAG studies for Whalsay and Bressay.

10 Recommendations Going Forward

10.1 In light of the above, the conclusions and options for recommended implementation that will be going forward to ZetTrans on 22nd September and Infrastructure Committee on 7th October will be:

- The option that performs best in the Bluemull Sound STAG process is Option 2. In effect this means replacing the current infrastructure and ferries to meet the needs of the islands for the foreseeable future, and developing a breakwater on Fetlar.
- However, this does not meet the expectations of the community and this prompted consideration of a single bore, single lane tunnel option (controlled by traffic lights) which, if technically and operationally feasible, out performs all other options due to significantly lower capital costs than the single bore two lane tunnel option.
- Since it is not operationally imperative that the planning and design of terminals and ferries on Bluemull Sound starts immediately, there is an opportunity to explore a single bore, single lane tunnel further and report back to Members before the end of this financial year whether or not this is a viable alternative to the ferry.
- Once this is done the final decision will be included in an implementation plan that covers Bluemull Sound, Whalsay and Bressay to provide the Council with the information it needs to prioritise these projects against other projects in the Council's Capital Programme.
- The Fetlar breakwater should be progressed independently of a decision regarding a fixed link between Yell and Unst.

For further information, please contact ZetTrans on (01595) 744868.



REPORT

To: Infrastructure Committee

7 October 2008

From: Head of Transport
Infrastructure Services Department

BRESSAY LINK STAG APPRAISAL – PROGRESS REPORT

1. Introduction

- 1.1. This report provides information to Members on progress in implementing the approved recommendations of the STAG 2 study into the Bressay Link.

2. Links to Council Priorities

- 2.1. The Council's Corporate Plan states *"Shetland's communities are scattered and have a diverse set of needs. To best address those, we must have sustainable road, sea and air transport systems, both internal and external, that ensure everyone is able to access the places, services and opportunities they need."*

- 2.2. The Shetland Transport Strategy aims and objectives include: -

FL1: *ZetTrans supports the principle of developing fixed links between Shetland Mainland, and the main offshore islands of Bressay, Yell, Unst and Whalsay.*

FL2: *ZetTrans and SIC are committed to undertaking a 'Bressay Link' STAG assessment examining future options for a link to Bressay, considering a range of options including the continued operation of a ferry service, and the development of fixed links in the form of a bridge or tunnel.*

FL3: *In the short-term, ZetTrans proposes to commission a study to confirm the robustness of business cases for fixed links between Yell and Unst (Bluemull Sound), Shetland Mainland and Yell (Yell Sound), Shetland Mainland to Whalsay and Shetland Mainland and Bressay, with particular emphasis on agreeing with regulatory bodies the appropriate standards and specifications that would apply.*

3. Background

- 3.1. Report No. TR19-08-F to the Infrastructure Committee on 10 June 2008 gave details of the findings and recommendations of the detailed appraisal into options for providing a sustainable transport link between Bressay and Mainland Shetland. It was agreed that, as with the STAG study, the

Infrastructure Committee should continue to be provided with regular update reports on progress on implementation of the recommendations.

- 3.2. It is anticipated that sufficient work will have been completed by March 2009, in order for Council to then decide whether to proceed with detailed design and implementation.

4. Progress

- 4.1. A number of key elements are nearing completion. Together they will ensure the project begins from a strong baseline:
- A risk register, including mitigative actions required to ensure risk and therefore time and cost, is minimised;
 - A timeline and action list of when these actions are required in order to ensure the project is successful;
 - A priority list of actions to be undertaken in the coming months, to ensure the appropriate information is available by the time Council are asked whether to proceed with detailed design and implementation;
 - A budgetary figure for the project.
- 4.2. This will be made available in a Stage1 report by the end of October 2008.
- 4.3. This information will also be made available to the public at two exhibitions to be held on Bressay on 28 October 2008 and Lerwick on 29 October 2008. This will also include information on short-term improvements, such as public transport and ferry fares. The project team will be available to explain the proposals and answer questions.

5. Financial Implications

- 5.1. Costs associated with the work detailed in this report are to be met from existing budgets (GCY 7212 1760 £250,000).

6. Policy and Delegated Authority

- 6.1. The Council decided to pursue a fixed link option to Bressay (Infrastructure Committee min. ref. 43/08, SIC Minute Ref 87/08). Delivery of this project is delegated to the Infrastructure Committee as part of its remit in Section 12 of the Council's Scheme of Delegation.
- 6.2. Shetland's Transport Strategy is a statutory document and the Council, as required under the Transport (Scotland) Act 2005, must perform its functions which relate to or which affect, or are affected by transport consistently with the transport strategy.

7. Recommendations

- 7.1 I recommend that Infrastructure Committee note this report.



REPORT

To: Infrastructure Committee

7 October 2008

From: Head of Transport
Infrastructure Services Department

WHALSAY LINK – PROGRESS REPORT

1. Introduction

- 1.1. This report provides information to Members on progress in implementing the approved recommendations of the STAG 2 study into the Whalsay Link.

