Environment and Transport Committee 16 June 2014

Yell Sound Timetable Changes	
Report No: TP-06-14-F	
Report Presented by Executive Manager - Transport Planning	Development Services Department

1. Summary

- 1.1. During recent consultation on ferry timetables Yell Community Council raised concern about the disruption to the Yell Sound ferry timetable due to the current scheduling of maintenance, cleaning and drills on the Yell Sound vessels. This currently affects the timetables on parts of Sundays, Mondays and Wednesdays. During these periods the service is reduced to a one-vessel service that reduces frequency and capacity.
- 1.2 This report seeks the approval of the Committee to implement a solution. A proposal has been developed to improve this which also has operational advantages. However, there is a differing opinion between the communities of Yell and Unst on the timings of the Sunday morning services.

2. Decision Required

2.1. That the Environment and Transport Committee RESOLVES to implement the revised Sunday morning timetable for Yell Sound described as Option 2 in Appendix 1 to this report.

3. Detail

- 3.1. In response to consultation on the Yell Sound ferry timetable a proposal to reschedule times for maintenance and drills on the vessels has been developed.
- 3.2. Crew have expressed concern that splitting the maintenance, cleaning and drills over shorter periods spread across these days reduces the effective time available to carry out these duties which puts pressure on the operation of the vessels.

- 3.3. These matters were carefully considered by officers and a proposal to carry out all the maintenance and drills on each vessel on alternate Mondays has been developed.
- 3.4. This has the effect of improving the services for users and improving the process of carrying out maintenance and drills.
- 3.5. Each of the Yell and Unst Community Councils agree on all the timetabling changes bar Sunday morning.
- 3.6. There are two options. Option 1 gives a sailing from Ulsta at 15 minutes past the hour from 0615 to 0915 and from Toft at 15 minutes to the hour from 0645 to 0945.
- 3.7. This makes a better connection for traffic arriving into Shetland with Northlink that is travelling on to the North Isles, but worsens the connections with Bluemull Sound. It also does not suit the SVT workers who prefer an 0815 sailing from Toft. This option is favoured by Unst Community Council.
- 3.8. The alternative shown as "Option 2" gives the 0815 from Toft and better connections for Sullom Voe Terminal workers (in both Yell and Unst) but is not as good for Northlink arrivals. It also has one less return crossing. This option is favoured by Yell Community Council.
- 3.9. During the course of the Ferries Review one of the objectives was to protect services for commuters. Taking this into account Option 2 is recommended on the basis that it best suits the needs of commuters.

4. Implications

Strategic

4.1. <u>Delivery on Corporate Priorities</u>

Reliable and affordable external transport links are essential to the economic and social well being of Shetland.

4.2. Community /Stakeholder Issues

Unst and Yell Community Councils have a difference in opinion with regard to which timetable should be implemented on a Sunday morning.

4.3. Policy and/or Delegated Authority

The Environment and Transport Committee has delegated authority to implement decisions within its remit, in accordance with Section 2.3.1 of the Council's Scheme of Administration and Delegations.

- 4.4. Risk Management None.
- 4.5. Equalities, Health and Human Rights None.
- 4.6. Environmental None.

Resources

- 4.7. Financial -None.
- 4.8. Legal None.
- 4.9. <u>Human Resources</u> None.
- 4.10. Assets and Property None.

5. Conclusions

5.1. In conclusion, the option that best suits the Sullom Voe Terminal workers is adopted on the basis that this is consistent with the objective in the Ferries Review to protect services that are used by commuters.

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2 June 2014

List of Appendices

Appendix 1 – Draft Sunday Morning Timetable for Fortnightly maintenance



Appendix 1

Inter-Island Ferry Service Timetable

Draft Sunday Morning Timetable for Fortnightly maintenance

Option 1: Timetable same as Saturd	y giving 0845 from Toft for Northlink	passengers (favoured by Unst CC)
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Toft dep. 0645 0745 0845 0945 and continue

Ulsta dep. 0615 0715 0815 0915 1030

Option 2: 0715 from Ulsta and 0815 from Toft for SVT workers (favoured by Yell CC)

Toft dep. 0645 0815 0945 and continue

Ulsta dep. 0615 0715 0915 1030

Environment and Transport Committee

16 June 2014

ACCIDENT INVESTIGATION SUMMARY REPORT A970 Gulberwick Black Gaet & A970 Brig of Fitch							
RD-07-14-F							
Report Presented by Traffic & Road Safety Engineer	Infrastructure Services Department / Roads Services						

1. Summary

1.1 The purpose of this report is to inform the Environment and Transport Committee of the reported accident history and investigations into those accidents at the A970 Gulberwick Black Gaet and A970 Brig of Fitch junctions and seeks approval to promote an improvement scheme at the A970 Brig of Fitch.

2. Decision Required

- 2.1 That the Environment & Transport Committee RESOLVE to approve that the Director of Infrastructure Services proceeds to promote an improvement scheme to install a splitter island on the A970 to Scalloway at the Brig of Fitch junction; and
- 2.2 Note that any funding requirement for the works to the A970 Brig of Fitch Junction will require to be addressed in line with the normal capital programme budgeting procedures under the Council's Gateway Process.

3. Detail

- 3.1. Appendix 1 to this report gives a summary of the background to the Accident Investigation process undertaken by Council staff.
- 3.2. This report details the considerations for each accident site and identifies the most appropriate action at this time.
- 3.3. The Director of Infrastructure Services intends on carrying out a scheme of works to enhance the road marking on the A970 Black Gaet

- Junctions at Gulberwick and Scalloway. These works are to be funded from the current approved AIP budget.
- 3.4. The Director of Infrastructure Services intends to install new bend warning signs on the A970 Lerwick to Brae road at the Brig of Fitch. These works are to be funded from the current approved AIP budget.

4. A970 Gulberwick, Black Gaet Junction

- 4.1. The B9073 Black Gaet junction on the A970 Lerwick to Sumburgh road at Gulberwick is one of the busier junctions on our rural road network with some 7,200 vehicles passing through it each day.
- 4.2. This junction serves the shortest route between Lerwick and Scalloway/ Burra/ Trondra as well as providing a direct route between the south mainland and the rest of Shetland allowing traffic to bypass Lerwick.
- 4.3. While there has been comment at various times regarding the number and frequency of accidents at this location the majority of them would appear to be non-injury accidents and not necessarily all reported through to the police as they do not appear within the STATS19 data.
- 4.4. The total number of injury accidents recorded for this location since 2000 is 3. These are the accidents that are used for initial statistical analysis as explained in Section 3 above.
 - 4.4.1. The 19 non-injury accidents reported in the general area over the same period have also been identified. These may be used to verify or support the analysis of the injury accidents, but in many cases the recorded information is incomplete. For example, one record contains no identifying information and as such is pretty much useless for any analysis purposes. Also, four of the reported non-injury accidents associated with the area are not related to the junction itself.
- 4.5. The locations and types of the reported accidents are plotted on the map attached as Appendix 2.
- 4.6. A summary of the applicable STATS19 data for the A970 Gulberwick Black Gaet Junction since 2000 is shown in the table below:

Year	Injury Accidents	5yr rolling Total			Total Reported
2000	0	-	-	1	1
2001	0	-	-	1	1
2002	0	-	0	2	2
2003	0	-	0	2	2
2004	0	0	0	1	1
2005	1	1	1	2	3
2006	0	1	1	2	2
2007	0	1	1	1	1
2008	1	2	1	1	1
2009	1	3	2	0	1
2010	0	2	2	0	0
2011	0	2	1	0	0
2012	0	2	0	0	0
2013	0	1	0	2	2

- 4.7. From this table you can see that the typical minimum cluster threshold of five injury accidents in three-years used nationally for basic analysis purposes has never been reached.
- 4.8. However, using our lower threshold of three injury accidents in five years has seen this area highlighted once since 2000 in 2009.
- 4.9. The accidents that have been recorded at this location can be grouped into the following main types as show in the table below:

	Junction Accident Type											
Overshoot Emerging Right Turn Crossing Shunt												
Injury	Non- injury	Injury	Non- injury	Injury	Non- injury	Injury	Non- injury					
0	3	1	2	2	6	0	3					

- 4.10. This clearly identifies that there is one main accident type at this junction that involving vehicles turning right from the A970 crossing in front of northbound traffic. This accident type equates to 67% of the injury accidents and almost half the total number of reported accidents.
- 4.11. There are no shunt accidents on the A970 approach from Lerwick, which would appear to indicate that the current turning lane is adequate for the numbers of vehicles using it.
- 4.12. There are single incidences of shunt accidents on both of the B9073 approach lanes as well as the northbound filter lane into the B9073. These numbers are very low given the available data period (14 years) and as they were non-injury accidents the causation factors are not well established in their records. We therefore have insufficient data at this time to draw any conclusions.
- 4.13. Overshoot accidents continue to occur at this junction despite several measures being employed over the years to eliminate them such as count-down plates, large bollards on the splitter island, and buff coloured high friction grip surfacing.
 - 4.13.1. Analysis of vehicle approach speeds from the Black Gaet show an 85% speed of 50mph at the 2nd count down marker. At the same point only 3.2% of drivers were over 55mph. This shows that the vast majority of drivers are clearly identifying the junction and approaching it at a reasonable speed. The full speed profile of vehicles approaching the junction along the B9073 Black Gaet are shown in Appendix 4.
 - 4.13.2. Given the actions that have been taken previously, and the current low accident rate for overshoots, it is recommend that no further remedial works are necessary at this time.
- 4.14. Emerging or failure to give way accidents were reported on 3 occasions with reduced visibility due to a low sun and mist/ fog being cited as contributory factors on two of them. None of these involved left turning/ northbound traffic from the B9073.

- 4.15. A couple of the right turn crossing accidents referred to mist/ fog or heavy rain obscuring northbound traffic on the A970 but for the remainder there was no such mitigation noted and the available visibility distance for approaching vehicles is noted on site as being excellent.
- 4.16. However, the times of the accidents generally match up with the busier parts of the day and it would appear that most of the right turn crossing drivers have been misjudging the gaps in the traffic while waiting to turn. This type of accident is not uncommon at busier junctions with limited gaps and various conflicting movements happening at the same time.
- 4.17. There are a couple of accepted remedial practises where right turning and crossing traffic is having gap judgement problems.
- 4.18. The most intrusive is to lower the approach speeds by installation of a permanent speed limit. This generally needs to be backed up with enforcement to be effective and as such is normally used where the serious and fatal injury accident rate is particularly high.
 - 4.18.1. Where the accident problem coincides with busier flow periods, with limited gap availability, reducing the speed limit does not necessarily improve the accident rate although it generally helps to reduce the severities by lowering overall speeds. This is because the section of lower speed limit will cause traffic to close up thus reducing the gaps, which often continues the gap problem only at a lower speed. This is why it tends to be used to deal with sites where the accident severities are high and a reduction in the typical severity of an accident is as important as a reduction in the overall numbers.
 - 4.18.2. With an existing 85% approach speed of 60mph from the south and 75% of traffic exceeding 50mph a reduced limit would have a notable impact on traffic flows, causing significantly greater amounts of 'bunching' at busy times. The full speed profile of vehicles approaching the junction along the A970 from the south are shown in Appendix 5.
 - 4.18.3. Given the low level of reported injury accidents this solution is not recommended as there is the risk of an increase in shunt accidents due to the combination of a rapidly slowing traffic queue and turning traffic. There is also no guarantee of a significant accident rate reduction for right turning and crossing vehicles. Typical severity levels at this location are already low.
- 4.19. Another approach to this issue is to employ signage; either speed activated junction warning signs to alert approaching drivers and encourage them to slow down through the junction area, or high visibility warning signs to alert drivers of the presence of the junction and turning traffic.
- 4.20. As some gap misjudgement issues tend to arise where there are significant speed variations within an otherwise steady flow of traffic specifically targeting the quicker moving drivers can be an appropriate measure. This is in effect what a properly enforced speed limit does.

