Shetland Islands Council

Environment and Transport Committee	**3 October 2016**
Development Committee	**4 October 2016**
Policy and Resources Committee	**24 October 2016**

Fuel Affordability Survey – Survey Results and Analysis
EO-05-16-F

Director of Infrastructure Services	**Infrastructure Services**

1.0   Summary

1.1   The purpose of this report is to inform the Committee of the findings of the Fuel Affordability Survey undertaken by the Council in December 2015 and seek approval of the action plan which identifies activity for the Council and its partners to tackle Fuel Poverty in Shetland.

2.0   Decision Required

2.1   That the Environment and Transport Committee and the Development Committee NOTE the Affordability Survey results and RECOMMEND that the Policy and Resources Committee APPROVES the implementation of the Fuel Poverty Action Plan.

3.0   Detail

3.1   **Fuel Poverty** - A household is said to be in fuel poverty if in order to heat their home to an adequate level they have to spend more than 10% of their income on their energy/fuel costs. If the household spends over 20% of their income on this they are defined as being in "extreme fuel poverty".

3.2   In November 2015 a Fuel Affordability Survey of all Shetland households was carried out to ascertain the current level of fuel poverty in Shetland. It was designed to better understand the causes of fuel poverty in Shetland by creating an evidence base to direct the activity of the Council and its partners in tackling Fuel Poverty. The survey was based on similar surveys in the Western Isles and Orkney which enables comparisons across the three island authorities who have the highest level of fuel poverty in Scotland.

3.3 10,800 household surveys were sent, 2,425 were returned with a response rate of 22%.

3.4 As shown in the attached Report (Appendix 1) the survey confirmed 53% of Shetland households experience fuel poverty – with the highest rates being in the North Isles which had a 64% level of fuel poverty.

3.5 In response to the issues identified by the Survey analysis an action plan has been developed, the actions will be delivered and monitored by the Fuel Poverty Action Group and will be taken forward in the development of the new Housing Strategy. The Fuel Poverty Action Group is made up of SIC Housing, Carbon Management, Community Planning and Development services, CAB, Hjaltland Housing Association, Home Energy Scotland, and NHS Shetland.

4.0 Implications

Strategic

4.1 Delivery On Corporate Priorities – Tackling fuel poverty is a key priority in the Council's Housing Strategy.

Addressing Fuel Poverty improves the educational and health outcomes for children and young people. Cold, poorly heated homes affect babies' weight gain and increase the frequency and severity of asthmatic symptoms in children. Teenagers who live in cold houses are five times more likely to risk developing multiple mental health problems than adolescents who have always lived in warm homes. Growing up in a cold home is likely to have a negative effect on children's educational achievement, emotional well-being and resilience. Over time this can put them at a disadvantage, worsening their life chances and increasing health inequalities.

Warm homes assist older people to live healthier and active lives by reducing the risk of heart and lung disease. Fuel poverty is also known to worsen conditions like arthritis and rheumatism.

Delivering savings on fuel bills has a beneficial impact on the local economy because people have more disposable income if their properties are more efficient.

It can clearly be demonstrated that tackling Fuel Poverty is a significant activity in delivering the priority outcomes in the Council's Corporate Plan – Our Plan 20116 to 2020.

Shetland's Commission on Tackling Inequalities set out recommendations on how to address fuel poverty in Shetland. These recommendations have been used to develop the Action Plan set out in Appendix 2.

The Council's Carbon Management Plan seeks to reduce carbon emissions (by reducing energy use) through appropriately insulating and heating the domestic housing sector – tackling fuel poverty targets resources at those most in need of assistance.

4.2 Community /Stakeholder Issues – Living in fuel poverty is detrimental to health and wellbeing and effects the life chances and opportunities of individuals, householders and communities.

4.3 Policy And/Or Delegated Authority – In accordance with Section 2.3.1 of the Council's Scheme of Delegation, the Environment and Transport Committee has functional responsibility for environmental services, and in particular carbon and energy management. The Development Committee has functional responsibility for housing and poverty. However, as the Action Plan involves multiple Council services and community planning partners, a decision to approve the Action Plan is a matter for the Policy and Resources Committee [Scheme of Delegation – 2.1.4(4)]

4.4 Risk Management – Given the significant impact that fuel poverty has on health and wellbeing outcomes and the life chances of individuals failing to address fuel poverty creates significant additional expense within social care and losses to the economy and community if Shetland's young people are not realising their full potential.

4.5 Equalities, Health And Human Rights – It is a basic human right to be able to live in a warm, healthy home. Living in fuel poverty negatively impacts on the health and wealth of individuals and is a key cause of inequality of outcomes for individuals, households and communities.

4.6 Environmental – The Climate Change (Scotland) Act 2009 requires local authorities to reduce carbon emissions. Tackling fuel poverty through supporting energy efficiency retrofit works reduces carbon emissions.

Resources

4.7 Financial – The survey costs were paid for through external funding from Scottish Government under the enabling fund received from Government as part of the Home Energy Efficiency Programme Area Based Scheme. This fund also supports grant funding of energy efficiency retrofit work on homes to support households.

The costs of delivering the Fuel Poverty Action Plan are multi organisational in that they require input from SIC Housing, Carbon Management, Community Planning and Development services, CAB, Hjaltland Housing Association, Home Energy Scotland, and NHS Shetland. The actions will be managed within existing resources however all efforts will be made t continue to draw in financial support to Shetland from Scottish Government and UK Government fuel poverty and energy schemes.

4.8 Legal – The Climate Change (Scotland) Act 2009 places a duty on the Council to reduce carbon emissions and support sustainable development.

4.9 Human Resources – The Carbon Management Team is part funded through this external enabling funding to tackle fuel poverty. This funding is applied for to the Scottish Government annually.

4.10 <u>Assets And Property</u> – Through the operation of the EESH programme by Housing Services, as part of the response to fuel poverty data and housing quality standards, the Council is improving its Council housing stock. These actions contribute to the reduction in fuel poverty levels of Council tenants.

5.0   Conclusions

5.1   The analysis of the Fuel Affordability Report demonstrates an increase in fuel poverty levels in Shetland since 2010. More than half of all Shetland homes are now in fuel poverty and at risk of experiencing the negative outcomes associated with fuel poverty. The study of the survey results has enabled the development of a Fuel Poverty Action Plan to enable the monitoring of actions being taken by local and national bodies to reduce fuel poverty and promote affordable warmth for all households.