2. Links to Council Priorities

- 2.1. The Council's Corporate Plan states *"Shetland's communities are scattered and have a diverse set of needs. To best address those, we must have sustainable road, sea and air transport systems, both internal and external, that ensure everyone is able to access the places, services and opportunities they need."*
- 2.2. The Shetland Transport Strategy aims and objectives include: -
- Section 6.20** – ZetTrans is committed to the improvement of the Whalsay ferry service and is currently progressing a STAG Part 2 Study examining future options for the service including consideration of new vessels and terminals.
- 2.3. The Council adopted the recommendations of the STAG 2 Whalsay Link Study on 10 June 2008 (Infrastructure Committee min. ref. 44/08)

3. Background

- 3.1. Report No. TR-17-08-F to the Infrastructure Committee on 10 June 2008 gave details of the findings and recommendations of the detailed appraisal into options for providing a sustainable transport link between Whalsay and Mainland Shetland. It was agreed that Infrastructure Committee should continue to be provided with regular update reports on progress on implementation of the recommendations.
- 3.2. It is anticipated that sufficient work will have been completed by March 2009.

4. Progress

- 4.1. The mathematical modelling has been completed by HR Wallingford and the analysis confirms that the configuration of breakwaters in the preferred option to build a new terminal in North Voe, Whalsay will provide sufficient shelter to the terminal.
- 4.2. This in turn confirms that progress to the physical modelling stage of the analysis can be taken with confidence that the outcome should be positive.

5. Financial Implications

- 5.1. Costs associated with the work detailed in this report are to be met from existing budgets (GCY 7551 1760 - £250,000).

6. Policy and Delegated Authority

- 6.1. The Council decided to pursue the recommendations of the Whalsay STAG 2 Study (Infrastructure Committee min. ref. 44/08, SIC Minute Ref 87/08). Delivery of this project is delegated to the Infrastructure Committee as part of its remit in Section 12 of the Council's Scheme of Delegation.
- 6.2. Shetland's Transport Strategy is a statutory document and the Council, as required under the Transport (Scotland) Act 2005, must perform its functions which relate to or which affect, or are affected by transport consistently with the transport strategy.

7. Recommendations

- 7.1 I recommend that Infrastructure Committee notes this report.

Report No: TR-27-08-F



REPORT

To: Infrastructure Committee

7 October 2008

**From: Energy Manager
Planning
Infrastructure Services Department**

ENERGY PRICES AND EFFECT ON BUDGETS

1 Introduction

- 1.1 This report presents the effects that energy price rises are having on the 2008/09 budgets for electricity, gas oil and district heating in Council buildings.
- 1.2 In parallel with this the report outlines some of the past, current and ongoing works to reduce energy costs and consumption within the Council.
- 1.3 It also presents, for information, an outline of the proposed Carbon Reduction Commitment legislation that could effect significantly energy prices in the future.

2 Links to Council Priorities

- 2.1 A Sustainable Organisation is one of the Corporate Plan's priorities by 'committing to ways of improving our business to make sure that the priorities outlined in the plan can be delivered in an efficient and sustainable way.'
- 2.2 Target and Priority 7 states "We will be world renowned for being clean and green islands, decreasing our CO² emissions by 30% by 2020".

3 Background

- 3.1 Past and present gas oil prices are presented in Annex A to this report. The graphs show two scenarios for estimating costs going forward, one using 5-years historical data the other using one years historical data. A trend line is applied to both graphs to allow an estimate of potential future costs. Prices estimated in March 2009 are vastly different for the two scenarios (58p/litre and 84p/litre respectively) and the reason for presenting this is to show that it is

very difficult to budget for oil and any increases in such a volatile market where prices change on a weekly basis.

- 3.2 Therefore based on the average price in the first five months of this financial year I have estimated an average cost for the price of oil for the year to be 62p/litre and have estimated the expected annual budget on this basis. The current price of oil is 59p/litre. Budgets were prepared on an oil cost of 42p/litre showing a rise of 48% on the new estimated price.
- 3.3 The current electricity supply contract was tendered in the last financial year. Prices were received in early February 2008 and are fixed for the period 1 April 2008 to 31 March 2009. The increase in required budget is approximately 7.5% and includes for the increase in the street lighting costs (street lighting was tendered separately as part of a collaborative arrangement with other Scottish local authorities). When the 2008/09 budget was prepared the wholesale rate for electricity was below the April 2006 to March 2008 contract rates i.e. the rates that the 2007/08 budget was prepared on, therefore the 2008/09 budget did not increase significantly.
- 3.4 District heating prices increased to 3.4p/kWh in April 2008 and a price increase for October has been agreed taking the standard tariff to 4.2p/kWh. The tariff figure that the budget was based upon was 3p/kWh. The tariff increases are directly linked to the price of oil as the district heating scheme supplements its output in the winter by burning oil at the peak load boiler station. Taking the price rises together and assuming a higher consumption in winter the average estimated tariff has been taken as 3.93p/kWh equivalent to a 31% increase.
- 3.5 District heating will still be significantly cheaper than the alternative standard forms of heating which are currently approximately 7.56p/kWh for oil (taking into account boiler efficiency) and 6.48p/kWh for electricity (low rate) based on the current electricity supply contract rates. Also the money paid out to SHEAP Ltd remains in the Shetland economy.

4 Energy Saving Initiatives

- 4.1 Annex B provides a list of current initiatives and ongoing works, actioned by different Services, that have succeeded in or are looking to improve Service efficiency thereby in turn limiting the damage that increased prices are having on energy budgets.
- 4.2 Whilst there are a number of initiatives currently ongoing the fact is that they cannot compensate (within a very short timescale) for the level of energy price increases that the Council is facing.