Therefore, the use of speed activated junction warning signs is becoming more common in situations where speed limits are not justified.

- 4.20.1. However, a speed activated warning sign at this location is likely to cost around £15,000. This cost is primarily due to the need for an electricity supply.
- 4.21. Due to the low level of injury accidents (3 in 14 years), and the fact that this type of remedial measure will not eliminate all accidents, this action cannot be recommend as a cost effective solution.
- 4.22. The installation of general high visibility warning signs cannot recommend either as the junction is already well marked and its layout is obvious to approaching drivers. Additional passive signage is likely to have little effect beyond that supplied by the signage already provided.
- 4.23. The recommendation of this report is that no action is taken with regards to the current accident history of the A970 Gulberwick, Black Gaet junction.
- 4.24. Members may wish to note that the hatched areas on the approach to this junction, and the one at the other end of the Black Gaet, are to be highlighted by the addition of red surfacing material. This feature has already been put in place at other busy junctions on our network with turning lanes.

5. A970 Brig of Fitch Junction

- 5.1. The A970 Brig of Fitch junction to the north of Lerwick is the busiest road junction on our rural road network with some 9,400 vehicles passing through it each day. The junction is also located on a fairly tight radius bend on the main road serving the north and west of Shetland.
- 5.2. Both junctions and tight bends are typically associated with accidents and as such the combination of the two in one location has contributed to the area being regularly identified as a cluster site for further investigation.
 - 5.2.1. These earlier investigations led to some works at the junction to improve braking effectiveness and to highlight the junction location better. Additional signage on the approaches to the bends has also been installed following previous investigations.
- 5.3. While there has been comment at various times regarding the number and frequency of accidents at this location the majority of them would appear to be non-injury accidents and not necessarily all reported through to the police as they do not appear within the STATS19 data.
- 5.4. The total number of injury accidents recorded for this location since 2000 is 12. These are the accidents that are used for initial statistical analysis.
 - 5.4.1. The 18 non-injury accidents reported in the area over the same period have also been identified. These may be used to verify or support the analysis of the injury accidents, but in many

cases the recorded information is incomplete. For example, one record contains no identifying information and as such is pretty much useless for any analysis purposes.

- 5.5. The locations and types of the reported accidents are plotted on the map attached as Appendix 7.
- 5.6. A summary of the STATS19 data for the A970 Brig of Fitch area since 2000 is shown in the table below:

Year	Injury Accidents	5yr rolling Total	3yr rolling Total	Non-injury Accidents	Total Reported
2000	0	-	-	3	3
2001	2	-	-	1	3
2002	0	-	2	1	1
2003	0	-	2	1	1
2004	0	2	0	1	1
2005	3	5	3	2	5
2006	1	4	4	3	4
2007	1	5	5	1	2
2008	0	5	2	3	3
2009	1	6	2	0	1
2010	0	3	1	0	0
2011	2	4	3	0	2
2012	1	4	3	1	2
2013	1	5	4	1	2

- 5.7. From this table you can see that the typical minimum cluster threshold of five injury accidents in three-years used nationally for basic analysis purposes has only been triggered once since 2000 in 2007.
- 5.8. However, using our lower threshold of three injury accidents in five years has seen this area highlighted annually since 2005.
- 5.9. The accidents can be grouped into the following main types as shown in the table below:

	Accident Type								
Junction -	Overshoot	Junction -	Emerging	Bend - Loss of Control					
Injury	Non-injury	Injury	Non-injury	Injury	Non-injury				
0	2	6	3	6	10				

- 5.10. This clearly identifies that there are two main accident types loss of control on the bend and emerging from the junction in front of oncoming vehicles. Each of these accident types accounts for 50% of the injury accidents reported for this location.
- 5.11. There are no shunt accidents on either the A970 Scalloway approach or on the A970 from the north.
- 5.12. The lack of shunt accidents means that there is no road safety reason to provide separate turning lanes on either the main A970 Lerwick to Brae road, or for traffic coming from Scalloway/ the Black Gaet.
- 5.13. These accident types are related to different aspects of the area one set relates to the tight radius bend, the other set to the busy junction.

Analysis of the various accident records therefore needs to be separated by the related feature – junction or bend.

5.14. Bend Accidents

- 5.14.1. Loss of control or skidding accidents within a bend, particularly a tight radius bend, are normally associated with too high entry speeds and/ or poor surface friction.
- 5.14.2. Poor surface friction is a factor that tends to be highlighted by an increasing trend or number of loss of control accidents as the road surface wears out and approaches the end of its functional life. Investigation of these bend/ skidding accidents shows the following pattern:

Year	Injury Accidents	5yr rolling Total			Total Reported
2000	0	-	-	1	1
2001	2	-	-	0	2
2002	0	-	2	0	0
2003	0	-	2	1	1
2004	0	2	0	1	1
2005	2	4	2	1	3
2006	0	2	2	2	2
2007	0	2	2	1	1
2008	0	2	0	2	2
2009	1	3	1	0	1
2010	0	1	1	0	0
2011	0	1	1	0	0
2012	1	2	1	1	2
2013	0	2	1	0	0

- 5.14.3. From this table you can see that the typical minimum cluster threshold of five injury accidents in three-years used nationally for basic analysis purposes has not been triggered by bend related accidents since 2000.
- 5.14.4. However, using our lower threshold of three injury accidents in five years has seen this area highlighted twice in 2005 and 2009.
 - 5.14.4.1. Following these investigations signage on the downhill approaches was reviewed.
- 5.14.5. While we know that the general level of surface friction within the bend was reducing over the period there is no evidence that it is a primary factor in bend accidents at this location as there is no increasing trend in loss of control accident numbers. The graphs in Appendix 8 indicate this clearly.
- 5.14.6. It is more likely therefore that the recorded accidents were the result of particular surface conditions at the time of the accident, or too high entry speeds.
- 5.14.7. Referring back to the accident records only the 6 injury accidents and 1 of the 9 non-injury accidents recorded the road surface state. This indicated a fairly even split between

wet and dry road surface conditions, which further reinforces the case that the general level of surface friction was not an issue.

- 5.14.8. Approach speeds into the bend are fairly consistent with 85% speeds of 54mph from both directions and around 4% of drivers exceeding 60mph approaching the bend. The full speed profile of approaching vehicles is shown in Appendices 9 and 10.
- 5.14.9. The 85% speed is nationally accepted as a good measure of the fastest safe speed for a particular section of road. This means that in this case some 11% of drivers are approaching the bend above the nominal 'safe' speed, but below the applicable speed limit for the road (60mph). It may well be that a number of these drivers are being 'caught out' by the tight radius of the bend and would benefit from some additional warning or reinforcing measures.
- 5.14.10. Typical measures employed to deal with this type of situation are to install a reduced speed limit, to install illuminated speed activated warning signs, or to install high visibility warning signs.
- 5.14.11. Given that the long term reported accident rate for this bend is reducing (see graphs in Appendix 8), and we have just improved the surfacing to the bend, there is not considered to be any justification at this time to pursue a costly remedy such as a speed limit or speed activated warning signs.
- 5.14.12. The recommendation is therefore that the existing bend warning signs and advisory speed plates should be replaced with a single larger bend warning sign and advisory 40mph maximum speed plate on a yellow backing board. This is an amalgamation and enhancement to the current signage, which was put in place following previous investigations.

5.15. <u>Junction Accidents</u>

- 5.15.1. There are two main types of accidents identified at this junction location emerging or failure to give way accidents, and overshoot accidents.
- 5.15.2. Overshoot accidents have largely disappeared with the addition of the buff coloured high friction grip surfacing on the approach. The last reported overshoot accident was in 2005.
- 5.15.3. One accident involved a vehicle travelling from Lerwick to Scalloway skidding across the centreline on the junction after turning in hitting a car waiting to exit the junction.

5.15.4. The reported junction accidents are tabulated below:

Year	Injury Accidents	5yr rolling Total			Total Reported
2000	0	-	-	2	2
2001	0	-	-	1	1
2002	0	-	0	0	0
2003	0	-	0	0	0
2004	0	0	0	0	0
2005	1	1	1 1 1		2
2006	1	2	2	1	2
2007	1	3	3	0	1
2008	0	3	2	1	1
2009	0	3	1	0	0
2010	0	2	0	0	0
2011	2	3	2	0	2
2012	0	2	2	0	0
2013	1	3	3	0	1

- 5.15.5. From this table you can see that the typical minimum cluster threshold of five injury accidents in three-years used nationally for basic analysis purposes has not been triggered by bend related accidents since 2000.
- 5.15.6. However, using our lower threshold of three injury accidents in five years has seen this area highlighted regularly since 2007.
- 5.15.7. Referring to the detailed accident records we find that none of them occurred during the hours of darkness and none of the reports noted mist or fog. Visibility from the junction is very good in either direction. Only one of the reports notes that the emerging vehicle was initially stationary at the junction before emerging.
- 5.15.8. The times of the accidents generally match up with the busier parts of the day and from the reports it would appear that most of the emerging drivers have been misjudging the gaps in the Lewick- North traffic while on the approach to the junction rather than while stationary at the give way lines.
- 5.15.9. This type of accident is not uncommon at busier junctions with limited gaps and one accepted practise is to install a splitter island at the junction on the side road approach. The purpose of this is to restrict the entry speed of vehicles onto the main road, thus encouraging drivers to stop at the junction before joining the main traffic stream. This arrangement is already in place at other busy junctions on our main road network.
- 5.15.10. It is therefore recommended that a splitter island with reflective bollards is installed at the A970 Brig of Fitch junction. This will require some minor re-alignment of the existing junction kerb lines and the re-location of the crash barrier on the south-east side of the junction. A typical layout plan of the proposed junction/ splitter island arrangement is

shown in Appendix 15. There is currently no funding in place for this work.

5.15.11. The crash barrier in this area is planned for replacement this summer and will be erected on a new line to suit the type of layout shown in Appendix 15. This will not incur any increased costs for the barrier replacement works, but will reduce the cost of implementing the proposed scheme afterwards. There will be no reduction in the effectiveness of the replacement barrier in its new location.