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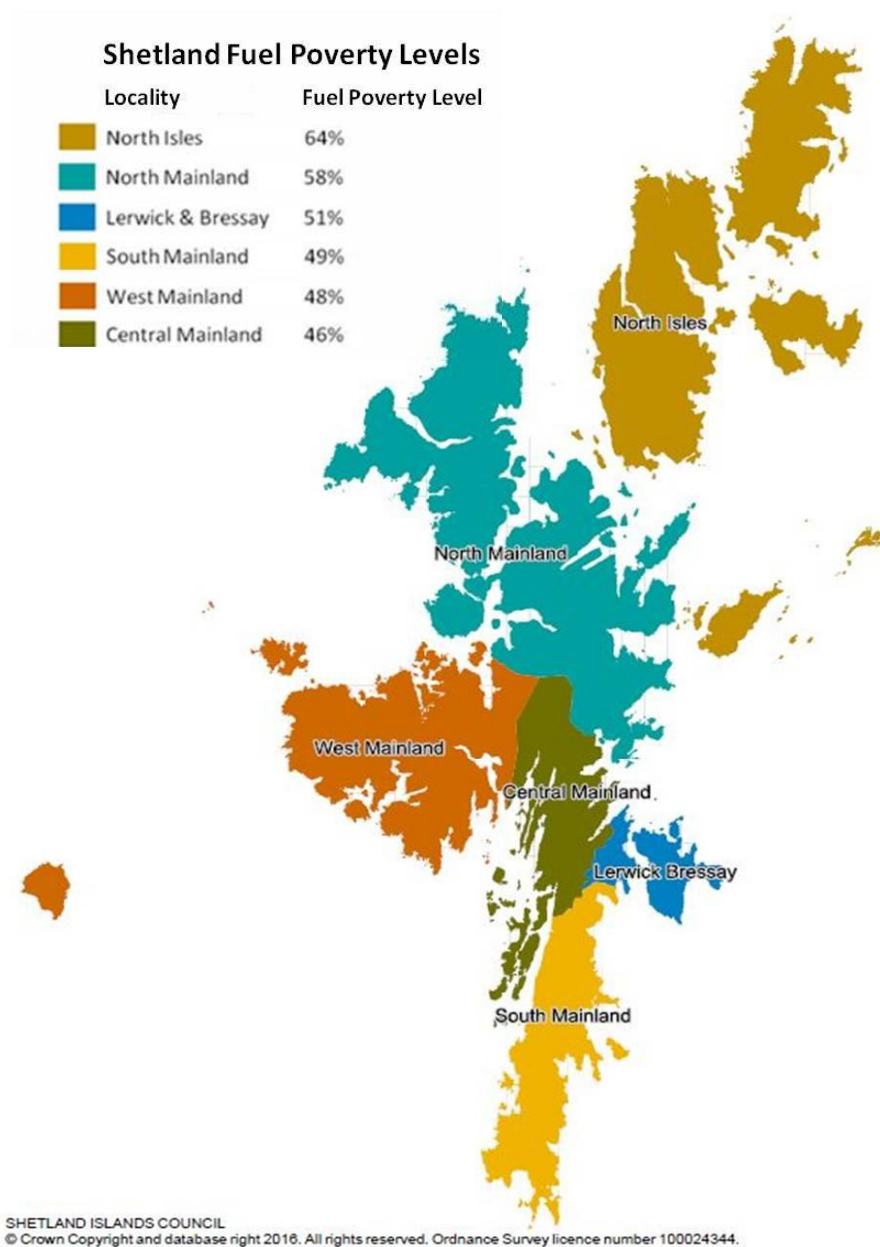(01595) 744818   mary.lisk@shetland.gov.uk
26 September 2016

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Appendix 1   Fuel Affordability Report 2015/16
Appendix 2   Fuel Poverty Working Group Action Plan

Fuel Affordability Report

2015/16

Shetland Fuel Poverty Levels

Locality	Fuel Poverty Level
North Isles	64%
North Mainland	58%
Lerwick & Bressay	51%
South Mainland	49%
West Mainland	48%
Central Mainland	46%

North Isles

North Mainland

West Mainland

Central Mainland

Lerwick Bressay

South Mainland

Survey Results and Analysis

Shetland
Islands Council

Executive Summary

In November 2015 a Domestic Fuel Affordability Survey was sent out to all Shetland homes, 10,800 in total.   2425 were returned for processing, a 22% return.

The results confirm that the fuel poverty level in Shetland in 2015/16 is 53%, with the North Isles having the highest level of poverty with a rate of 64%. This was an increase of 10% since 2010 and demonstrates that more than half of all Shetland homes are now living in fuel poverty.

The detailed analysis breakdown of data has been undertaken to try and understand the factors contributing to Fuel Poverty in Shetland and develop a more proactive action plan to address it.

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Table of Figures

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1   Background

1.1   In November 2015 a Fuel Affordability Survey was carried out in Shetland to ascertain the current level of fuel poverty. This was the first locally carried out survey since 2010.

1.2   Both Western Isles and Orkney Islands Council were carrying out similar surveys. The intention was to use these results to jointly lobby Government through the "Our Islands: Our Future" process on the high levels of fuel poverty in the islands groups. The benefits of carrying out similar surveys is that there is now a common baseline over the 3 authorities.

1.3   All three island groups believed that current Government figures understated levels of fuel poverty. In Shetland's case Government figures stated a fuel poverty level of 43%. Those working with fuel poverty in Shetland believed this to be an underestimate.

1.4   A householder is defined as being in fuel poverty, if in order to maintain a satisfactory heating level, they would need to spend 10% or more of their household income (including Housing Benefit and/or Income Support) on all household fuel use. Should the householder spend over 20% of their household income on domestic fuel they are defined as being in Extreme Fuel Poverty.

1.5   It was agreed that the survey format developed by Western Isles Council would be adopted as the standard format for the other two island groups.   The results from the Western Isles had demonstrated a considerably higher level of fuel poverty to exist than that stated in Government data.

1.6   The proposed Shetland questionnaire was approved with minor amendments by the Shetland Fuel Poverty Working Group. This Group involves a multi-disciplinary group of organizations including the Shetland Islands Council, Community Planning, CAB, Home Energy Scotland, NHS Shetland and Hjaltland Housing Association. It was agreed that the questionnaire would be sent to every home in Shetland (10,800 houses) and that its postage would be externally funded using Government enabling monies for the Home Energy Efficiency Programme: Area Based Scheme in Shetland.

1.7   Of the 10,800 surveys sent, 2425 were returned to the Council for processing, a response rate of 22%.

1.8   The data was recorded and analysed and this information is provided in the remainder of this report.

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2   Results and Analysis – Overall Fuel Poverty levels

2.1   The results showed the overall level of fuel poverty in Shetland in 2015 as 53%.

This is based on the 1275 respondents who answered yes to the question 'Do you estimate you spend more than 10% of your household income on heating and electricity costs?'

2.2   The Scottish House Condition Survey (SHCS) 2014 figures were released in January 2016 and show the same level of fuel poverty for Shetland. Figure 2.2.1 represents this, as well as showing the Scottish national average.
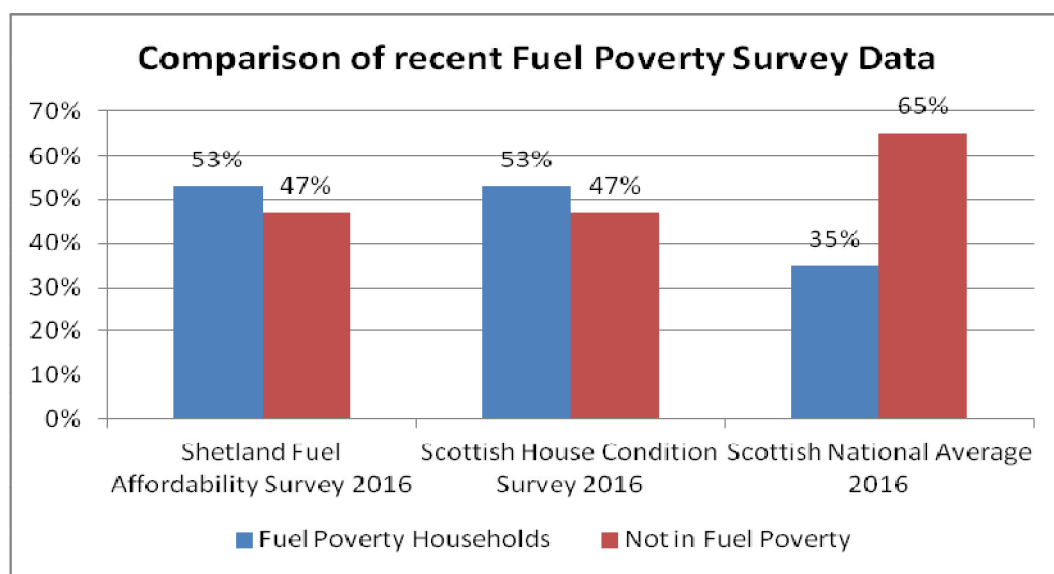