5 Securing Budgets to Implement Energy Saving Works

- 5.1 The main risk for all potential projects (contained in Annex B) is capital funding and it is clear that projects that can attract external

funding will be at an advantage when applying for funding through the Council's Capital Projects mechanism. Sourcing of funding and producing successful applications is therefore a vitally important area in carbon management at both Council and community level. The following is an outline of the main sources of potential funding:

- **Energy Conservation (Spend to Save) Budget** - Steps have and will be taken to try and re-establish a capital energy conservation budget in the next financial year through savings achieved by changes to billing and a policy on green electricity premiums.
- **Energy Revenue Budgets** – There could be an opportunity to use energy budgets where the payback on measures is less than a year.
- **Green Electricity Premiums** – Contained as a proposal in the accompanying report. 'Where green electricity is charged at a premium that the Council contracts for brown electricity and instead the energy conservation budget in the following year is increased by an equivalent sum to the premium to be used on energy efficiency projects within its own stock thereby maintaining the Council policy of reducing energy usage and promoting alternatives to standard systems. A spend to save budget such as this would be a more cost effective use of Council resources'.
- **Public Sector Energy Efficiency Initiative (PSEEI)** - The PSEEI has established 'invest to save' funds, managed at a local level, which has allowed local authorities to implement long term energy efficiency strategies within their estates. The Council has received £116,000 and the funding is being allocated on specific projects that comply with the requirements of the grant. As an 'invest to save' initiative funding is accrued from one financial year to the next.
- **Other Budgets** - Energy conservation and PSEEI budgets could be combined with existing maintenance, capital or other budgets where works are identified as achieving aims required by the budget e.g. a faulty air source heat pump unit was replaced at ICT and this achieved maintenance and energy savings. In the absence of an energy conservation budget it is essential that these budgets are used where the maintenance project links with energy saving aspirations.
- **Feasibility/Capital Budgets** - Feasibility studies have been and will continue to be assessed for funding through the Council and larger scale capital projects will also be presented (these are the responsibility of the services that are maintaining, creating or enhancing the assets concerned);
- **External Funding** - Feasibility studies have been to date supported by outside bodies e.g. the Community Energy

Scotland and ZetTrans. External funding sources will also be assessed for larger scale projects. On a smaller scale again Community Energy Scotland has provided support for installations.

6 Energy Purchasing

- 6.1 In the accompanying energy supply contract policy report one of the proposals is **‘that the Council, subject to review of Agency Agreement and Risk Management Policy, signs up to a national contract thereby allowing Procurement Scotland to purchase electricity on the Council’s behalf’**. This will include all metered and non-metered (street lighting) consumption.
- 6.2 There is currently on ongoing review of the purchase of fuel across all Council Departments to ensure that the Council is procuring the required quality of fuel at the lowest possible price.

7 Studies/Strategies/Focus Groups

- 7.1 Transport Focus Group - This short-life working group has been established as a result of Infrastructure Committee asking the Transport Service, on 10th June 2008, to develop proposals to address the rising cost of running the Council’s Transport Service. At the June meeting it was requested that the Transport Service return to today’s meeting with proposals for how efficiencies can be made across the network. It was also asked that the impact of these proposals be explained.
- 7.2 The main aim of taking part in the Carbon Trust’s Carbon Management Programme was to develop a carbon management strategy, agreed across the Project Team with clear actions and targets for the short, medium and long term. This will be updated annually or in response to changes in relevant local or national policy. This will lead to a coordinated approach to carbon management thereby helping to raise the profile both within the Council and across the Community. A draft report has been produced however we are currently looking at how best to complete the Strategic Environmental Assessment (SEA) requirements. This has not stopped progress in a number of key areas and also the Council currently has agreed a target for reducing CO₂ emissions in Shetland (30% by 2020).

8 Carbon Reduction Commitment (CRC)

- 8.1 The CRC is a mandatory emissions trading scheme being introduced by the Government to cover large businesses and public sector organisations whose 2008 half-hourly metered electricity use is above 6,000 MWh. The introduction of the scheme was announced by Government in the Energy White Paper 2007.
- 8.2 The UK Government, in conjunction with the Scottish Government, plans to issue a detailed consultation on the CRC draft regulations

this autumn. 2008 is the qualifying year that will see the Council rated as part of the scheme. In early 2009, all organisations and companies affected by the scheme will be contacted and given a registration pack. They will then have to provide information on their 2008 electricity consumption.

- 8.3 As stated the CRC inclusion threshold is 6,000MWh/year therefore the Council, with annual electricity consumption for half hourly sites of 7,873MWh, would appear to fall under the scheme.
- 8.4 The introductory phase of the scheme begins in 2010 with the first carbon allowances being sold to participants in 2011 at a fixed price of £12/tCO₂. Trading will begin in 2013.
- 8.5 On the basis that the Council will be included under the scheme annual emissions (excluding transport and emissions from the Energy Recovery Plant and landfill site) are in the region of 21,455 tonnes equating to £257,460 at the fixed price noted in 8.2.
- 8.6 More information will be gathered on what other areas apply/don't apply to get a more accurate picture on whether the Council will be included under the scheme and therefore the annual costs facing the Council with the introduction of the CRC.

9 Proposals

- 9.1 That the Energy Manager will continue to monitor budgets and actual costs as the year progresses and report back to Infrastructure Committee on any further unforeseen increase in costs.
- 9.2 That the Energy Manager continues to encourage staff to be energy efficient in the light of increasing costs.