6.0 Implications

- 6.1 <u>Delivery On Corporate Priorities</u> The actions recommended in this report meets the core principles of the Single Outcome Agreement and the Shetland Transport Strategy, particularly those of accessibility, inclusion and integrated local decision making.
- 6.2 <u>Community / Stakeholder Issues</u> The two junctions covered within this report have been the subject of public comment and query on several occasions. This report should answer those questions and put the various comments made into proper context.
- 6.3 <u>Policy And/ Or Delegated Authority</u> The Council's Scheme of Administration and Delegation provides authority for each functional committee to discharge the powers and duties of the Council within their own functional areas in accordance with the policies of the Council, and the relevant provisions in its approved revenue and capital budgets.
- 6.4 Risk Management Taking appropriate steps to reduce identified accident risk is a statutory duty of the Council.
- 6.5 Equalities, Health and Human Rights None.
- 6.6 <u>Environmental</u> None.
- 6.7 <u>Financial Resources</u> The Accident Investigation and Prevention capital budget for financial year 2014/15 has adequate funds to cover the expected £9000 works costs of installing red surfacing to the hatched areas on the A970 Black Gaet Junctions at Gulberwick and Scalloway and the £1000 cost of replacement signs for the A970 Lerwick to Brae road at the Brig of Fitch.

If a splitter island is to be installed on the A970 to Scalloway at the Brig of Fitch then the implementation will require a fully costed business case to be made for consideration under the Council's Gateway Process for capital project prioritisation. This is because the estimated £30,000 cost is greater than can be funded from the Accident Investigation and Prevention capital budget for financial year 2014/15. It should be noted that even if these proposals are assessed under the Gateway Process they may not ultimately be progressed if deemed not to be sufficiently high in the Council's priorities against other capital projects.

- 6.8 <u>Legal</u> The Council has a statutory duty under the Road Traffic Act 1988 to carry out studies into accidents arising out of the use of vehicles. The Council must, in the light of those studies, take such measures as appear to it to be appropriate to prevent such accidents, including the dissemination of information and advice relating to the use of roads, the giving of practical training to road users, the construction, maintenance or repair of roads and certain other measures.
- 6.9 <u>Human Resources</u> None.
- 6.10 Assets and Property While implementing the recommended works will involve the installation of additional maintainable assets (bollards and coloured surfacing) it should result in a reduction to injury accidents on out road network.

7.0 Conclusions

- 7.1 Analysis of Police reported accidents on the road network across Shetland is carried out regularly by Roads Service staff as part of the Councils statutory duty under Section 39 of the 1988 Road Traffic Act.
- 7.2 The analysis of these accidents is undertaken in accordance with nationally accepted practise, while taking into account as far as practical the specific conditions found in Shetland.
- 7.3 This report shows the analysis and considerations carried out for the A970 Gulberwick, Black Gaet Junction and the A970 Brig of Fitch Junction and bend area and presents it for the members information.
- 7.4 No remedial action is recommended for the A970 Gulberwick, Black Gaet Junction but works to improve the signage for the bend and install a splitter island for the junction are recommended for the A970 Brig of Fitch.

For further information please contact: Colin Gair, Traffic & Road Safety Engineer Tel: 01595 744867 colin.gair@shetland.gov.uk 9 June 2014

List of Appendices

Appendix 1: Background to Accident Investigation Process

Appendix 2: Plot of Accident Locations for A970 Gulberwick, Black Gaet Junction Appendix 3: Graphs of Accident Numbers and Trends for A970 Gulberwick, Black Gaet Junction

Appendix 4: Graph of Vehicle Speeds on B9073 Black Gaet approach to A970 Gulberwick, Black Gaet Junction @ 200m countdown marker

Appendix 5: Graph of Vehicle Speeds on A970 South approach to A970 Gulberwick, Black Gaet Junction

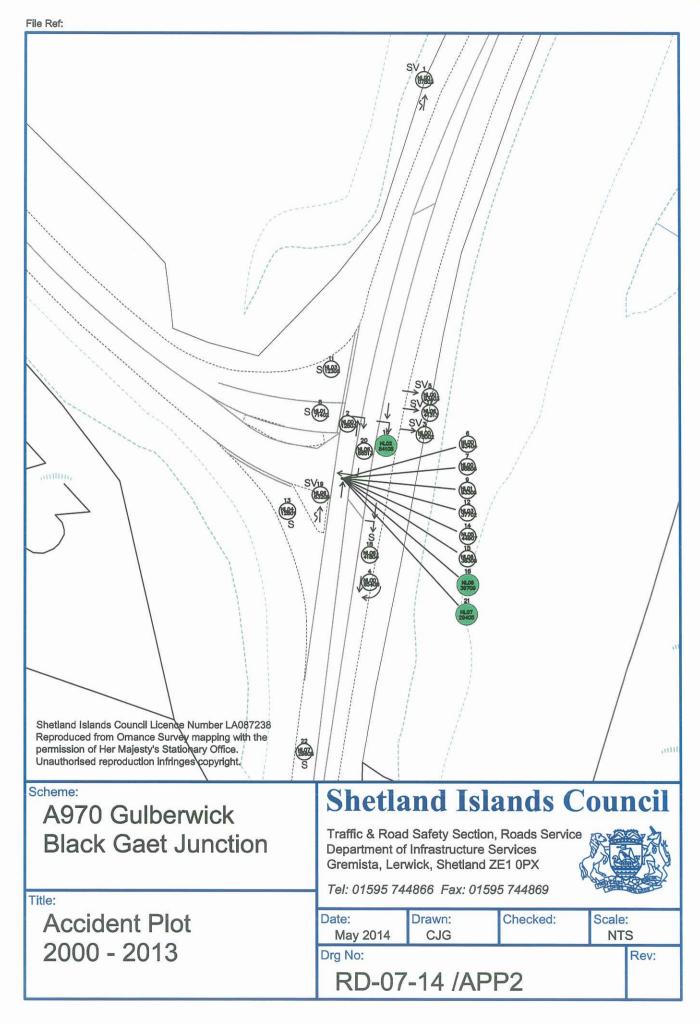
- Appendix 6: Tables for Accident Times, Days and Months for A970 Gulberwick, Black Gaet Junction
- Appendix 7: Plot of Accident Locations for A970 Brig of Fitch Junction area
- Appendix 8: Graphs of Accident Numbers and Trends for A970 Brig of Fitch bend
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- Appendix 15: Drawing of A970 Brig of Fitch Junction with Splitter Island

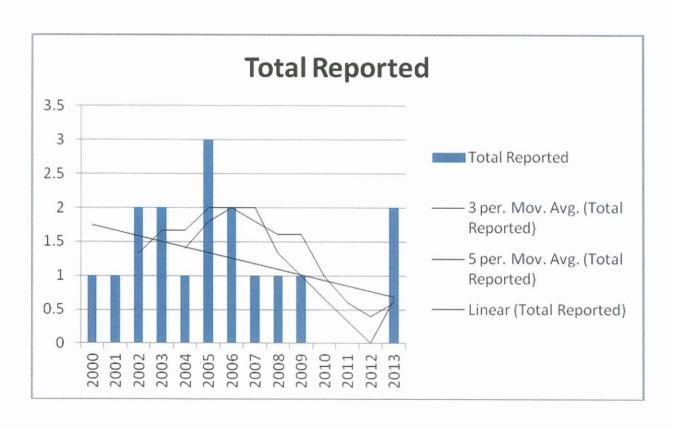
Background to Accident Investigation Process

- 1.1. The 1988 Road Traffic Act, Section 39, puts a 'statutory duty' on local authorities to undertake studies into road accidents within their area, and to take such measures as appears to the Council to be appropriate to reduce and prevent accidents.
- 1.2. The Roads Service is responsible for delivering road safety engineering remedial measures to help meet the Council's statutory responsibilities under the above act.
- 1.3. Road safety engineering is considered to be the physical construction, alteration or management of roads, while endeavouring to create a road environment that is safer for all road users. Some of these features are primary and are intended to prevent collisions while others are secondary and are intended to reduce the levels of impact and severity of casualties when accidents do occur.
- 1.4. Effective road safety engineering depends on reliable data about where, when, how and why accidents occur. It is accepted national practise that remedial action should be focused on sites, routes and areas with poor accident records in order to concentrate efforts where there is a known, rather than a perceived, risk.
- 1.5. STATS19 accident data, which is collected by the Police on all injury accidents reported to them, provides the accident data input. There is a legal requirement on drivers to report to the Police all accidents involving injury, or damage to another person's property.
- 1.6. Nationally it is accepted that a minimum of three years data is generally needed for meaningful analysis however this base model can be updated / supplemented on an annual (or more regular) basis depending on the supply pattern and volume of data.
- 1.7. Accidents are generally more likely to happen where there are high traffic flows, significant manoeuvres in traffic and where traffic flows interact - such as at junctions. Some accidents will tend to be grouped together, indicating the presence an underlying cause or causes. The identification of such "clusters" is the first step towards determining any appropriate remedial action.
- 1.8. A cluster exists where the number of accident points located geographically close to each other is greater than would be expected from a random distribution across the road network.
- 1.9. The most effective way of managing the accident data and then identifying clusters is through use of a Geographic Information System (GIS), which relates, organises and allows analysis of the accident data. The modelling process does not replace detailed site investigation techniques or the detailed

- examination of accident records or patterns. However, it does provide the most effective way of combining the various data inputs as a first step.
- 1.10. The level at which a cluster is defined is not set by statute. Local levels are set depending on a number of factors including the number of accidents in an authority area, the level of funding available for accident reduction schemes, and the staffing resources available to address the issue.
- 1.11. In Shetland our cluster definition level is set at the lowest level practical for analysis purposes 3 injury accidents over a 5 year period.
 - 1.11.1. Nationally clusters are normally set according to the number of injury accidents or casualties over a three-year period (see 3.6 above). However, due the low level of accidents in Shetland we look at a five-year period.
 - 1.11.2. The five-year period was selected in order to capture enough accident data. Using a period greater than five years would not be reliable as the road environment in any one location is much more likely to have changed within the study period.
 - 1.11.3. The three injury accident threshold is used as remedial actions should not be planned from too little data and three is the lowest practical number to see or confirm a pattern.
 - 1.11.4. Only injury accidents are considered initially as non-injury accident records are unlikely to contain all of the information required for analysis. Also, reporting rates of non-injury accidents is variable and tends to be lower in more remote areas. Thus using non-injury accidents to identify cluster sites would skew the results.
 - 1.11.5. We also have to be aware of short-term fluctuations, particularly when dealing with low numbers of events, and so historical trends are also inspected.
- 1.12. Each year, the latest police injury accident data for Shetland is analysed by Roads Service staff to identify any clusters or patterns on our road network. This is done with a view to introducing cost effective measures to improve road safety at these locations.
- 1.13. When accident clusters are identified they are investigated in depth to identify common factors between accidents. These may be environmental, such as occurring on a wet road surface, or behavioural, such as driving with excessive speed. This in depth investigation considers all relevant information available including older accident records and non-injury accident records.
- 1.14. When sufficient common accident factors are identified as a trend then engineering measures that could reduce those accidents are considered. If appropriate, improvements will be highlighted for consideration in future programmes of works.

1.15. The whole process of data capture, analysis and investigation is carried out in accordance with national legislation and best practice as set out in RoSPA's Road Safety Engineering Manual. The remedial works and other actions carried out by the Council in line with this and associated guidance has contributed significantly to the steady and meaningful reduction in road accidents in Shetland over the years despite the continued growth of traffic flows on our roads.