Fig. 2.2.1 Comparison of recent Fuel Poverty Survey Data
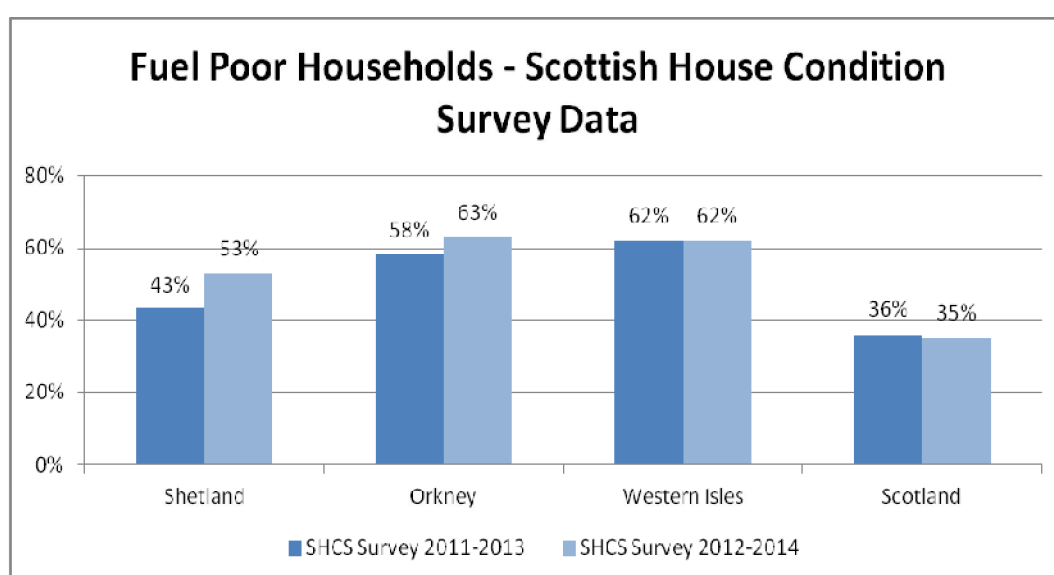
Fig. 2.2.2 Comparison of Recent Scottish House Condition Survey Data

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2.3   The level of households in Extreme Fuel Poverty is measured through the Scottish House Condition Survey also. The definition of extreme fuel poverty is when a household has to spend 20% or more of their income on heating their home to an adequate level. The latest figures show an increase to 19% for Shetland.

	% of Extreme Fuel Poor Households – Scottish House Condition Survey Data			
	Shetland	Orkney	Western Isles	Scotland
SHCS 2011-2013	13%	28%	24%	10%
SHCS 2012-2014	19%	30%	26%	10%

Fig. 2.3.1 Extreme Fuel Poverty Level Compared to SHCS Data

2.4   As well as asking respondents about their income, households were asked the question 'Do you feel your home is adequately heated?'   A total of 719 respondents (30%) said no.

Do you spend 10% or more to adequately heat your home?

Is your home adequately heated?

■ No   ■ Yes   ■ Did Not Answer
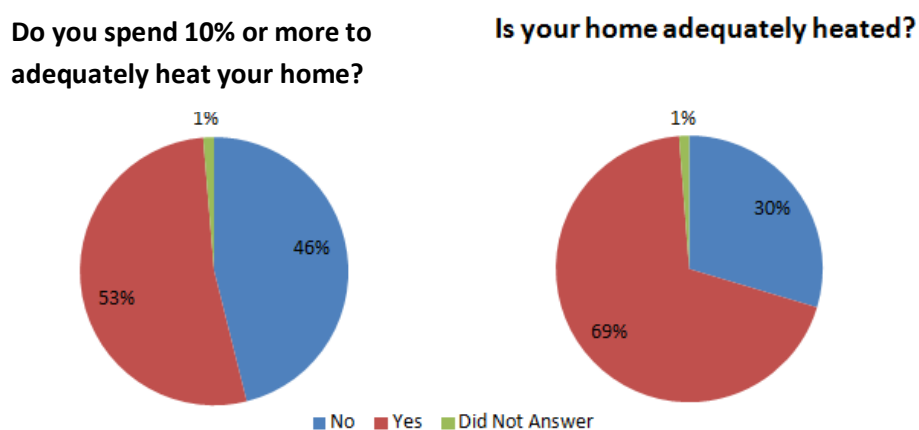
Fig. 2.4.1 Households in Fuel Poverty and Households Adequately Heated

2.5   By locality, the order of areas of Shetland in highest fuel poverty are as follows:-

   *   North Isles (64%), North Mainland (58%)

   *   Lerwick & Bressay (51%)

   *   South Mainland (49%)

   *   West Mainland (48%)

   *   Central Mainland (46%).

 Fig 2.5.1 provides the further detail, including response rates.

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Shetland Fuel Poverty Levels

Locality	Fuel Poverty Level	Response Rate
North Isles	64%	27%
North Mainland	58%	21%
Lerwick & Bressay	51%	20%
South Mainland	49%	26%
West Mainland	48%	21%
Central Mainland	46%	22%