10 Financial Implications

- 10.1 Following the calculations of energy cost increases in paragraphs 3.3, 3.4 and 3.5 of this Report an estimated outturn overspend on energy budgets is likely to be in the region of £426k, split by energy type as follows:
 - 1160 (electricity) - £127,465 equivalent to 7.5% increase;
 - 1162 (gas oil) - £234,167 equivalent to 48% increase;
 - 1164 (district heating) - £64,629 equivalent to 31% increase.
- 10.2 At the end of August the Council was underspent on salary costs (after removal of full year budgeted savings required) to the sum of £495k on its General Fund, Support and Recharged Ledgers. As salary costs are profiled evenly throughout the year this constitutes real savings which could be used to offset the estimated increase in energy costs.

11 Policy and Delegated Authority

- 11.1 The Infrastructure Committee has full delegated authority to act on all matters within its remit, Section 12.0 of the Council's Scheme of Delegations, and for which the overall objectives have been approved by the Council, in addition to appropriate budget provision.

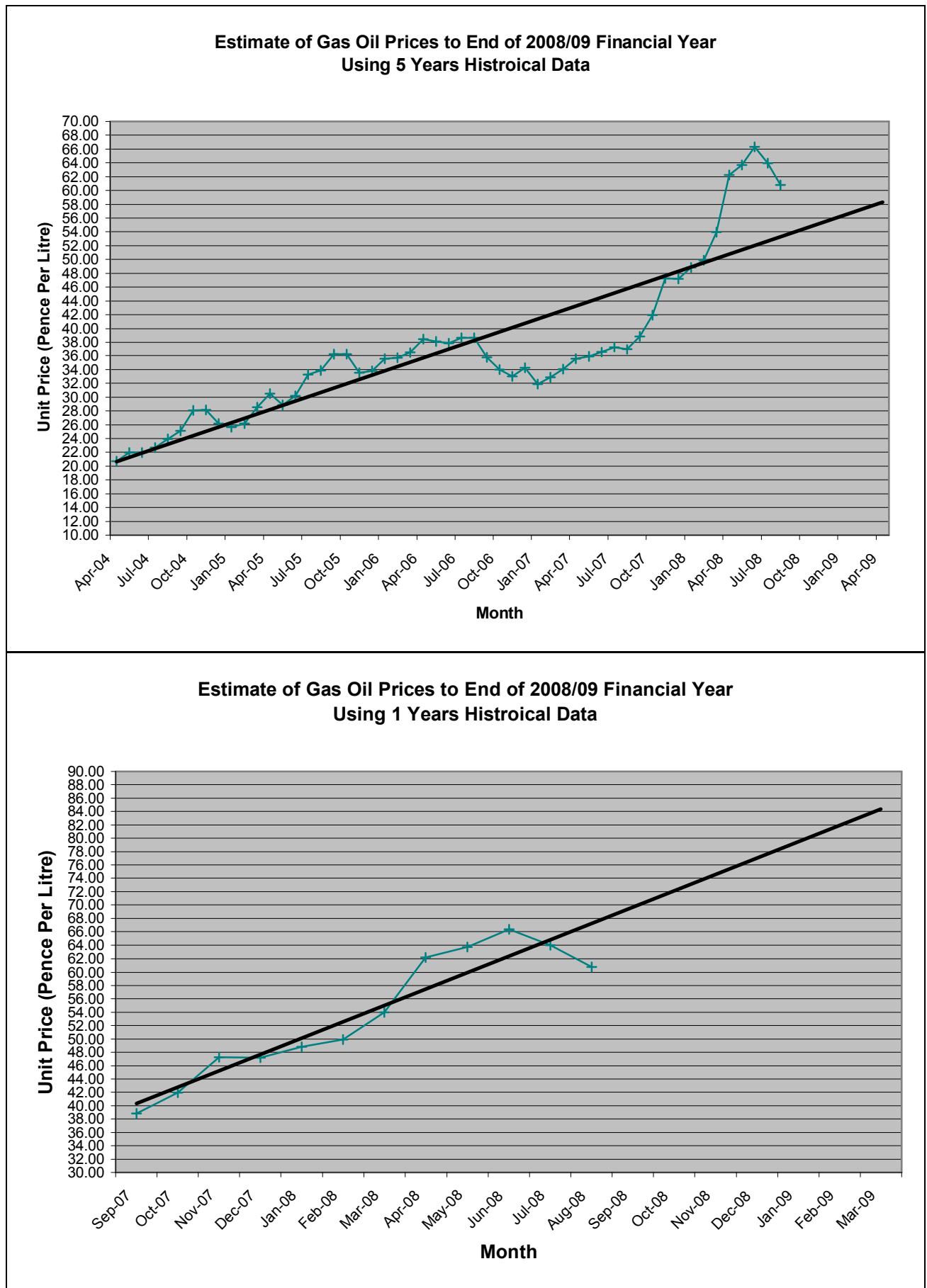
12 Recommendation

I recommend that:

- 12.1 That the Infrastructure Committee note the position regarding the estimated outturn increase in energy costs and possible offset by underspending on salary costs.
- 12.2 That the Infrastructure Committee support the Energy Manager in encouraging staff to be energy efficient given the increase in costs.
- 12.3 That the Energy Manager report back to Infrastructure Committee on any further unforeseen increase in energy costs.