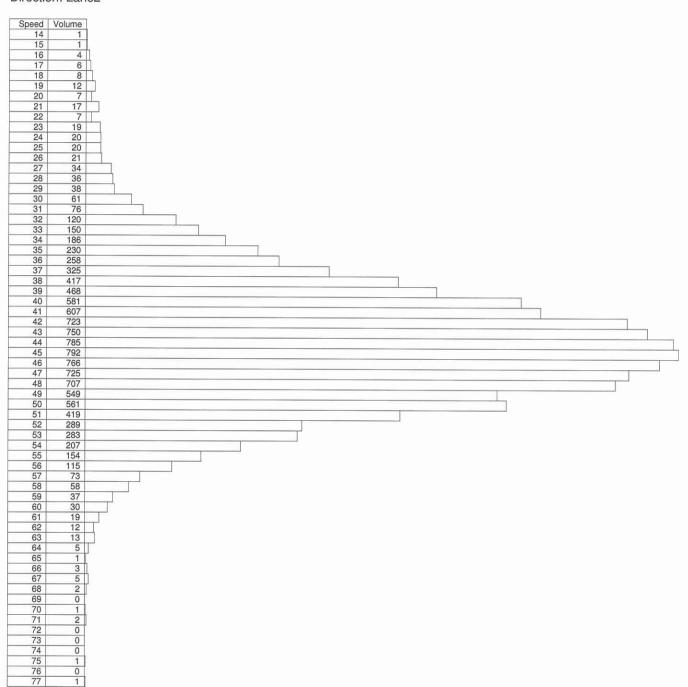
APPENDIX 4

Shetland Islands Council

Roads Service, Gremista, Lerwick, ZE1 0PX t:: 01595 744866 e:: roads@shetland.gov.uk

Volume Sorted By Speed for 16-May-14 to 23-May-14

Direction: Lane2



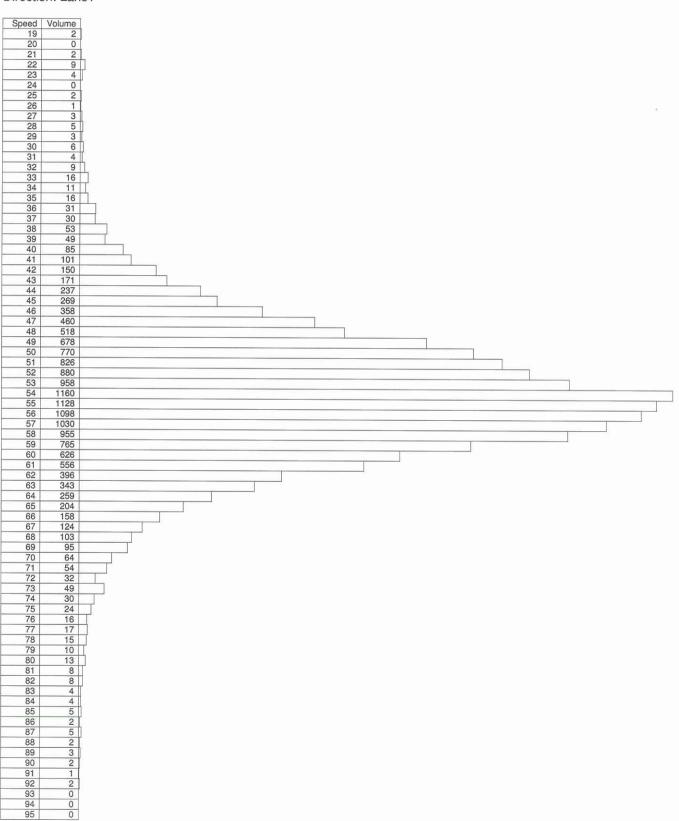
APPENDIX5

Shetland Islands Council

Roads Service, Gremista, Lerwick, ZE1 0PX t:: 01595 744866 e:: roads@shetland.gov.uk

Volume Sorted By Speed for 16-May-14 to 23-May-14



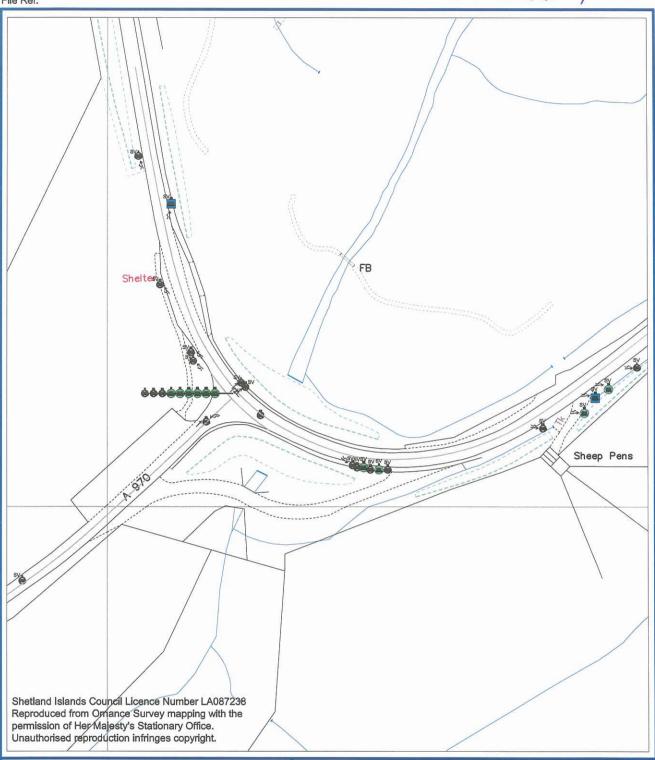


<u>Plot of Accident Times, Days and Months for A970 Gulberwick, Black Gaet Junction</u>

Time	00:00 to	03:00 to	06:00 to	09:00 to	12:00 to	15:00 to	18:00 to	21:00 to
Period	03:00	06:00	09:00	12:00	15:00	18:00	21:00	00:00
Number	0	0	1	1	3	5	1	0

Day	Day Sunday Monday Tuesday		Tuesday	Wednesday	Thursday	Friday	Saturday
Number	1	3	1	1	3	1	1

Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Number	1	2	1	0	1	0	1	1	2	0	2	0



Scheme:

A970 Brig of Fitch

Title:

Accident Plot 2000 - 2013

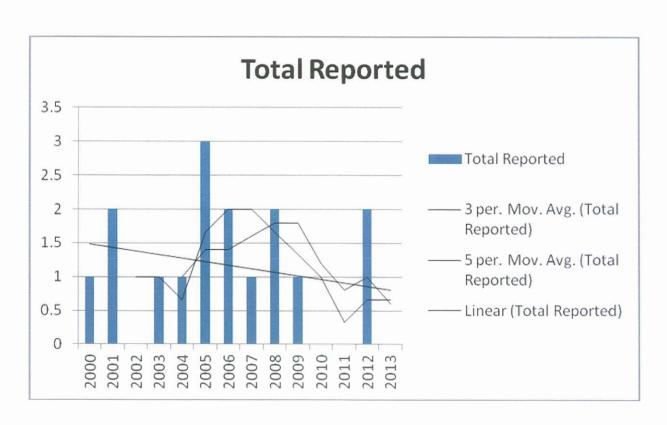
Shetland Islands Council

Traffic & Road Safety Section, Roads Service Department of Infrastructure Services Gremista, Lerwick, Shetland ZE1 0PX

Tel: 01595 744866 Fax: 01595 744869

Date: Drawn: Checked: Scale: NTS
Drg No: Rev:

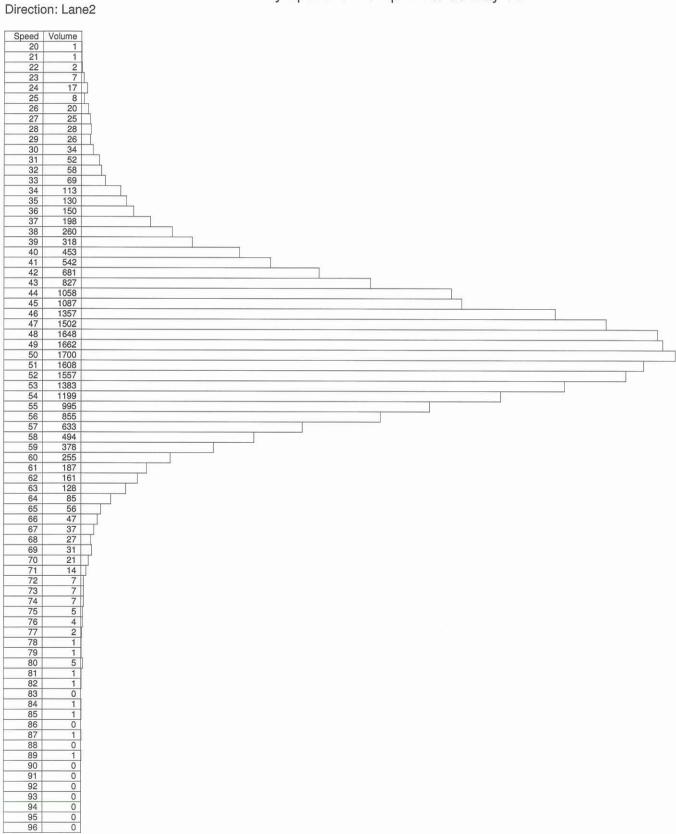
RD-07-14/APP7



Shetland Islands Council

Roads Service, Gremista, Lerwick, ZE1 0PX t:: 01595 744866 e:: roads@shetland.gov.uk

Volume Sorted By Speed for 26-Apr-14 to 03-May-14

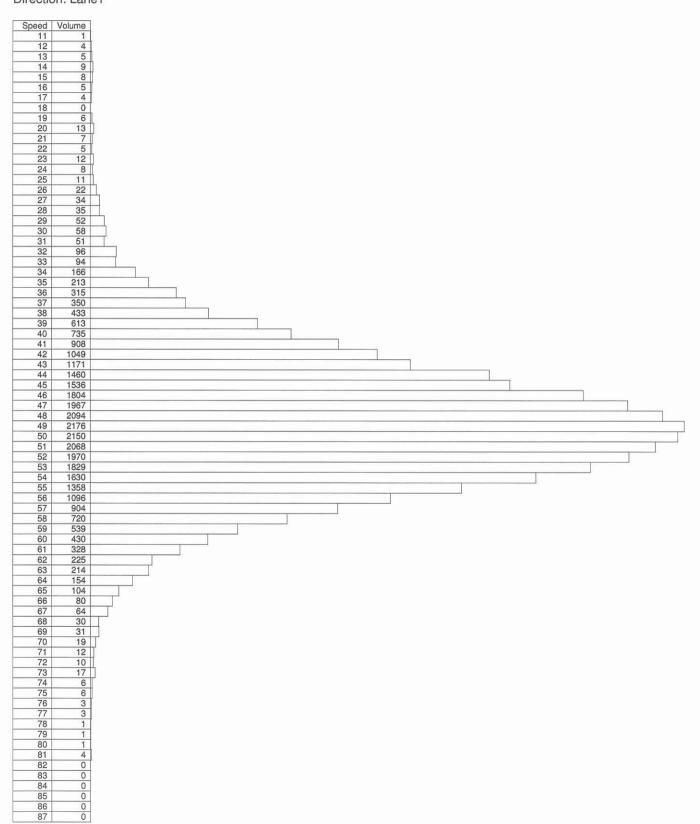


Shetland Islands Council

Roads Service, Gremista, Lerwick, ZE1 0PX t:: 01595 744866 e:: roads@shetland.gov.uk