SHETLAND ISLANDS COUNCIL
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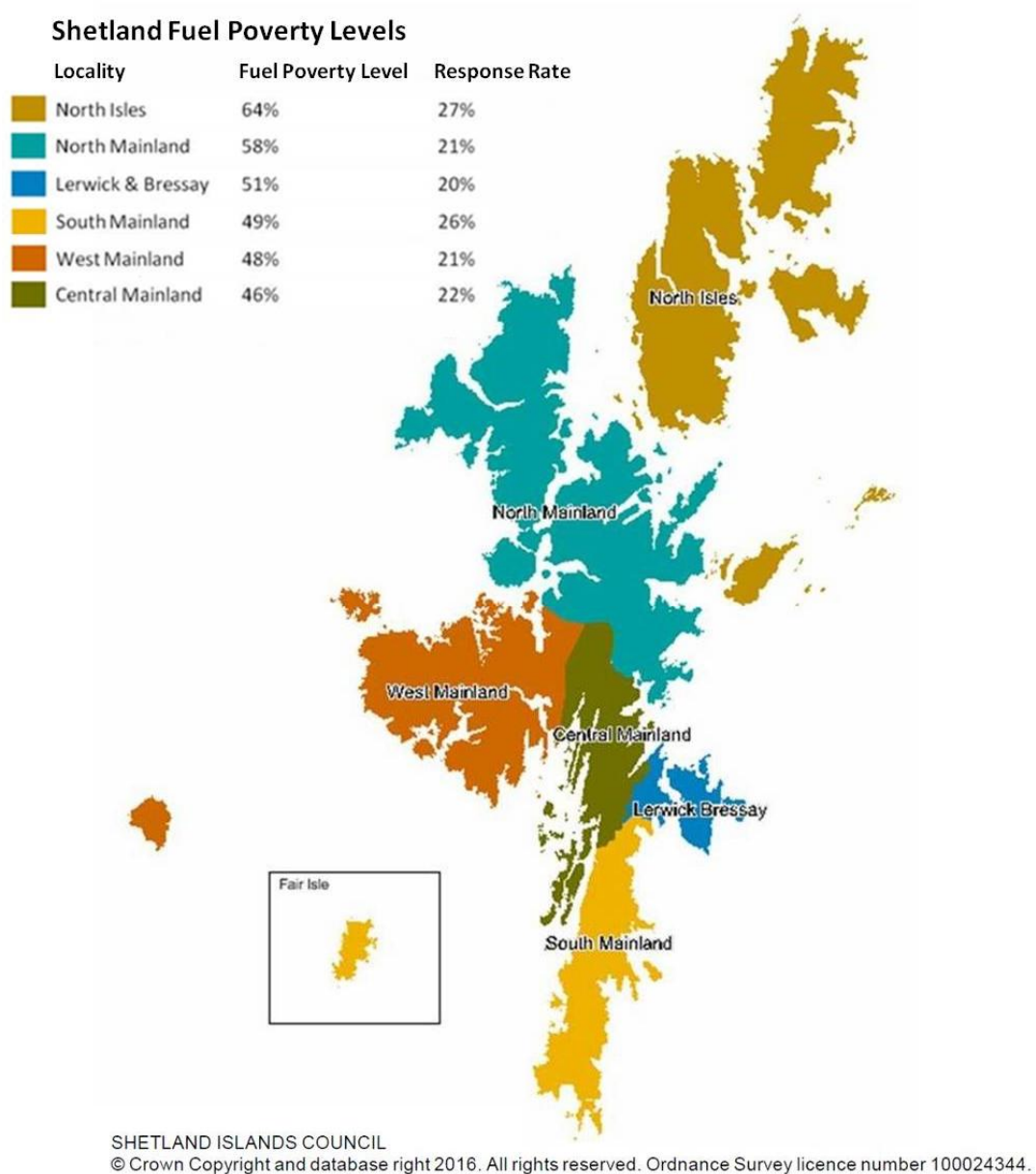
Fig. 2.5.1 Fuel Poverty in Shetland and Survey Response Rates

3 Fuel Poverty by property type

3.1 The highest number of surveys received from respondents considering themselves to be in fuel poverty were from those living in detached properties (704).

3.2 High levels of fuel poverty were found in semi detached properties (66%) and end terrace properties (63%). However there was a much lower response rate from these house types. With the detached responses, 46% were in fuel poverty.

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3.3   The data shows that fewer people living in flats and mid terrace properties are in fuel poverty.

For context, according to Census 2011, the accommodation types in Shetland are: Detached – 56%, Semi-Detached – 24%, Terraced – 8%, Flat – 9%, Caravan – 0.4%.
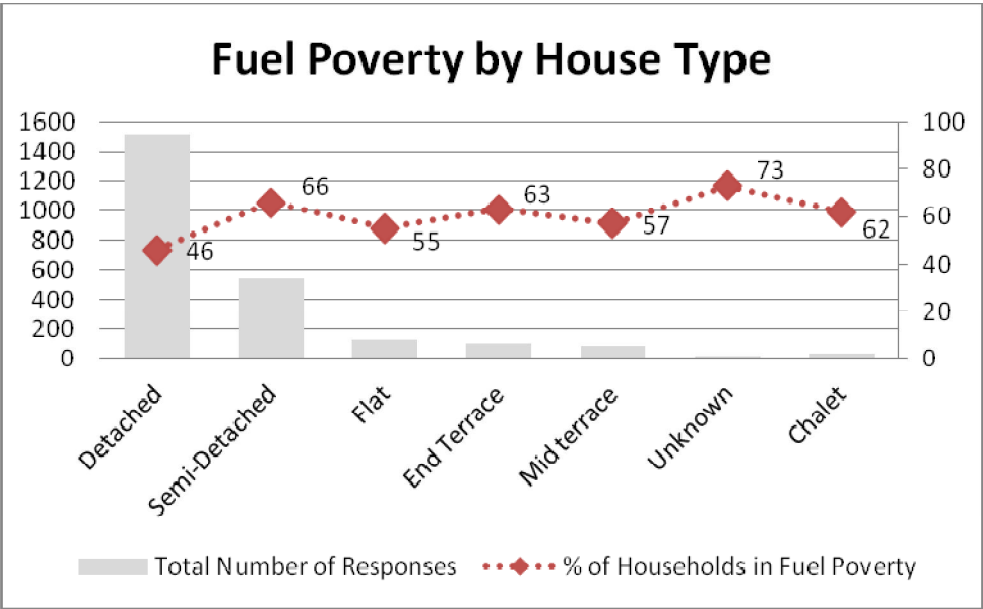
Fig. 3.3.1 Fuel Poverty Levels by Property Type

4   Tenure and Fuel Poverty

4.1   The highest number of respondents in fuel poverty by tenure were owner occupiers (837).   Considering all owner occupiers who responded, 46% were in fuel poverty.

Considering all social tenants who responded, 78% of Shetland Islands Council tenants and 73% of Hjaltland Housing Association tenants were in fuel poverty. Combined, this is a total of 336 tenants.

For context, the Census 2011 data shows that 65% of domestic properties in Shetland were owner occupied, 19% Council tenants, 5% Other Social Rented (Hjaltland), 9% Private Rented and 2% Living Rent.

4.2   Household income is a key factor in determining whether a household is in fuel poverty. Therefore this correlation between social housing, where income tends to be lower, and high fuel poverty levels would be expected.

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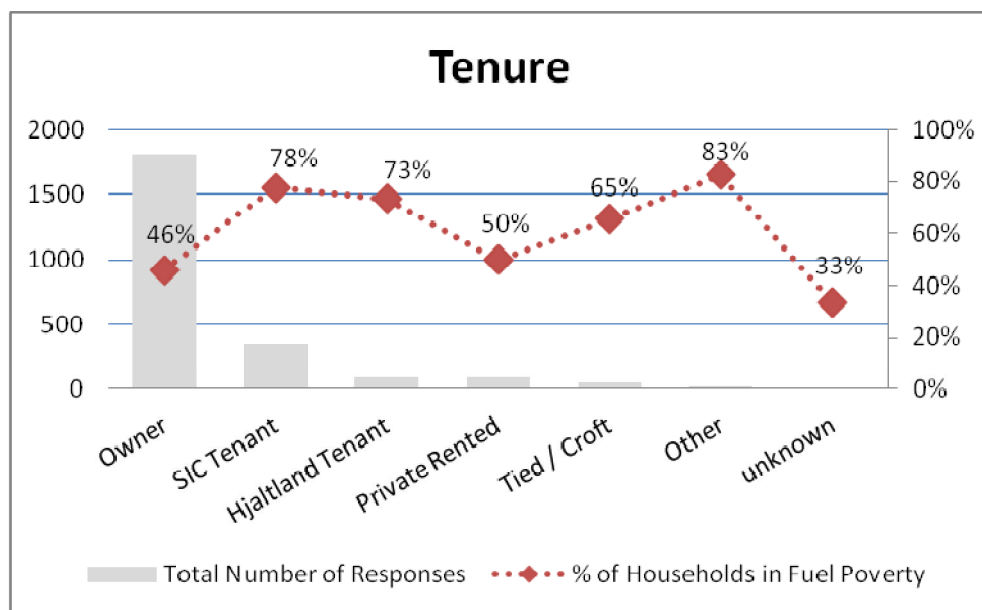
Fig. 4.2.1 Fuel Poverty Levels by Property Tenure