Report Number: PL-38-08-F

Annex A – Gas Oil Prices



Annex B - Emission Reduction Works and Opportunities

1 District Heating Connections

The Council has a number of buildings (both gas oil and electric heated) that could potentially be connected to the scheme. This project could change depending on the long-term future of some of the buildings but if they are moved to more efficient premises (Housing to North Ness) or new premises (proposed North Ness office) then savings are likely still to be achieved.

New Connections - Tender documents have been issued to convert Islesburgh House and the Old Library Centre to district heating.

2 Heat Pumps

There are a number of sites with air source heat pumps fitted. The installations to date are currently being monitored (meters fitted directly to each unit) and initial readings suggest that the units operate very efficiently and can also be closely controlled. This is an expensive solution and again projects may depend on electricity price changes, however paybacks can be reduced if heat pump technology is considered as part of refurbishment projects and therefore some of the cost can be written off against the cost of a standard heating system.

Conversions to date include the top floors of both buildings at the Shetland College, the Building Services/Roads offices at Gremista, the ASN unit at Brae. Installations currently ongoing are Cunningsburgh Primary (tenders returned) and the Seafeld Pavilion (order issued).

3 Energy Recovery Plant (ERP) Project

The ERP building is currently the largest Council consumer of electricity. The success of the district heating scheme has seen its customer base expand rapidly. It is likely that new connections will stop unless further sources of energy are found to feed into the scheme during peak demand periods. A higher dependence on oil for backup would adversely affect the district heating tariff due to the rising cost of oil. A feasibility study has been undertaken to assess the potential of a wind turbine/storage facility supplying the plant's electricity requirements and heat to the district heating scheme. The main features of the system include:

- The planned turbines will have a significantly higher capacity than the current demand at the plant. During periods of excess generation the electricity would be used to heat water to supply the district heating system (wind is the preferred option as peak output from the turbines will closely match peak heating periods);
- To address grid constraints a storage element will be incorporated to ensure a smooth changeover to grid supply at times of a reduction in output or shutting down of the wind turbines;
- Where there is no requirement for heat from the district heating system (during warmer periods) there will be hydrogen production. The hydrogen will either be used as a transportation fuel or as backup to the wind turbines through on site generation of electricity.

Contract to be issued for installation of anemometer mast to monitor wind regime.

4 School Turbines

It is hoped that the 3 existing school turbines can be re-commissioned within the current financial year and if so this technology could potentially be used on other Council sites. The current wind to heat projects have been very successful in both displacing consumption from standard forms of heating and doing so as efficiently as possible through the storage of heat and hence again there is good local experience available to inform projects from feasibility through to installation. There is now also a second local installer of wind turbines which will also improve competition in this area.

Status - Proposal from Proven expected.

5 Building Management System (BMS)

The majority of care homes and oil-heated schools are now connected to the Council's BMS system. Importantly there will continue to be some user control of heating and hot water on site but there is also now the opportunity to use central control options. The ability to view and change settings and assess where systems are not operating correctly shall, with the provision of user training, see energy and again maintenance savings achieved.

Status - Clear guidelines and training requires to be provided to ensure that the system is maximised to its full potential to the satisfaction of all parties i.e. between central control and building occupants.

6 Ship to Shore Supplies

A ship to shore supply has been operating at the tug jetty at Sellaness for almost a year. This has seen significant energy savings in respect of oil reduction compared against a significantly smaller increase in electricity consumption.

Status – Monitoring is ongoing. Could be potential for system at Ulsta Ferry Terminal

7 Feasibility Study - Mid Yell Community Heating Project

8 ZetTrans Initiatives

Activity	Tasks
Access to Lerwick/Main Employment Centres:	
Car-sharing/lifts home	Investigate feasibility & therefore maintenance of park & ride schemes
Cycling	Investigate feasibility of Bike to Work scheme and other possible incentives, lockers and changing areas.
Bus/Ferry/Air Services	Continuous improvement in timetabling and services, within resources available

Mopeds	Investigate feasibility of motorcycle parking and 'Wheels-to-work'
Access within Lerwick/Main Employment Centres:	
Pool Cars	Investigate feasibility and develop
Cycling	Provision of secure and covered parking, lockers and changing facilities
Walking	Establish routes between workplaces, for promotion.
Use of incentives	Investigate, with other services, such as Essential Car Users Allowance, mileage for walking/cycling, subsidised bus tickets for a period of time
Reduce Need to Travel:	
Remote Working	Encourage and enable staff to work from home. Consider establishment of remote office locations
Video Conferencing	Promotion
Information and Promotion:	
Develop information pack for use on website, staff induction, office notice boards	Include information on all public transport services (bus and ferry), and access to Sumburgh airport and Holmsgarth, promote benefits. Discuss incorporation into staff induction with Human Resources and Waste Awareness Training.
Develop examples of Good Practice:	
New Office Building: North Ness	Involve interested staff in development and implementation of initiatives
New Office Building: Fire Station	
Grantfield	
Hayfield	
Sellaness	
Care Centre and/or School	
Consider roll-out	
Monitoring:	
Monitor implementation against objectives	Annual staff survey to establish change in modal share