Volume Sorted By Speed for 25-Apr-14 to 05-May-14



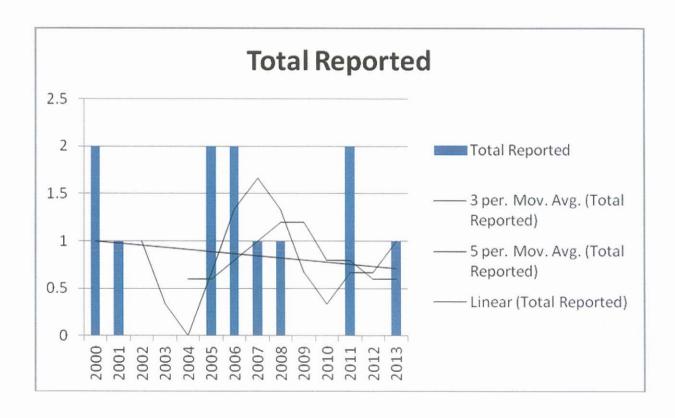


Plot of Accident Times, Days and Months for A970 Brig of Fitch bend

Time	00:00 to	03:00 to	06:00 to	09:00 to	12:00 to	15:00 to	18:00 to	21:00 to
Period	03:00	06:00	09:00	12:00	15:00	18:00	21:00	00:00
Number	1	0	3	3	2	1	2	4

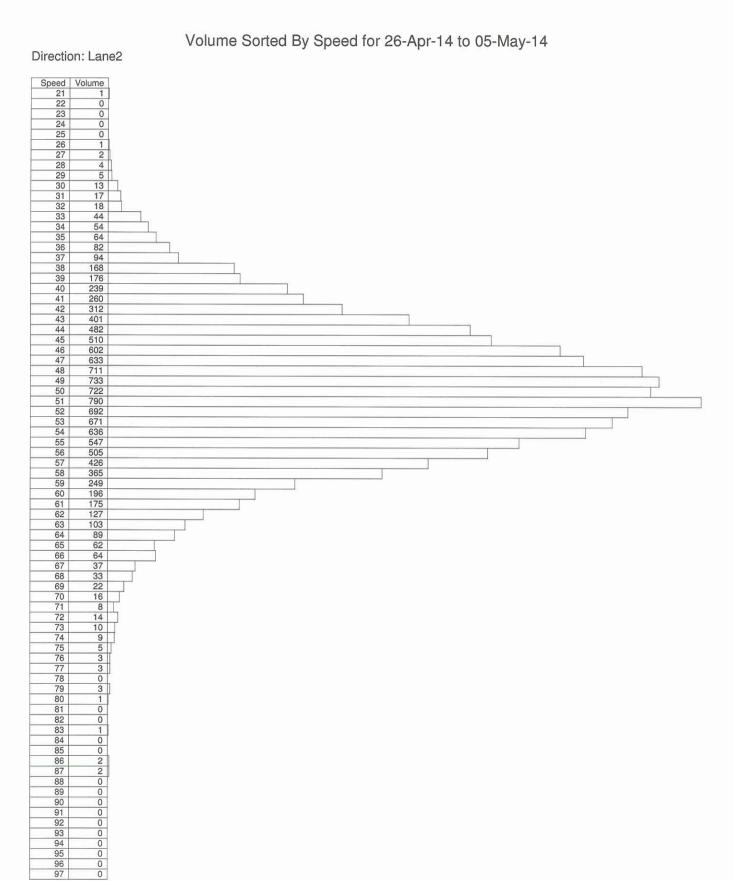
Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Number	6	2	0	2	3	0	3	

Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Number	1	0	2	2	2	3	3	0	0	1	2	0



Shetland Islands Council

Roads Service, Gremista, Lerwick, ZE1 0PX t:: 01595 744866 e:: roads@shetland.gov.uk



RD-07-14 APPENDIX 14

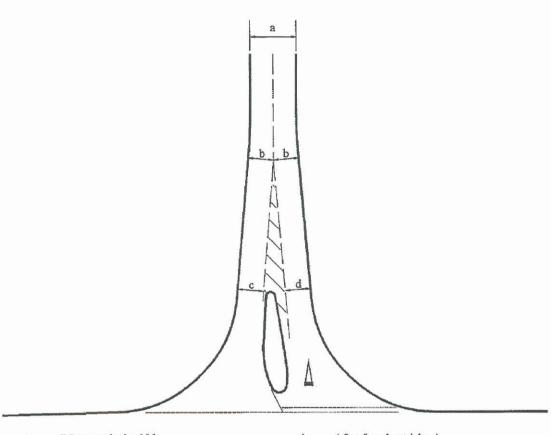
Tables of Accident Times, Days and Months for A970 Brig of Fitch Junction

Time	00:00 to	03:00 to	06:00 to	09:00 to	12:00 to	15:00 to	18:00 to	21:00 to
Period	03:00	06:00	09:00	12:00	15:00	18:00	21:00	00:00
Number	1	0	3	0	3	5	0	0

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number	2	1	0	2	2	2	3

Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Number	1	1	1	2	1	0	0	1	1	3	1	0





- a b
- С
- 7.3m nominal width
 4.0m in all cases
 4.5m for ghost island
 5.0m for single lane dualling,
 dual carriageway
- 4.0m for ghost island 4.5m for single lane dualling, dual carriageway 5.5m if two lane approach d

Figure 7/7: Minor Road Approaches (para 7.23 and Annex 2)

Environment & Transport Committee

16 June 2014

Scottish Government Grant Scheme: Fuel Poverty / Carbon Reduction Home Energy Scotland Area Based Scheme: Programme 2014/15	
ES-08-14-F	
Report Presented by Executive Manager, Estates Operations	Infrastructure Services Department / Estates Operations Service

1.0 Summary

1.1 The purpose of this report is to inform the Environment and Transport Committee of the submission made to Scottish Government setting out the disbursement strategy of the £820,000 grant funding allocated to Shetland Islands Council to tackle fuel poverty and carbon reduction in 2014/15. The disbursement strategy details energy efficiency measures to be offered and categories of households to be treated as a priority for funding.

2.0 Decision Required

2.1 That the Environment & Transport Committee RESOLVE to approve the disbursement strategy.

3.0 Detail

- 3.1 In 2013/14 the Scottish Government provided a grant fund of £400,000 to Shetland Islands Council to tackle fuel poverty and to reduce carbon emissions in private houses in Shetland. This money has been fully committed with some 50+ houses receiving various retrofit energy efficiency works.
- 3.2 In recognition of the ongoing discussions over the past year concerning the high level of fuel poverty identified in Shetland, the Scottish Government has confirmed an increased allocation of £820,000 for similar works in 2014/15.
- 3.3 Appendix 1 sets out the submission to Scottish Government detailing the strategy for disbursement of the £820,000 in 2014/15. This was

- submitted to Government in April 2014 by the Director of Infrastructure Services in order to meet the grant deadlines.
- 3.4 The geographic area eligible for grant is again "the whole of Shetland".
- 3.5 The condition proposed by Environment and Transport Committee and agreed by Scottish Government in last year's strategy limiting access to this funding to houses in Council Tax Bands A, B and C has been retained. This still covers over 80% of Shetland homes.
- 3.6 Where homes are in Tax band D or above HESABS funding is not offered but a full Green Deal Survey is available for a fee of £150:00 to assist the household in accessing other financial routes eg Green Deal, Energy Company Obligation, Renewable Heat Incentive etc.
- 3.7 For 2014/15 the prioritisation system, requested by Members in 2013/14, has been retained giving households, where members of the household are in receipt of benefits, terminally ill, disabled, or are pensioner families, or families with young children, a higher rating for action than homes without this perceived need.
- 3.8 For 2014/15 the maximum 20% core HESABS funding allowable for heating systems has been retained £164,000. We have also requested a further 30% (c £245,000) from the Government's additional funding account (PAF). However Government has advised all local authorities that they are unlikely to receive considerable extra funding from this. Old and inefficient heating systems are a problem in many Shetland homes impacting on fuel poverty levels.
- 3.9 The submission has requested discretion to offer an extra £3000 in funding where extreme need can be identified in households with no savings and low income. Costs of works in Shetland are high and the lack of further additional funding may mean major works cannot be fully funded from grants alone. Many Shetland households who are in fuel poverty are not able to receive Government benefits, being just above the national threshold. They cannot then access extra Government funding aimed at those households receiving benefits, although their actual situation may be more critical than households elsewhere in the United Kingdom who are in receipt of benefit..
- 3.10 The measures to be offered are detailed in Appendix 1 -Section 3.
- 3.11 The submission has stressed the wish to deliver these works (wherever possible) using local contractors. However this may prove difficult as few local contractors have finalised their PAS2030 accreditation (the industry standard for this work). There is an action plan to address this issue to increase capability across the industry.
- 3.12 Steps are being taken to maximise Energy Company Obligation (ECO) funding –required in order to access the £820,000 core funding. Scottish Government are aware of actions being taken in this area and are supporting efforts to draw down ECO funding.
- 3.13 A Communication Plan is being developed to advertise the programme in the local media, in partnership with the Citizen's Advice Office and

Home Energy Scotland during the summer. Funding for energy efficiency/fuel poverty work is complex and constantly changing. A joint publicity campaign detailing funding sources would be of value to many households. Funding for this campaign has been budgeted for within the £820,000 offered by Government.

3.14 This publicity will provide a further list of potential clients and will assist in developing a rolling programme of works for the next 10 years as requested by Scottish Government.

4.0 Implications

Strategic

- 4.1 <u>Delivery On Corporate Priorities</u> Tackling fuel poverty and carbon and climate change adaptation, mitigation and resilience are core priorities for Council and community planning partners.
- 4.2 <u>Community /Stakeholder Issues</u> Every household in Council Tax Bands A, B and C will potentially be affected by this strategy. Shetland has high levels of Fuel Poverty. The 2013 study by Highlands and Islands Enterprise of poverty and deprivation in remote and rural areas demonstrates that fuel need and costs in Shetland are closer to twice the national average and this combined with the very high costs of living makes domestic energy supply and efficiency a critical issue for Shetland households.
- 4.2 <u>Policy And/Or Delegated Authority</u> In accordance with Section 2.3.1 of the Council's Scheme of delegations, the Environment & Transport Committee has responsibility for discharging the powers and duties of the Council within its functional area.
- 4.3 Risk Management There is currently a waiting list of households requiring works and it will be critical that local contractors are up skilled and available to carry out the works in the necessary timeframe. It may be that the community cannot fully access this funding without sufficient local contractor support qualified to PAS2030. The alternative may be to examine the use of supplementary contractors from outside Shetland to deliver this scale of programme.
- 4.4 Equalities, Health And Human Rights By facilitating the grant funding of retrofit energy efficiency works for Shetland households in fuel poverty the Council is proactively improving public health and supporting the most vulnerable and deprived in the community. Reducing fuel bills and maximising affordable warmth enables householders to have a greater choice about where they spend their disposable income.
- 4.5 Environmental It is a duty on public bodies to operate in a way intended to deliver sustainable development. Work to tackle climate change by reducing carbon emissions supports this end. The Council is has a duty under the Climate Change (Scotland) Act 2009 to reduce carbon emissions within its area. Housing is one of the highest carbon generating sectors within the community. This work will deliver substantial carbon savings reducing Shetland's carbon footprint.