4.3 65% of crofting tenants who took part in the survey were in fuel poverty. This may reflect lower incomes in rural areas, but may also reflect older and poorer building standards. 72% of households with tied/crofting tenures who are in fuel poverty are in the North Isles and North Mainland.

5 Property Specifications and Fuel Poverty

5.1 The highest number of respondents in fuel poverty heated their water by electricity (755).

5.2 The highest rate of fuel poverty was found in homes where the water was heated either by solid fuel (59%) or by electricity (58%) Those heated by oil recorded a 50% fuel poverty level whilst those on district heating recorded a 43% level.

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Primary Water Heating
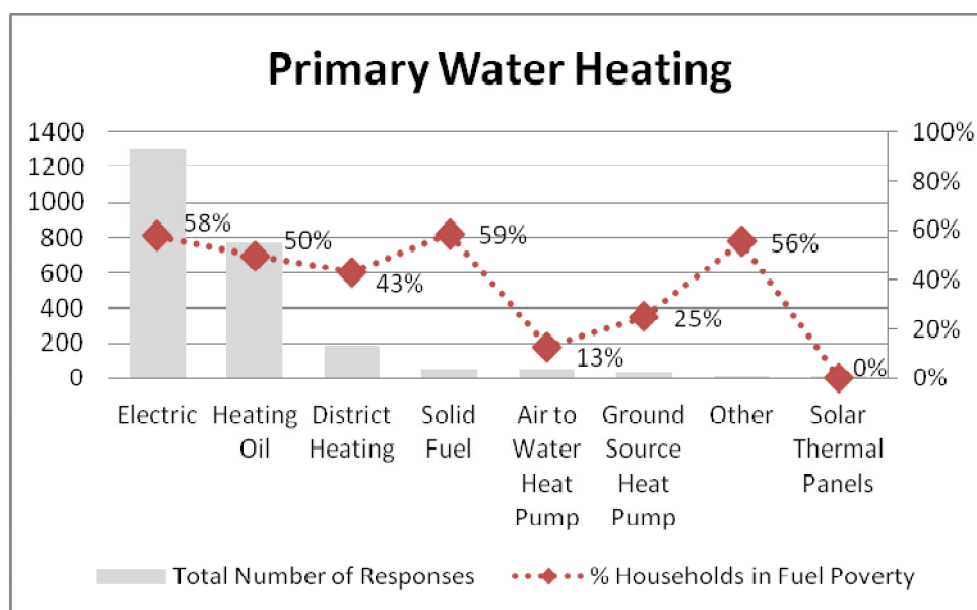
Fig. 5.2.1 Fuel Poverty Levels by Primary Water Heating

5.3   The highest number and percentage of households in fuel poverty by build type was reported by those living in solid wall construction (336) or cavity wall construction (332) homes.

A lower number of households were in fuel poverty who lived in timber framed properties (34%).
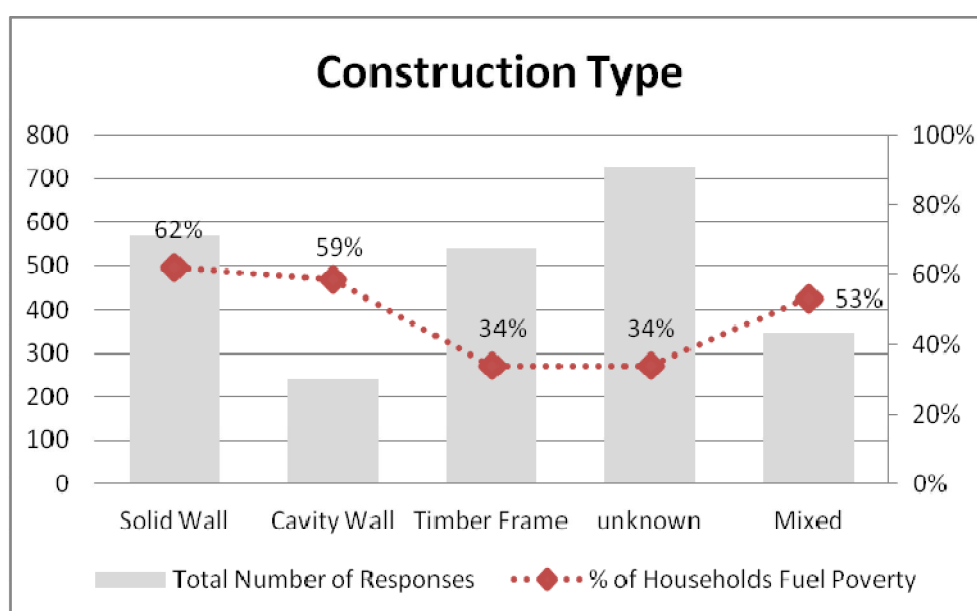
Construction Type

Fig. 5.3.1 Fuel Poverty Levels by Property Construction

5.4   The highest number of households in fuel poverty by age of property was reported by those living in properties built between 1965 – 1983 (447).

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Evidence shows that fuel poverty is higher in older properties. A lower level of fuel poverty is found in newer properties, particularly those built after 1984. This is likely to be due to higher building standard regulations from 1984.

46% of respondents living in homes built pre 1983 who have indicated that they are spending more than 10% of their income on fuel (ie are in fuel poverty) have also said that they do not adequately heat their home.

Homes built post 2012 have the lowest rates of fuel poverty (31%) with only 19% stating they were spending more than 10% of their Household income on adequately heating their home.
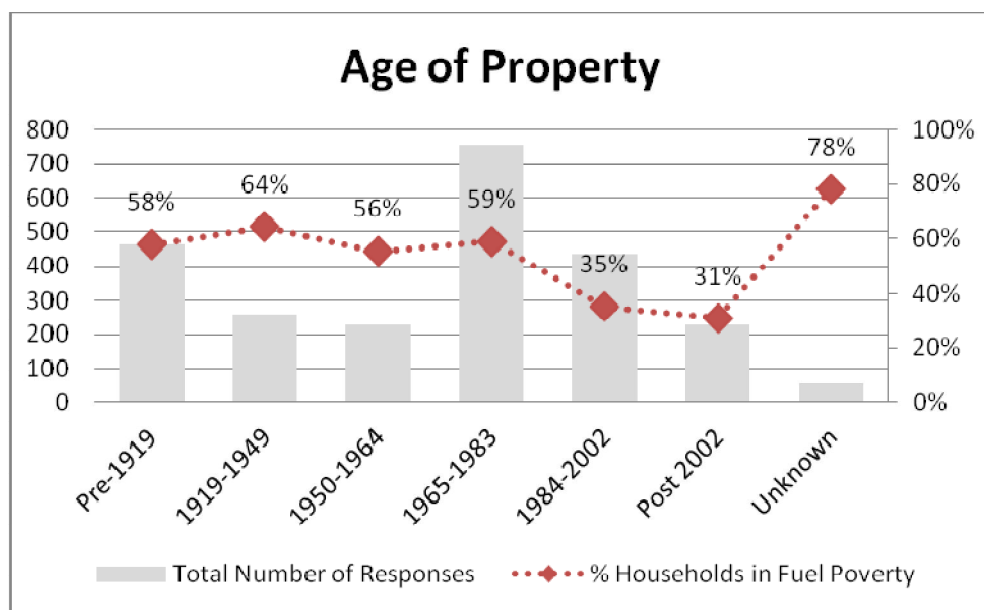
Fig. 5.4.1 Fuel Poverty Levels by Property Age