9 Feasibility Study – Hydrogen Internal Combustion Engine.

10 Smaller Scale Works

- **Variable Speed Pumps (AHS)** This project has seen the replacement of fixed speed pumps in the main plant room at the AHS and the Janet Courtney Hostel with variable speed types. This project should pay for itself within a year.
- **Power factor Correction at Scord Quarry** – unit delivered and installed
- **Replacement tumble dryer in Viewforth laundry;**
- **Plant Room Insulation** – A report covering the work that is required in each plant room has been received. Contract to be advertised;
- **Uyeasound Primary Insulation** – quotes received and works to be ordered;
- **Aith JHS Insulation** – insulation works could be carried out at same time as re-roofing work;

- **Authorised capacity reductions** – capacity reductions were requested for the Waste Handling Facility, Rova Head and the Eric Gray Centre which will see ongoing annual savings of approximately £13,000;
- **Fluorescent Lighting Conversions** - There are currently retrofit solutions to lighting that can reduce the size of existing 38mm (old thick tubes) and 26mm (current standard) with new 16mm tubes. These tubes are slightly shorter hence an adaptor is required but the adaptor converts the lamp to high frequency reducing the need to replace the whole fitting or install more expensive high frequency ballasts. Two types are to be installed and will be assessed based on feedback by installers and also the users. If successful a larger project will be identified (school or office with predominantly 38mm fittings). Wider implementation could be progressed as a rolling programme as current tubes fail therefore spreading the installation costs. **Currently being trialled at Sellaness.**
- **Grantfield Works** – district heating time switch was replaced and the building was re-roofed with increased insulation fitted;
- **Voltage Optimisation** - There are devices on the market designed to improve incoming voltage to a building to avoid instances of over voltage. Over voltage has implications both with regards increased energy consumption and also lifetime of equipment within buildings. A trial is proposed for the Shetland College where significant numbers of fluorescent lamps have failed indicating poor power quality. Cost savings therefore may be achieved on both energy and maintenance budgets.
- Energy Recovery Plant (ERP) – Operation

11 Other Works

The following table provides a list of other projects and ideas that could lead to further carbon savings:

- Variable Speed Drives on Air Handling Units;
- External Lighting Time Switches;
- Driver Development Training;
- Emissions Factor as part of CPRT Review of Projects;
- Design Brief for New Build and Major Refurbishment Projects;
- Wind Turbines Through Partnership Arrangements;
- Solar Hot Water Trial;
- Storage Tanks at Scord Quarry;
- Linking Smart Metering to BMS System;
- Use of Waste Oils Locally;
- Purchase and training in the use of combustion monitoring equipment;
- Time switching;
- Insulation and draught proofing.

12 Energy Performance Certificates

Approximately 24 buildings are to be rated as part of the statutory EPC scheme. This will mean publically displayed energy certificates (similar to current white goods certificates) in each of the buildings. The requirement for a rating is that buildings have to be over 1000m² and accessible to the public. An advisory report is also provided with the certificate that will provide information on measures that can be taken to secure future energy and cost savings.

13 Good Practice

Good practice and further small-scale measures is the main area for securing carbon savings in the short term. 2006/07 was the first year that responsibility was shared with Service Managers and therefore staff to try and secure savings in the buildings they are responsible for.

The intranet site will be the main tool for providing the monitoring information that compares consumption in any year with the base year (2006/07). Energy monitoring is carried out on a site-by-site basis through the provision of meter readings and central billing and from this and the use of the energy management database, evaluation of energy, cost and carbon dioxide savings is carried out. Energy monitoring spreadsheets have been produced and will be used for the following purposes:

- Energy targets are now included in Service Plans and progress against these targets are reported to members on a quarterly basis by Service Managers;
- As a quick check that savings anticipated are being achieved and if not the reasons established and corrective action taken;
- Establishing high consumers by comparing against best practice figures;
- For the general interest of stakeholders;
- Reporting annual progress through the use of an overall spreadsheet (an example for 2007/08 is given below) highlighting energy use in each Service in the past year and the savings made against the 2006/07 baseline year.

Site	Energy Savings (%)				Total Savings			
	Electricity	Gas Oil	District Heating	DERV	Energy (kWh)	CO2 (tonnes)	Energy (%)	CO2 (%)
Asset Services	-0.65	10.76	4.56	0.00	77,320	11.03	2.47	0.79
Community	4.26	7.24	19.50	0.00	163,291	26.86	9.75	5.07
Education	0.91	2.60	-4.25	0.00	71,511	79.43	0.44	1.59
Ferries & Terminals	-2.71	2.69	0.00	0.00	1,335,965	355.90	2.63	2.56
Waste Management	-0.67	7.51	0.00	0.00	90,201	18.09	2.11	0.87
Social Work (Adult)	-0.89	6.37	-11.14	0.00	42,149	36.74	0.74	1.96
Social Work (Childrens Service)	3.56	13.32	6.17	0.00	32,775	10.17	7.52	6.05
Ports & Harbours	2.16	0.74	0.00	0.00	36,916	20.36	1.69	1.90
Toilets	0.49	0.00	0.00	0.00	217	0.13	0.49	0.49
Transport (Bus and Air Depots)	15.97	0.00	0.00	0.00	31,576	18.95	15.97	15.97
Tugs & Shore Power	-	9.02	0.00	0.00	928,584	120.93	6.34	3.06
Total 1	-2.12	4.18	-2.69	0.00	2,810,507	698.59	2.83	2.32
Road Fuels & Scord	7.48	7.47	0.00	-2.99	388,588	122.24	2.53	2.79
Total 2	-1.69	4.46	-2.69	-2.99	3,199,094	820.82	2.79	2.38

Table 1 – Comparison of Energy Usage and CO₂ Emissions (2007/08 Against 2006/07)



REPORT

To: Infrastructure Committee

07 October 2008

**From: Head of Environment and Building Services
Infrastructure Services Department**

DEFECTIVE BLOCKWORK

1. Introduction

- 1.1 This report was requested at the Infrastructure Committee on the 10 June 2008 (Minute Reference 46/08) by Councillor Alastair Cooper to highlight the issues relating to buildings that were built with defective blocks during the 1970s.