Resources

4.6 <u>Financial</u> – The strategy levers into Shetland a core grant funding from Scottish Government of £820,000 with a further potential £245,000 in PAF funding to tackle the priority area of fuel poverty and carbon reduction. It will also require some ECO funding to be levered in. This has the potential of making available in Shetland for 2014/15 c £1.25 million for works to tackle fuel poverty.

We are in the final stages of negotiations for ECO funding and will finalise the position by late summer. Government is aware of the position and is supportive of us.

Council is entitled to up to 15% of the funding as enabling monies to support administration works, staff training and the communication plan's implementation.

- 4.7 <u>Legal</u> The Climate Change (Scotland) Act 2009 places a duty on the Council to reduce carbon emissions in its area. This grant funding delivers external monies to assist Council to fulfil its duties.
- 4.8 <u>Human Resources</u> Costs for up skilling existing Council staff have been met through the 2013/14 enabling monies. Further provision has been made in the 2014/15 enabling funding to cover any additional administrative / technical up skilling costs.
- 4.9 <u>Assets And Property</u> None.

5.0 Conclusions

5.1 The Council has been offered an increased sum for 2014/15 to support its work on fuel poverty and carbon reduction in private houses throughout Shetland. The disbursement strategy submitted to Scottish Government mirrors the strategy approved last year for this work, so it is anticipated that there should be no changes required for it to be accepted.

For further information please contact:

Mary Lisk, Team Leader – Environment & Energy Service Tel No: 01595 744818 e-mail: mary.lisk@shetland.gov.uk

9 June 2014

List of Appendices

Appendix 1 - Submission to Government detailing our strategy for disbursement of the £820,000 in 2014/15.

END

Home Energy Efficiency Programmes for Scotland: Area Based Scheme

Application Form

Applicants should ensure that applications meet the criteria attached with this pack.

(All the boxes in the table can be expanded)

Applications should be returned to <u>janet.crook@scotland.gsi.gov.uk</u>

Queries should be addressed to either <u>janet.crook@scotland.gsi.gov.uk</u> tel: 0131 244 7952 or <u>scott.cameron@scotland.gsi.gov.uk</u> tel 01292 292744

1. Local Authority Name:

Shetland Islands Council

2. Strategic Approach for Energy Efficiency Programmes

A key objective of the HEEPS:ABS is to improve the energy efficiency of Scotland's homes. In doing so we want to develop area based schemes which target the most fuel poor areas first.

Please list the sources of information and data you have used to select the areas you propose to target for HEEPSABS in 2014/15:

The area we propose to cover for 2014/15 is again the WHOLE OF SHETLAND.

The whole of Shetland is chosen because, based on applications for assistance to date, we are aware that there is considerable dispersed fuel poverty in all datazones. To limit access to a few datazones would cause real distress to these dispersed incidents of fuel poverty (of which there are many). Certain areas of Shetland traditionally have a higher rate of fuel poverty due to low income levels of householders and/or house condition. Applications from these areas will be considered as a priority where need is demonstrated as being greater or as great as householders in other areas. These areas are set out in the Local Housing Strategy 2011 - 2016.

In order to quantify and prioritise need, all applicants are sent a pre property survey questionnaire asking for details of household, house condition, energy usage and whether the household has a member receiving benefits, long term sick or it is a pensioner hosehold or a family with young children. Priority is then given to those demonstrating most need regardless of datazone. However we also take consideration of the Fuel Poverty Indicator of the property as outlined in our Local Housing Strategy. This places properties in:-

Unst, Yell and Fetlar (the North Isles)

Northmavine, Muckle Roe and Busta (the North Mainland)

Certain areas of Lerwick (North Central, Clickimin, Breiwick, South Central, Harbour and Bressay)

Scalloway

Sandsting, Aithsting and Weisdale (Central mainland)

Walls, Sandness and Clousta (West mainland)

as being in highest neeed.

Where a number of applications are received from a street or other small area we also try to filter by that area, bearing in mind the need to ensure area basis for the scheme as well as social need. This method also ensures more efficient surveying, as a number of properties in a limited area can be surveyed on one day's visit. This approach is also likely to make works more attractive to installers, as they then have a potential cluster of work in one area rather than a number of dispersed one off projects.

This designation of ALL OF SHETLAND as "the area" is further supported by the Home Analytics database, by considerable research by our Housing service and by personal knowledge from previous fuel poverty schemes such as UHIS and Year 1 of HESABS.









Please state here the date you last carried out a formal review and update of your Local Housing Strategy, and <u>specifically</u>, the section that addresses energy efficiency and fuel poverty

Shetland's current Local Housing Strategy covers the period 2011 – 2016. At P15 of the document it details its position vis a vis separate strategies for Homelessness and Fuel Poverty. The section from P27 -31 deals specifically with fuel poverty.

This House Condition Survey shows fuel poverty in Shetland increased from 25% in 2005 to 35% in 2009, with 15% of households being in extreme fuel poverty. Since then it is estimated fuel poverty rates have further increased due to sharp rises in costs for energy and increased living costs. A recent study of one island (Unst) showed fuel poverty levels now at 53%+. It is considered that this level of fuel poverty is now the norm for homes across all areas of Shetland and that the Housing Strategy (now 4 years old) may underestimate current need.

The Scottish House Condition Survey also showed a minimum of 66% of Shetland pensioner households to be fuel poor. This figure has not been updated since the large increases in energy costs over the past 2 years and is likely to be an understatement of real need across Shetland in 2014.

A more recent study of povetry and deprivation undertaken in 2013 by Highlands and Islands Enterprise has shown that fuel need and costs in Shetland are closer to twice the national average and this combined with very high living costs in general makes all areas of Shetland liable to hold instances of dispersed poverty and deprivation.

It is also significant that by 2030 86% of all Shetland homes are predicted to be occupied by one or two adults only. With little possibility of downsizing it is likely that these households will be in fuel poverty unless significant structural work is carried out on the majority of Shetland housing stock over the next ten years.

Considering demographics, climatic conditions and high fuel poverty levels in all sectors of households within the isles we intend to make ALL OF SHETLAND the "area". This covers in total 10,700 homes. However by limiting HESABS assistance to private houses in Council Tax Bands A, B and C we have a total eligible housing stock of c 6,000 homes.

3. Targeted Approach to Energy Efficiency Programmes 2014/15

Having determined the strategic approach please detail the selected areas for the HEEPS:ABS including a description of the area in relation to fuel poverty, the nature of the housing stock and the programme of energy efficiency measures that will be undertaken in the area. This should include the number and type of measures you will target along with your offer to private owners within the area. It should also include an indication of ECO available to fund the measures along with HEEPS:ABS needed to support the measures. If measures are fully funded by HEEPS:ABS this should be detailed. Where the homes receiving measures are part of a larger project possibly an RSL or LA own stock project you should provide details of all the measures being carried out.

Where the overall HEEPS:ABS grant exceeds the core allocation for the local authority you should indicate which areas/projects are core and which are the proposals for additional funding. The core project funding should not exceed the allocation notified.

There is a spreadsheet attached to provide a summary for each area and a summary for all the areas/projects contained within the application form.

Area 1

Include name of area and detail boundaries, where know this should include postcode information or addresses which can be utilised by the Home Energy Scotland Hotline to filter clients eligibility locally.









As stated above the area to be covered is ALL OF SHETLAND. This includes all postcodes beginning ZE1, ZE2 or ZE3.

However, grant funding will only be offered to houses falling within Council Tax bands A, B and C. The Assessor's Rolls show that some 86% of Shetland properties fall within these bands, so most households will be eligible for some support.

Shetland's geography – we are further north than Moscow and southern Greenland – requires homes to heated for longer periods than houses elsewhere in the UK. Degree date data confirms Shetland to be one of the windiest and coldest places in the UK.

Our rural communities are fragile, scattered and consist demographicalloy of older, often single person households on limited income. Shetland is off grid and energy costs are high per property. A recent MIS report for Highlands and Islands Enterprise demonstrated that energy need and costs in Shetland are twice the national average. Carbon emission levels are high as many properties are hard to heat and have a low level of insulation. There is no mains gas.

In 2010 at least 37% of private households were fuel poor (recent figures suggest 53% + of properties now are). At least 33% of other households (2010) were considered to be fuel poor with some failing to meet the Scottish Housing Quality Standards for energy efficiency.

Throughout Shetland many households fall just above the point for receiving benefits (eligibility for which are based on national figures for income rather than a comparison of household income in relation to real living costs in the area lived). This is an acute problem in the islands where heating and food costs are up to twice the national average, whilst pensions and other low incomes are at a national level. There is a considerable unmet gap in Shetland between income versus outgoings which pushes many into fuel poverty in Shetland who might not be so if they were living elsewhere in the United Kingodm on a similar income.

Shetland's housing stock is dispersed, elderly and often of a one off design with numerous extensions to the core building added as and when the householder could afford to extend. This makes energy efficiency work difficult, as a home can have different heating systems in different areas and have various forms of roofing and walling in different areas of the house. This limits quick fix installs and bulk scheme projects and any retrofit work is, by its very nature, more costly to install. It should be noted also that there are few private landlords with more than 2 or 3 dispersed properties, so generally householders require to be supported individually.

In 2014/15 we again intend to exclude holiday homes and static caravans regardless of area and will require a residency period of six months in the property before works can be funded. We will exclude void properties and developer schemes and will concentrate instead on individual private homes.

When offering funding it will be a condition that all properties will have draughtproofing and adequate loft and floor insulation fitted (where possible) as part of the works when other works are funded.

We intend to take a "whole house" approach to works where ever possible (in support of the one off nature of our housing stock). Measures needed per property will be identified following a full EPC/Green Deal survey of each property using standard software. The householder will be given a copy of this current EPC as part of the works.

This will ensure that each householder is in possession of the tools to better understand their individual home's whole energy efficiency needs. Even if HESABS/ECO funding does not cover the full costs of all works currently identified as needed, the householder will still - (through the EPC) - have a clear understanding of what other works are needed to ensure the efficiency of his home. The householder can then plan for any further works funded through Green Deal or other blended funding streams.









This approach means the householder is empowered to understand the real needs of his individual home and can work towards a blended finance package to carry out all necessary works. This, in the longer term, is hoped will improve the housing stock of Shetland structurally overall.

It is an element of Green Deal/ECO that the householder receives some behavioural change support as well as a funded technical fix. We propose to supply each householder with a full EPC/Green Deal report for his property. We also will leave with each householder an Energy Efficiency Information Pack to supplement the in house discussions that takes place when the surveyor visits. This in house advice and Pack support - (the pack containes both our own and Home Energy Scotland's contact details) - will form the basis of the behavioural change element in the Shetland programme.

Part of the information given to the householder includes a link to Home Energy Scotland's hotline and website for more detailed advice. Where applications are received for homes in the Council Tax Band D+ we - (whilst offering to carry out the full Green Deal assessment for the housholder for a fee of £150) - immediately refer them to the Home Energy Scotland website and supply them with the phone number of this service encouraging them to approach it for further advice and ideas as to potential funding source for work on their home. A number of householders in this category have already taken up this offer.