5.5 The highest number of respondents in fuel poverty by the type of room heating was those heating their homes by electric storage heaters (669).

Of the respondents, 58% whose primary room heating was electric boiler/ panel heaters or electric storage heaters were in fuel poverty. This was closely followed by solid fuel heating.

Households using heat pumps were least likely to be in fuel poverty, with fuel poverty at 14% for air to water heat pump homes and 30% in homes using ground sourced heat pumps.

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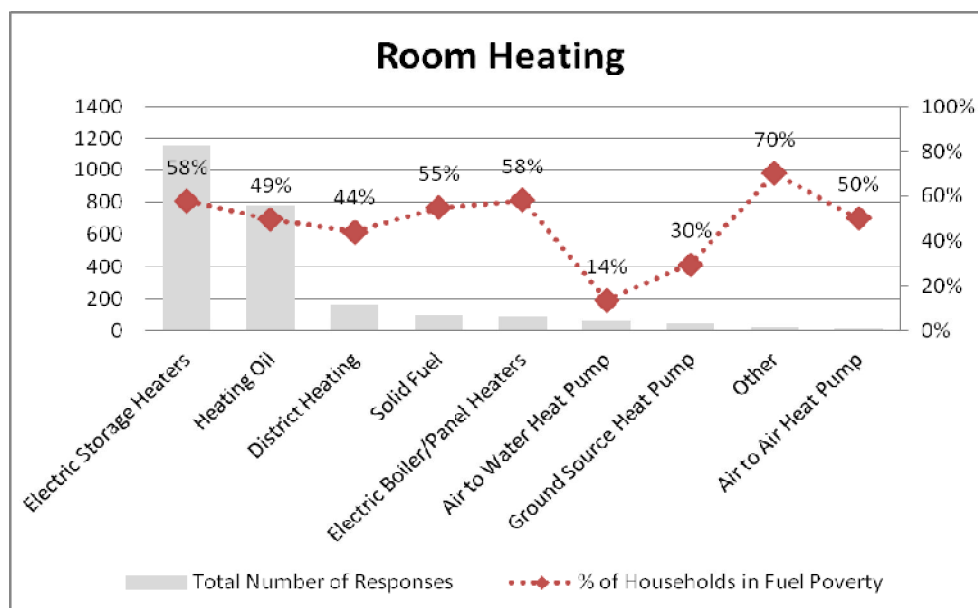
Fig. 5.5.1 Fuel Poverty Levels by Primary Room Heating

5.6 59% of homes with unfilled cavity walls were in fuel poverty. 62% of homes with less than 100 mm of loft insulation were in fuel poverty.

However in houses, where the loft had been topped up to more than 100 mm, the fuel poverty level was 49%.

5.7 8% of all respondents stated that their properties were not fully double glazed. However, 21% of respondents who were in fuel poverty had single glazing.

6   Size of Property Occupied and Household Size / Under-occupation

6.1 Of the 927 single households who responded, 783 (83%) have 2 bedrooms or more, 505 (53%) have 3 bedrooms or more, 113 (12%) have 4 bedrooms or more and 15 (2%) have 5 bedrooms or more.

6.2 Of the 837 households with only two adults in residence, 638 (76%) have 3 bedrooms or more, 25% have 4 bedrooms or more, 4% have 5 bedrooms or more.

6.3 Of all respondents, the household type who are most fuel poor are households with fewer occupants. 66% of single person households were fuel poor, 65% of households with 1 adult with children were fuel poor.

6.4 Of the 614 single households in fuel poverty, 62% lived in their own homes. The next highest percentage was SIC tenants at 26%.

6.5 Of the 614 single households in fuel poverty, 61% included at least one member of the household aged of 65 or more.

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6.6   Not all respondents included their Council Tax Band. However, of the 62% who did, 65% of households living in a Council Tax band A property considered themselves to be in fuel poverty.   Of these properties, the highest percentage by locality was within the North Isles at 75%. This locality is where the highest proportion of Council Tax Band A properties are.

7   Energy Supplier and Payment Type

7.1   The results show a marked difference between levels of fuel poverty and who supplied the energy. For example, 56% of all respondents whose accounts were with Scottish Power or Scottish Hydro were in fuel poverty, whilst only 34% of those whose accounts were with EON were in fuel poverty.

Electricity Provider	Total	% of Responses	Fuel Poor	% Fuel Poor
Scottish Hydro (SSE)	2245	93%	1200	53%
Scottish Power	34	1%	19	56%
EDF	18	1%	10	56%
N Power	17	1%	7	41%
Other	58	2%	21	36%
E-On	53	2%	18	34%
Grand Total	2425	100%	1275	

Fig. 7.1.1 Fuel Poverty Levels by Electricity Supplier

7.2   The results also show a marked difference in fuel poverty levels for those paying their electricity by different means. 91% of those paying weekly were in fuel poverty whilst only 46% of those paying monthly were.   75% of those with a pre pay card were in fuel poverty whilst only 46% of those paying by Direct Debit were.

Main Fuel Payment Method	Total	% of responses	Fuel Poverty	% in Fuel Poverty
Weekly	79	3%	72	91%
Prepay Card	118	5%	88	75%
Cash	161	7%	93	58%
Quarterly	354	15%	197	56%
Account	188	8%	100	53%
Direct Debit	617	25%	282	46%
Monthly	797	33%	364	46%
Unknown	111	5%	79	71%
Grand Total	2425	95%	1196	

Fig. 7.2.1 Fuel Poverty Levels by Electricity Payment Type

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7.3   89% of those paying more than £3500 annually for their energy were in fuel poverty. 54% of these also stated that their homes were not being heated adequately and that they were spending more than 10% of their Household income to heat their home.