2. Link to Corporate Priorities

- 2.1 This report links to the Council priorities to “live within our means” “ensure that we are being efficient in everything we do” and “base all our decisions on evidence”.

3. Background

- 3.1 Shetland Islands Council commissioned a report in 1998 to examine a sample of concrete block taken from the external walls of Mossbank Primary School. Extracts from this report are shown in Appendix A.
- 3.2 It has been suggested based on surveyor’s observations that the defective blocks were manufactured from 1977 to 1984. It should be noted however that there were suppliers producing blocks during the same period which were of a much higher standard. Therefore not all build during this period will have defective blocks and indeed there may have been buildings where blocks have been obtained from a number of sources which could result in only isolated areas in the build suffering from the defective blocks.
- 3.3 The deficiencies in the blocks seem to stem from a number of factors including variation in the cement content, degree of compaction and inclusion of susceptible aggregates.
- 3.4 The defective blocks are affected by moisture gaining access through defects in the render coating e.g. drying, shrinking, cracks, etc. The cyclic wetting, drying and freeze thaw leads to a complete disintegration of the constituents.

- 3.5 It is not always obvious that a building has defective blocks, however early signs such as horizontal cracks and peeling in the roughcast could be an indicator.
- 3.6 It is not known how many buildings are affected, however it is possible that houses will continue to emerge which will require remedial treatment.
- 3.7 Replacing the blocks would appear to be the most effective solution to remedy the problem.
- 3.8 Defective blockwork may occur in any random sample for a variety of reasons and so not all defective blockwork can be attributed to the problems set out in 3.2.

4. Council Estate

- 4.1 There were comparatively few schools and public buildings, in relation to houses, constructed during the period that the defective blocks were produced so the scale of the problem is smaller. The worst affected building was Mossbank Primary School where virtually the entire substructure on the East part of the building had to be replaced.
- 4.2 The indications of defective blocks are apparent in some areas of other buildings, although the extent of this tends to be more isolated, for example there is one panel in one wall at Sandwick Junior High School showing the typical signs of cracking. Repair or replacement work will be carried out on a priority basis as budgets permit.

5. Council Housing Stock

- 5.1 The Council's Housing Service continues to experience problems with defective blocks. Whilst all examples cause problems, remedial works have been planned on a worst case first basis. The Council monitors all properties built during this period investigating and planning remedial works as required. This monitoring and remedial action is ongoing.
- 5.2 Remedial works have already been completed in Vidlin, Brae, Cunningsburgh and Bigton.
- 5.3 The Council has still to complete remedial works in Lerwick, Mid Yell, Unst and Hillswick.
- 5.4 In the event that any of the houses with known problems are subject to Right To Buy (RTB), the Council will advise the District Valuer (DV) allowing them to take this into account during their deliberations on market value. Thus, any tenant can be assured that:
 - 5.4.1 As with any other defect, if the tenant identifies any problems to the DV, the DV may seek clarification.
 - 5.4.2 Similarly, if the DV notices any problems that are not already reported they can seek additional information.

- 5.4.3 In any event, the tenant would get the market value based on the current condition of the house, as assessed by the DV. Tenants are also recommended to obtain their own survey of the property before proceeding with a purchase.

6. Private Sector Housing Grants

- 6.1 Private Sector Housing Grants may be available for undertaking repairs where the applicant is on a means tested benefit or where the property is so defective that the property is classed as Below Tolerable Standard due to structural instability. It should be noted that the Grant budget from the Scottish Government cannot currently meet demand and is fully allocated for the financial year 2008/9. The level of budget being made available in 2009/10 is as yet unknown. Officers are preparing a Scheme of Assistance to enable Members to decide how to prioritise the allocation of the budget in 2009/10 including considering the use of loans instead of grants as detailed in the draft Government Guidance. This will be available to Members for decision once the budget is announced, as it would be difficult to set the scheme parameters until the budgetary constraints are known.

7. Trading Standards Advice

- 7.1 Because the blocks were supplied before 27 December 1991, the provisions of the Construction Products Regulations 1991 (which might otherwise have had some relevance, and which the Trading Standards Service enforces) do not apply.
- 7.2 From 1 December 2008, the seller (or their agent) of virtually any house which is put on the market must have and make available a single survey (including an energy report) and a property questionnaire, which are designed to give prospective purchasers useful information about the nature and condition of the house. The Trading Standards Service will also enforce these requirements, but the documents will be unlikely to provide any information about defective blockwork unless the problems are evident from a visual inspection (or remedial work has already been carried out). These requirements do not apply to the Council in RTB cases.
- 7.3 The Property Misdescriptions Act 1991 created an offence for a person to make a false or misleading statement (in the course of an estate agency business) about certain specified matters – which include, among other things, the form and condition of construction, and the person who produced any component used in the construction. This would therefore cover this issue of defective blockwork, and the Trading Standards Service has the responsibility for enforcing this legislation, but again this will be relevant only in relation to the sale of a house where a problem is known to exist.
- 7.4 The Trading Standards Service does, from time to time, receive requests for civil law advice about the building, buying and selling of houses. However, in view of the financial sums involved (which would put most disputes well outside the limit for the small claims procedure), officers will

usually recommend that the individual seeks specialist legal advice from a solicitor.