The suggested number and types of measure are quantified in the attached spreadsheet. However it should be noted that as we already have more households on our waiting list than total funding currently allocated to us for this year (2014/2015), the measures identified in the spreadsheet may vary depending on priority perceived need after the individual homes are surveyed (bearing in mind our "whole house" approach).

It should also be noted that we intend to allocate the maximum permitted 20% of our 2014/15 core funding for heating works, as it has been clearly demonstrated by applications to date that failed/faulty heating systems are a key element in fuel poverty in Shetland (heating requires to be on most of the year and costs are high). Efficiency of heating system is therefore key in keeping people out of fuel poverty in our area.

In defining works to be carried out per home, in our "whole house" approach where the combined monies available from all available funds is less than the costs of the measures and the householder is of a vulnerable group, we would wish to retain the authority to offer a further maximum additional grant of £3,000 per household from the HESABS funding.

This top up would only be available in rare and extreme cases where the householder was 65 or over, there was a member of the household who was long term ill or disabled and where, although the householder could demonstrate real fuel poverty, they had no access to any further funding to complete the works needed to elicit the necessary savings in energy and costs. This extra funding would only be available after considerable checks had been made of income, savings and a full benefits check had been completed. It would only be awarded at the discretion of the Director of Infrastructure Services following full panel discussion.

As stated above we intend to allocate the full 20% available from our core funding in 2014/15 for heating upgrades. However we also would wish to request a further 30% (£246,000) from the non core funding monies for this work.

EPC data on surveys to date demonstrates the poor quality of many heating systems in Shetland, particularly in houses in Council Tax Bands A, B and C. We have many instances of 20+ year old boilers and very old electric storage heating systems accompanied by extraordinarily high bills. Merely offering insulation does not in itself tackle the core of this problem and does not really address the issue of fuel poverty for that householder.









In our holistic approach per property we would wish to be able to support a move to an improved heating system for the household, accompanied by improved levels of insulation and supported by behavioural change assistance for the householder as to how to best deal with the new fitments to maximise their efficiency.

It should be noted, however, that should this potential extra heating funding be available to tackle fuel poverty in Shetland, eligibility for it could not be limited to only those receiving benefits – although they would be a priority (as the core 20% funding specifies).

Low income combined with high fuel costs in Shetland has resulted in a class of client not able to receive benefits (income just above the national cut off point) but who yet is in greater fuel poverty need than those on mainland UK due to high fuel costs locally combined with a geographical need to have heating systems on longer and more frequently than those living in warmer areas of the UK.

For this extra funding (if received) to effectively tackle fuel poverty we would also require to include these "working poor" ie households just above the current level for national benefit eligibility – where low income combined with proven twice the average living costs locally leaves them in a more disadvantaged position than many in the UK who are in already in receipt of benefits.

Therefore, we would wish to offer this funding to households not on benefit where EPC data on the property showed system breakdown or extreme inefficiency (low EPC rating) accompanied by high fuel bills.

We would also require the householder to have undergone a full (unsuccessful) benefits check which demonstrates the household to be near the level of need. It might also be possible to include those householders (often pensioners on a fixed low income) who could show that they were not heating their home adequately because of fear of debt and were instead limiting heating to the living room (or equivalent) only, thus risking health implications and property deterioration due to the ingress of damp.

For 2014/15 measures to be offered in Shetland per home (as detailed in the EPC on a priority needs basis) would be:-

Loft insulation – virgin, top up from all levels to 300 mm

Cavity wall insulation

Internal wall insulation

External wall insulation (although it is unlikely that given the level of HESABS and limited ECO this could be funded for most homes)

Underfloor insulation

Draughtproofing

External doors

Single to double glazing

Heating systems where failed or proven to be inefficient or no guarantee available if repaired (boiler upgrades and storage heating replacement) - where the above specified criteria can be demonstrated.

It is also our intention to offer micro generation and renewable measures where these are cost effective within the monies available. In particular air source heat pumps are possible to replace failed heating systems – but only where the householder understands that retrofitting such systems in older homes is unlikely to deliver the efficiency levels suggested by the manufacturers. It also needs to be considered that certain systems require higher ongoing maintenance costs which may be outwith the budget of the householder in the longer term.

Lerwick has a District Heating System heated from our Energy for Waste Plant with biomass boiler support. Although technically the system is currently closed to new entrants following negotiations with its management we have been offered a number of possible installs to Lerwick homes where fuel poverty can be demonstrated and the house sits is on or near a current route.









We cannot specify with certainity how many installs could be achieved through this agreement in 2014/15, but it does give fuel poor homes in Lerwick a further possible source of heating and support.

In Shetland our "individual whole house" approach - based on actual property survey and householder need analysis - will mean different measures will be available to different households. However it will result in a more focussed long term structural upgrade of the housing stock, house by house. It is belived that this approach, carried out over the ten year proposed period for HESABS/ECO, will have a definite long term effect in eliminating fuel poverty levels in Shetland.

We would wish to retain this level of discretion and concentrate on measures which reduce the greatest carbon volumes as well as offering affordable warmth benefits. As we are dealing with a total of only c 6,000 properties we feel that this method has a better chance of improving the overall housing stock of Shetland in the longer term and of really tackling fuel poverty in all areas.

We also intend to continue to work in partnership with the local Citizen's Advice Bureau and Housing/Community Outreach Workers to identify those in need. Shetland Islands Council Social Work/Social Care staff and staff from Shetland Health Board are being trained to identify cases of fuel poverty and to refer these to us for intervention. This approach has been successful in 2013/14. We also find that often referrals come from within families, with support for one family member leading to enquiries from neighbours, other family members and friends.

Our staff have developed a level of trust with householders who are happy with this more locally led and based approach, where the team can be contacted or visited at any time for support or to answer queries. The team's local knowledge of both geography and of installers is seen by householders as beneficial. We would intend to develop and continue this approach for clients.

We also intend in 2014/15 to try to develop a more holistic approach within Shetland, working more in partnership with our Housing Services. Our Housing Services are planning £500,000 of energy efficiency works in 2014/15 funded from their maintenance and capital budgets for upgrades to Council Housing stock throughout the isles to ensure their properties meet the Scottish Housing Quality Standards by 2015.

Where possible we will consider tackling the "blockers" in these schemes of Council Housing work, where "right to buy" householders will not otherwise be receiving work. However, it should be stressed that works to these "blocker" homes cannot be guaranteed unless the householder can demonstrate fuel poverty and social need.

It is possible that (especially in Lerwick) a number of the privately owned homes within Council schemes have a high household income and cannot, therefore, take priority over those householders in other areas who are in real need. A mechanism to tackle this issue is under consideration. It may result in our pre survey application questionnaires being sent to all privately owned homes in schemes where Council works are proposed. Only after receipt and analysis of these questionnaires could we quantify those households who could be assisted as a priority through HESABS/ECO.

To ensure all eligible households are aware of the funding potential we also intend to carry out a publicity campaign in June/July asking for people to contact us. We will, however, require to advise that applicants will be prioritised and may be on a waiting list for 2015/16 and on. We already have enough referrals on our waiting list to fully allocate all our current 2014/15 funding.

4. Outline Proposals for 2015/16 within Local Authority Areas

In considering your proposals for 2014/15 it anticipated that LAs will be considering a pipeline or rolling programme of activity under HEEPS:ABS please provide details of potential forward programmes.









Area 1

We intend to retain the area for works for all future years as "The Whole of Shetland" – for reasons previously discussed. We would also wish to retain the "whole house" approach as the basis of all works. This will ensure that the housing stock is gradually improved piece by piece – rather than just limited install measures offered in a limited area, where the success of tackling fuel poverty and reducing carbon within a home is reduced by other factors within the dwelling.

It is anticipated that the proposed summer 2014/15 islands wide publicity campaign will provide a large number of new applicants. Currently there is a steady flow of referrals coming in weekly, particularly when a family member or a neighbour has been seen to have been successully supported.

This new volume of client referrals will also escalate as more works hit the ground and by our proposed more holistic work with Council housing retrofit programmes. It is considered that this latter development will reach some households who may not otherwise self refer.

This being so we see no difficulty in delivering a long term programme of requested works. Our current waiting list alone requires at least 2 to 3 years funding allocation at current levels (£820,000 per year). Publicity will at least double, possibly triple, this.

It will also be possible in future years (once self referrals and medical/social services referals decline) to take defined geographical areas - eg single islands – and, if necessary, door knock those who have not yet self referred. This is a core plank of our long term strategy.

We are also conscious of the problem off failed referrals from previous schemes where – for a variety of reasons – potential installs have fallen through. There are already a number of failed UHIS properties which have been referred to us for a second attempt.

We intend (and are already operating a system) of going back to these household where the process paused to see if additional support is required to ensure that this time the process succeeds. This may be through direct householder support in contacting contractors or even completing application forms. Where pre repair work is necessary before installation works can be carried out we will refer the householder to support schemes.

This is an area which will require to be further developed in any long term programme to ensure previous scheme failed referrals are encouraged and supported to a successful conclusion. It should be noted that this work is particularly staff and time intensive – but could be funded through the enabling works funding.

It is hoped that through this variously pointed approach we will be able to upgrade the housing stock throughout Shetland in a long term focussed manner.

It must again be emphasised that, in order to successfully ensure homes in Shetland are removed from fuel poverty, a major programme of heating upgrade has to be developed and implemented. Homes can be insulated, but inefficient heating costs will still be high and would leave many still in fuel povetry despite retrofit works.

Average current costs for heating system upgrade in Shetland are in the region of £7,000 per home. There are many homes where income is low but no benefits are claimable at national income rates. The high local cost of living is such that real poverty and deprivation exists. Insulation schemes alone cannot tackle this.

We would hope over the next 5 years to offer some solution to this endemic problem.

5. Supporting the Local Economy

The Scottish Government will use national modelling to estimate numbers of jobs retained









and created. However an objective of the HEEPS:ABS programme is to support the local economy and sustainable local economic development. Detail any specific initiative or tendering practices to support this for example the use of community benefit clauses or whether you will tie up to local apprenticeship schemes.

Because of issues encountered in previous energy efficiency schemes by the use of non island based contractors it has always been a key element of our programme that local contractors should be used wherever possible.

Anacdotal evidence from local contractors demonstrates that some have considered that HESABS work would be a reason for taking on an apprentice, although it is not known whether any have actually done so as yet.

The picture with regards to job creation/retention in Shetland specifically due to HESABS work is difficult to quantify because of the overall high level of construction work being carried out in the islands at present due to large scale oil contract developments. Petrofac and Total both have major developments underway with considerable demand for construction workers.

To quantify which posts have been retained or created because of HESABS/ECO and which for other reasons would not be an easy matter. This is further compounded by the fact that to date less than £400,000 has been committed for HESABS work and this in comparison to the oil development funding on offer would be insufficient to ensure job creation/retention.

We do however wish to continue to use only locally based contractors. This is a problem as most of them are not PAS2030 accredited. The oil industry work does not require this as an accreditation. However a small number of local firms are now accredited for this work. We intend to encourage more local firms to follow their lead.