 Of those households paying £2500 to £3000 and £3001 – £3500, 60% and 65% respectively were in fuel poverty.
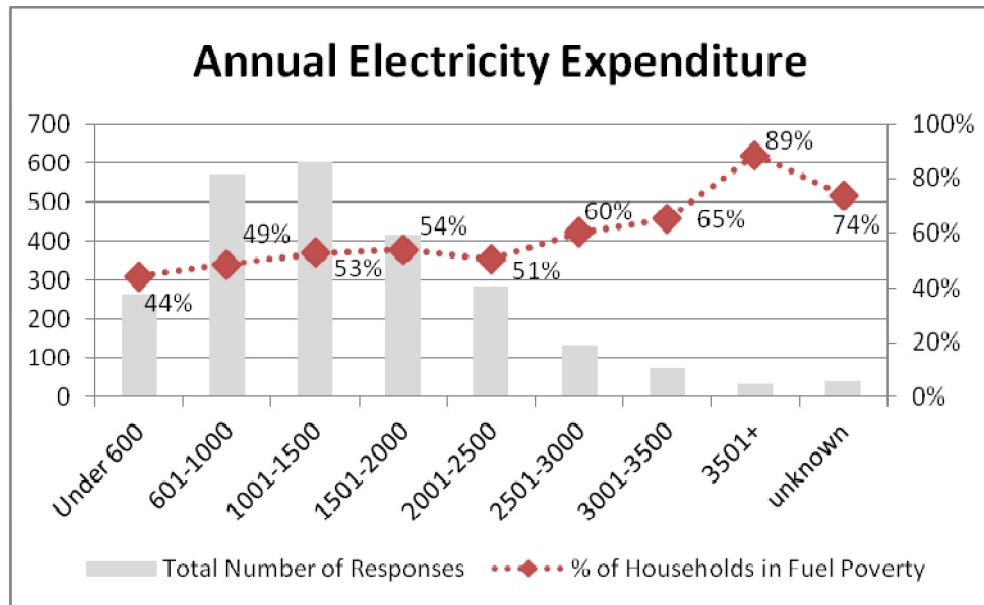
Fig. 7.3.1 Fuel Poverty Levels by Annual Electricity Expenditure

7.4   Of respondents, 92% of households who were in fuel poverty stated that their total annual income was under £7500.

 44% of these who were spending more than 10% of their Household income on energy also stated that their homes were not being heated adequately. Of these 162 households   77% were single person, 12% were 2 adults only with the remaining 11% of households including children. 52% of these households include people over 65+, with the majority of them living in Lerwick & Bressay.

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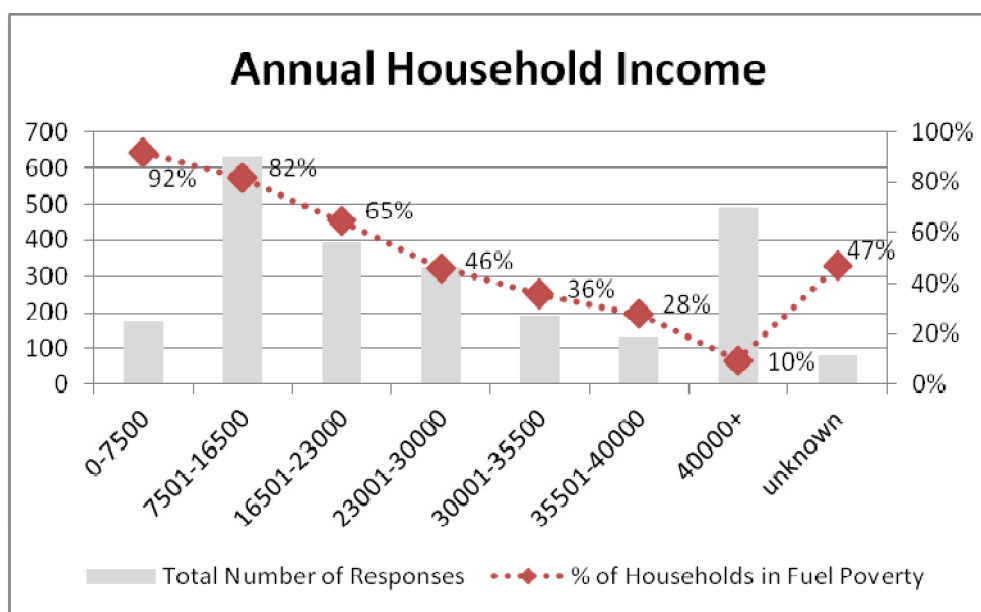
Fig. 7.4.1 Fuel Poverty Levels by Annual Household Income

7.5   The survey results demonstrated that households on lower incomes were more likely to be in fuel poverty than households with higher incomes.

82% of all households where the overall income is between £7500 and £16500 were in fuel poverty.   These figures compare with a fuel poverty level of 32% in households where the household income is between £30000 and £40000.

8   Age Profile of Family and Benefit Level

8.1   Of the households responding with residents over 65, 62% were in fuel poverty. Comparatively, 43% of households with children under 10 were in fuel poverty.

81% of those claiming benefits were in fuel poverty, regardless of age.

	Total Response	% in Fuel Poverty
Household with Child under 10	293	43%
Household with Over 65	1015	62%
Claiming Benefits	351	81%

Fig. 8.1.1 Fuel Poverty Levels for Households with Children under 10/ Adults over 65 or Claiming Benefits

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9 Households not heating their home adequately

9.1 As well as the respondents who claimed to be in fuel poverty, there were 719 respondent households who said that they did not heat their home adequately. This equated to 30% of the total responses to the survey.

The localities they live in are as follows:

Locality	Total	% by Locality
Lerwick And Bressay	221	31%
North Isles	121	17%
Central Mainland	116	16%
North Mainland	112	16%
South Mainland	109	15%
West Mainland	40	6%
719		100%

9.2 Of the 719, 41% are households who include someone who is over 65. 12% of households with at least one child under the age of 10 stated that their homes were not adequately heated.

9.3 The tenure of homes not adequately heated is as follows:-

	Do not adequately heat their home
64%	Owner Occupiers
23%	SIC Tenants
6%	Private Rented
3%	Tied / Croft
3%	HHA
2%	Other

9.4 The house size of homes not being adequately heated is as follows:-

	Do not adequately heat their home
48%	3-bed
27%	2-bed
13%	4-bed
8%	1-bed
3%	5-bed

9.5 Of respondents who stated that they did not heat their home adequately 45% of those were single occupants and a further 16% were households including children.

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9.6   In households stating that they were not adequately heating their home the type of primary room heating is as follows.

Is Your Home Adequately Heated?		
Room Heating	Total	% in Fuel Poverty
Electric Storage Heaters	429	60%
Heating Oil	161	22%
Solid Fuel	44	6%
Electric Boiler/Panel Heaters	38	5%
District Htg	37	5%
Other	4	1%
Air to Air Heat Pump	3	0%
Ground Source Heat Pump	2	0%
Air to Water Heat Pump	1	0%
Grand Total	719	

10   National Context

10.1   The Scottish Rural Fuel Poverty Task Force has identified distinctive dimensions contributing to fuel poverty in remote and rural reas. These are detailed as follows:-

Income Poverty

The MIS Rural Remote Scotland report 2012 demonstrates that households require 10% to 40% higher household income to achieve the same UK average Minimum Income Standard. Our figures included at 7.4 demonstrate this issue within Shetland as affecting our fuel poverty levels.

Climatic Conditions

These affect house fabric and require more heating to be used in properties in certain areas, particularly exposed, rural conditions. Increased storm conditions over the past few years have paralleled an increase in fuel poverty due to an increased need for heating.

It also suggests that weather patterns are affecting fuel poverty levels as the recent long wet and windy periods and poor summers have left householders requiring to heat their homes all year round. This changed weather pattern creates increased energy demand and has almost certainly pushed some families into fuel poverty.