8 Redress

8.1 It would appear that options to recover costs for householders who discover defective block work is limited, these would include:

- In the first instance making a claim against the builder although it would appear that this is only likely to be settled if you are the original owner.
- Claiming against a surveyor, however you would have to prove that the surveyor was negligent.
- Claiming through home Insurance would depend on the type of insurance cover. It is not known if any successful claims have been made through insurance.

9 Financial Implications

9.1 There are no financial implications arising from this report.

10 Policy and Delegated Authority

10.1 The Infrastructure Committee has full delegated authority to act on all matters within its remit, Section 12.0 of the Council's Scheme of Delegations, and for which the overall objectives have been approved by the Council, in addition to appropriate budget provision.

11 Conclusions

11.1 Defective concrete blocks are known to have been widespread in Shetland although discussions with local surveyors suggest that occurrences now appear to be less frequent.

11.2 Making a successful claim against a builder or from the block supplier appears to be extremely difficult, with very few successful claims known to have taken place.

12. Recommendation

12.1 I recommend to Infrastructure Committee that they note the contents of this report.

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3 Background Information

The problem associated with the block samples submitted, was first noticed at least ten years ago and concerned the breakdown of the fabric of individual blocks and has been found to be fairly widespread in Shetland, particularly in blockwork construction of the mid to late 1970's.

In Mossbank Primary School and other buildings of that period the problem occurs both in individual blocks and in groups of block in isolated patches. Affected block appear to be characterised by a loss of strength associated with a reduction in hardness leading to complete disintegration of the constituents.

The problem appears to be mainly confined to the outer leaf and can occur at any height above ground level in both rendered and unrendered situations and in the two courses immediately below ground level. The samples taken as part of the current investigation were taken from pits, in which, from inspection, there was no evidence to suggest that the problem extended below this level.

The ground at the four pit excavations was well drained, consisting mainly of stone chippings, and therefore it was not possible to recover water samples for analysis as part of the investigation.

Three samples of render from unrelated areas, in the same walls as those from which the block samples were removed, were obtained for examination.

The purpose of this investigation was to identify the mechanisms responsible for the breakdown in the concrete block and, if possible, identify any measures that may be taken to stem deterioration in the condition of blockwork susceptible to this problem.

10 Discussion

It is suggested from this investigation that more than one mechanism is contributing to the loss of fabric integrity in the concrete blocks in the outer leaf of the external walls of Mossbank Primary School and that the active disruptive components were included in the fabric of the blocks during their manufacture.

Blocks displaying fabric disruption show evidence of moisture movement through their fabric, with weathering of susceptible aggregates.

As the block deterioration has been, mainly, confined to the external leaf of affected walls, it is clear that the presence of moisture is the catalyst for the onset of fabric disruption.

Many factors determine why individual blocks, and small groups of blocks, are affected rather than the whole elevation of a building, including variation in the cement content, degree of compaction and variation in the aggregates (including the presence and continuity of any clay coating on aggregate particles) within the individual blocks. The presence of potentially disruptive minerals within the aggregate is a significant contributing factor in determining the durability of the block under severe service conditions.

Moisture is gaining access to the blockwork, via defects in the render coating e.g. drying shrinkage cracks, etc.

This investigation has confirmed that low-grade aggregates used in the block manufacture have deleteriously affected the quality of the product.

Given the severe weather conditions to which the Shetland Islands are exposed it is considered that it would be virtually impossible to build walling that could totally withstand moisture penetration. It is therefore considered that further deterioration in the blockwork will continue.

If exposure of the blocks to cyclic wetting and drying, and freeze thaw, is permitted to continue fabric disruption will proceed at an increasing rate. However, there are materials and techniques available that can be used to minimise water ingress.

11 Recommendations

As this problem is reportedly widespread within 1970's construction in the Shetland Islands it is suggested that the extent of the deterioration be identified in one or two typical structures. This would permit an evaluation of any potential stabilisation techniques to be undertaken, as the effectiveness of any technique will be dependent on the extent of the works to be carried out and the ease with which the technique can be applied.

If it were confirmed that the problem only affects a relatively small isolated number of blocks, the simplest course of action would be replacement of the block. However, if it is identified that the number of affected block is significant a method of *in situ* consolidation may be worth considering.

Similarly methods of reducing the moisture content within the outer leaf of the blockwork and minimising the risk of re-wetting need to be addressed. This may be achieved by venting the wall fabric with positive or negative air circulation techniques (naturally induced, if possible) with the addition of surface coatings or overclad systems to minimise re-saturation.

One method that may be suitable in identifying the extent of the problem would be Infrared Thermography. This technique would permit the mapping of defective block within a wall, rendered or otherwise coated, as the defective block will most likely retain a higher moisture content than sound intact block. The presence of moisture will result in the wall producing a different thermal response to absorbed solar radiation, with the moist areas appearing colder.

Similarly areas of render, behind which deteriorated block exist, will also be highlighted, as the variation in the render/block contact will produce a variation in the thermal conductivity of the wall fabric, with the delaminated/debonded areas appearing warmer.