The volume of work involved in the management of the programme has required the creation of a full time Energy Efficiency Officer within the local authority (previously a part time post) and has enabled a local authority buildings services apprentice technician to be retained to carry out EPC/Green Deal surveys. This has been funded from our enabling works. It may be necessary to further fund additional administration support for these officers in 2014/15 and beyond. Should an ECO contract be agreed it is likely that we will wish to retain at least this level of local authority involvement to ensure high uptake of the programme and also to handle any complaints arising from problems in the installation and management process.

A local specialist insulation installer has also indicated that he views the national insulation programme as guaranteeing the retention of his workforce. He believes that it will possibly support the training and employment of further installers, depending on demand and level of funding available over the next few years.

The 2013/14 programme emphasis on heating upgrades to tackle fuel poverty has been identified as the prime reason for local electrical and plumbing installers becoming PAS2030 accredited. Four firms now are accredited - with others moving towards it as they see a level of income coming from this work which they can only access with PAS2030 accreditation. It is hoped general insulation works nwill follow a similar path once more works hit the gournd.

The HESABS/ECO programme is the prime factor in encouraging upskilling of contractors. Locally this has been supported by our Housing Services tendering for insulation work whilst specifying for the first time PAS2030 as a requirement for the installer (due to the capacity to lever in ECO). This too may influence the upskilling of the local workforce seeking Council contract work.

For Shetland a more significant support to the local economy will flow from the savings in energy costs attributed to householders receiving energy efficiency works. It is likely that this money will be spent within the local economy and will have an onflow in supporting jobs in other sectors.









6. Funding plan

We need to understand the overall funding for the projects and local authorities need to demonstrate that the leverage from ECO is being maximised.

For each area/project selected detail the total costs of work. Details of Scottish Government Funding requested, Social Housing Landlord or owner contribution if any and Energy Company Obligation confirmation. Calculate the leverage for each area with a summary of overall leverage. Time periods of work and conclusion dates should be included.

See also the spreadsheet attached for summaries by area/project

Area 1 ALL OF SHETLAND

The core HESABS funding offered to Shetland is £820,000. We are not requesting householder contribution unless the works identified as needed in the property are above the maximum fundable through HESABS (or HESABS + ECO should we receive this latter funding stream later in 2014/15).

Currently householders are offered up to £7,500 from HESABS and can contribute funding for further works (if needed) if they are able or wish to so do. As they have the individual EPC/Green Deal assessment for their property they can quantify what other works could be carried out when installers are in their home and how best they can fund this. How much extra funded works there will be has yet to be quantified. We are aware, however, of householders adding to the HESABS/ECO funded works with additional works funded from their own pockets or via blended funding streams.

Shetland Islands Council has to date been unable to conclude two draft contracts for ECO with two different energy suppliers due to contractual differences in the perception of risk and how it can be best managed and also due to the energy companies reluctance to carry out more expensive works in our area when cheaper carbon tonnages can be obtained elsewhere in the UK.

We are currently examining the possibility of obtaining ECO through an agent (the agent bringing the ECO to the table and training and contracting the installers). We are aware of a company interested in funding works in both Orkney and Shetland in this way and are in discussion with the company.

Nevertheless, we hope to place an ECO tender advertisement through the usual processes in the next few months. However, bearing in mind the current uncertainty regarding ECO and the recent Government relaxation in the amount of input required from the energy companies, we are uncertain how much funding this approach will deliver.

It is understood that some limted ECO (£25,000) has been gained in 2013/14 for Shetland by an ECO agreement between SSE and Shetland Heatwise. It is understood that some of this has supported work in Council houses and some in private. We are currently led to believe that a similar sum of £25,000 may be available through this route in 2014/15 – but works have to be completed by September 2014. We are in discussions with Shetland Heatwise as to how best to maximise this element. It is only, however, available to householders on certain benefits as it is funded through rural CSCO from SSE.

Shetland Islands Council's Housing Services are retrofitting 220 Council houses in 2014/15 required to be upgraded to meet the new Scottish Housing Quality Standards targets. In 2014/15 they propose to carry out 220 insulation upgrades and some dispersed heating upgrades (solid fuel to electric Dimplex heaters). For this work they have committed £500,000 from their capital and maintenance budgets supported by some of the potential ECO via Shetland Heatwise/SSE.

It is not currently possible to identify leverage rates until our HESABS ECO tender process is concluded. This is likely to be by September 2014 at the earliest. All works









would be required to be committed by 31 March 2015 and installed by 30 September 2015.

At present on the £7,500 maximum HESABS allocation per property we intend to deliver 120+ private properties by September 2015. With the potential of a further 220 properties being delivered by our Housing Service the target figure delivered via Shetland Islands Council in 2014/15 would be 340+ homes.

Some families have indicated that they are happy to top up the costs of works identified under their EPC. For this they are using a mix of savings and loan finance. We will be better able to quantify what the total top up sum for all properties through this blended finance is by year end 2014/15.

7. Enabling and Administrative Costs

Provide a statement on how enabling and administrative costs will be spent and for what purpose.

Our enabling costs (£123,000 – 15%) for 2014/15 will be spent on works designed to support and facilitate the programme. This will include staff training (as required) and staff costs for programme monitoring and development. This includes the costs of at least one full time staff member. This staff member operates the local helpdesk for referrals, carries out survey work on properties and completes the relevant legal documents (lodged approrpriately).

As requested previously we wish to retain a discretion to offer up to a further £3,000 funding in very limited cases where clear need can be demonstrated. This cost will be met from the enabling fund.

Our programme includes a high level of in house energy efficiency advice and support for each householder to ensure maximum value can be obtained from the tech fix funding applied. This requires information packs to be developed and produced. A pack is given to each home. The costs of these packs will be met from this money. We also operate a number of local Roadshows where energy efficiency advice is available at Information Stands throughout the islands throughout the year. The costs of this work will be met from the funding.

It will also be possible to produce and publish good practice examples of actual completed Shetland installs to act as examples to encourage others to self refer. Again the cost of this work would be met from within the enabling funding.

It is certain that we will require to support local installers in upskilling to carry out this work. There will be a need to train local installer workforces and to carry out installer workshops. Again this work will be funded from the enabling monies.

Communication and marketing costs for all HESABS work will all be financed from the enabling funds, as will support for training programmes for social and health personnel requiring training to identify those at risk and in need of referral.

Customer evaluation feedback will be carried out funded through these monies to identify problems in the customer journey so future years delivery of the programme can be improved to tackle any issues found.

We may also offer enabling funding to those householders unable to carry out pre installation works, eg loft clearance, to ensure works can be carried out in all homes requiring retrofit. At present discussions with the volunatry sector for support in this area has proven fruitless. Funded works may solve the issue and allow previously failed retrofits to proceed.

8. | Energy Company Support

Confirm energy company support with details of which energy company is providing ECO









funding and contact details. A letter of in principle commitment from them will be required prior to funding being approved. Prior to projects commencing LAs should ensure that funding in place for packages of measures. HEEPS:ABS funding may be reduced if levels of ECO funding fall from those originally predicted.

To date both Npower and SSE have failed to conclude contracts with Shetland Islands Council for this work due to high costs of installing works in the islands and because of the level of perceived risks to be placed on the Council. We intend to place a tender advert through the usual routes for ECO in the next few months.

We have had an informal expression of interest from a management agent wishing to set up in Orkney and Shetland. This company claims to have links with all energy companies. Currently we cannot advise with which, if any, energy company any agreement will be completed nor can be anticipate its value as leverage.

As discussed earlier it is understood that our Housing Service and some local householders have received £25,000 from SSE through its installer Shetland Heatwise for 2013/14 with the possibility of the same in 2014/15.

9. Marketing

The Scottish Government strongly recommends that the Home Energy Scotland Hotline is used as the route into Local Authority HEEPS:ABS schemes. This allows a one stop shop for energy advice for customers. Confirm that you will be using this service or alternatively what strategy will put in place to ensure customers receive appropriate advice on energy efficiency, tariff advice and benefit checks.

For properties throughout Shetland in Council Tax Bands D+ we have already a working system with the Inverness ESSAC. When we receive an application for support from any householder in this tax band we refer them in writing to the Home Energy website and give them the 0808 number asking them to contact the ESSAC immediately for advice and support with funding.

This information is also available to all members of the public at all our Roadshows and in our advice packs to all householders. It is felt that offering this idependant advice is of value to the householder. We have also had discussions with our local HES part time Outreach Worker with regards to a possible joint information campaign later in the year possibly in June/July. This campaign would be supported by our Fuel Poverty Forum with advice and support from the local Citizen's Advice Bureau as well as the ESSAC and local health professionals.

The Inverness office has also been advised of our "whole house" approach and of our zoning of all of Shetland as the area where the home falls within Council Tax Bands A, B or C. We are in regular tele discussion with Bob Grant the Inverness manager. We have asked that when a contact is made to them, and it is ascertained that the property falls within Tax bands A, B or C that the householder is then referred directly to us to carry out an individual property survey.

There has been some discussion with the ESSAC over the issue that whilst Affordable Warmth households in the islands are in theory "elegible" for works referred through the ESSAC they are not in the real world "entitled" to them. Many received no works after referral. To therefore, filter out all these "elegible" households via the ESAAC and refer them on on the basis of elegibility has left a number of households exposed as they then receive nothing – the energy companies finding it too expensive to deliver works in the islands.

Until this national issue of entitlement as opposed to eligibility (followed by no works) is addressed we would prefer to have all Shetland householders in tax bands A, B and C contact us directly in the first instance where we can then prioritise them on the basis of our inital pre survey Application questionnaire. It will be a matter to be discussed and developed with the ESAAC in 2014/15 how the interface between Inverness and ourself can best deliver guaranteed works to the benefit of all clients. If the works can be "guaranteed" via ESAAC referrals to Scottish Gas and the householder actually









receives the works in a short time this would indeed be an excellent route for some householders. However this is as yet unproven.

As previously outlined we operate and advertise a local energy efficiency helpline within the Council for referrals and offer in house advice on energy efficiency within the home as part of our Green Deal Advisory Organisation accreditation. The Council has achieved full GDAO status, accredited through Stroma. We also operate a number of fully trained Green Deal Assessors.

This locally based advice and support approach has shown to be very successful, as direct local knowledge of areas, homes and installers can be used to support the client. We would intend to retain this and to carry on our Roadshows throught the islands (supported by the ESSAC).

Locally it has been shown that a level of trust is needed in the retrofit process as often clients are vulnerable and are wary of disussing their "business" over the phone with someone south. The known and recognised local Council officers dealing with the programme locally can be approached in person within Shetland. This local support staff element cannot be overemphasised in ensuring a trusted and efficient journey for vulnerable clients in this area of work.

It should be noted that two previous south led energy efficiency installation programmes have a very bad reputation in the islands due to poor workmanship achieved and due to poor communication – particularly when things went wrong. Both these programmes made the local media as "scandals". This has greatly affected householder's perception of south supported works in this area. The local link is therefore perceived as critical in the success of the programme. We would intend to retain and develop this, supported by the ESSAC.

10. Lead Officer Contact Details and delegated authority statement

Include name, address, e-mail address and telephone contact. Also confirm that relevant committee has given authority to submit this application or the date of any future committee that will approve the application.

Mary Lisk, Tean Leader Environment and Energy

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The application will be placed before the Environment and Transport Committee of 16 June 2014. It has however been approved by the Director of Infrastructure prior to submission.