Figure 10.1.1 Heating Degree Day Comparison, shows that years 2014 and 2015 had 199 and 441 more degree days than 2011.   This means that people needed to heat their homes more frequently and for longer periods in the most recent years.

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This weather pattern change has affected levels of fuel poverty in remote, northern, rural areas such as Shetland.
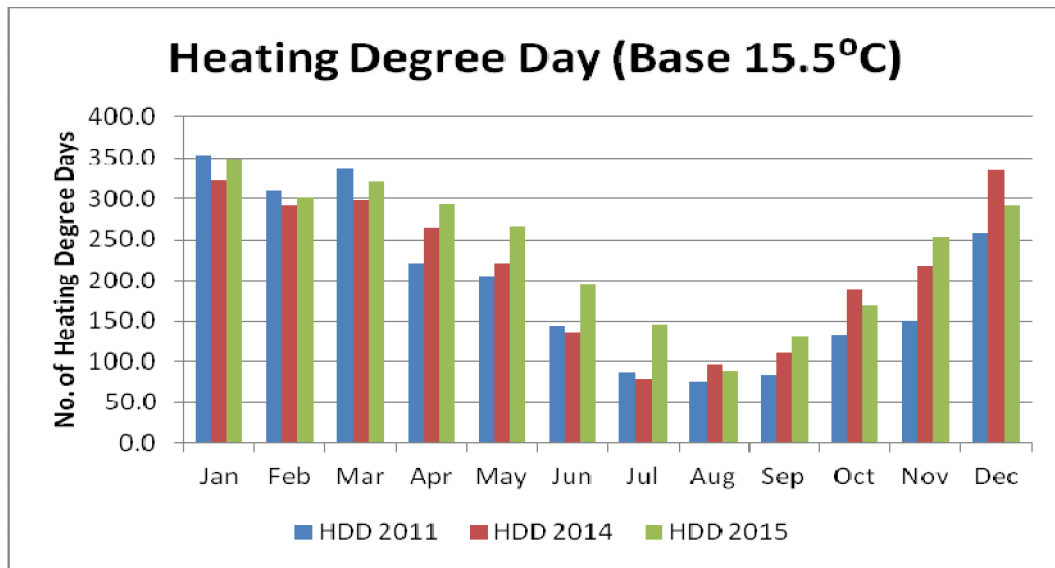
Fig. 10.1.1 Degree Day Comparison

Housing stock

The type and condition of homes have a critical effect on the amount of heat required to maintain an adequate level of heating. As shown in our survey results above low levels of insulation and larger homes occupied only by small families create a climate for fuel poverty.

Energy Market and Prices

Restricted choice of supplier and /or tariffs has a negative effect on energy costs which when combined with the need for more heating to maintain an adequate level of comfort pushes families into fuel poverty. This too has been demonstrated by our figures above.

 The fact that Shetland is an off gas area is also critical in limiting energy costs. The unregulated fuel market for fuels such as domestic oils creates a captive market for many householders when paying for their energy needs.

Currently off gas areas pay much more than on gas areas to keep homes warm. The North of Scotland region pays more than the South of Scotland region and Pre Payment Meters customers pay more than anyone else. Most rural customers show little interest in switching supplier as demonstrated by our figures and the CMA's Energy Market investigation.

Our survey results demonstrated at 7.1 reinforces the benefits that can be achieved by switching energy supplier. It also demonstrates the problems found in Shetland and

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other areas with certain non-changeable tariffs, for example Total Heating Total Control (THTC). Households with these tariffs cannot easily switch suppliers.

Government figures published by the Department of Energy and Climate Change demonstrate the rising trend in the cost of Electricity, as is shown in figure 10.1.1.
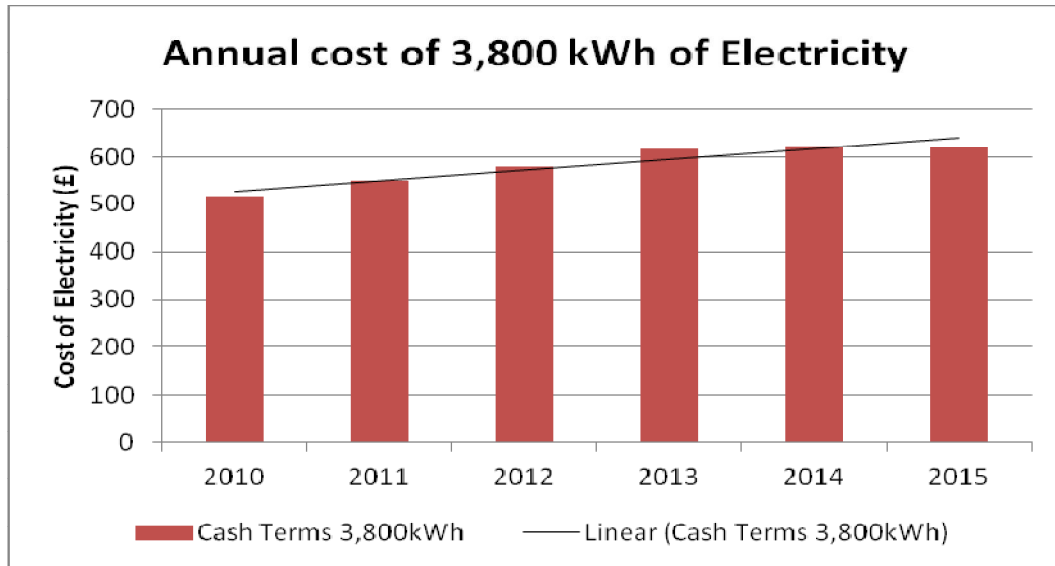
Fig. 10.1.1 Annual cost of 3,800 kWh of Electricity (DECC 2016)

This rise in electricity costs co-insides with the rise of 10% in fuel poverty levels in Shetland over this period.

Demographics

Rural communities have a much higher proportion of older people than urban areas, including many single pensioner households in under occupied houses. The Scottish Household Survey, Census stats and the Fuel Poverty Evidence Review carried out by Scottish Government's SHCS research team all have evidenced this as do our figures on households above.

In our survey 52% of households with three or more bedrooms and only one or two residents were in fuel poverty. This demonstrates the value of property downsizing where such property is available.

The distribution of fuel poverty in Shetland parallels the Energy Savings Trust fuel poverty distribution map, although the levels within the bands are now higher, the banding pattern remains accurate.

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11   Conclusion

11.1   In November 2015 Shetland Islands Council carried out a domestic Fuel Affordability Survey of all Shetland homes. Of the 2425 who responded:-

- **53% are in fuel poverty**.   -   1275 respondents answered yes to the question 'Do you estimate you spend more than 10% of your household income on heating and electricity costs? This matches the Scottish House Condition Survey figure published in 2016.

- The locality where **fuel poverty is highest is in the North Isles** (64%), followed by North Mainland (58%).

- **30% of households do not feel their home is adequately heated.**

- The highest fuel poverty rate was in Semi-Detatched and End Terraced Houses. The majority of respondents were from detached properties, where 46% were in fuel poverty.

- The highest fuel poverty levels were in social rented homes.   The highest number of responses were from owner occupiers.

- Respondents living in homes heated by electric boiler/panel heaters or electric storage heaters have the highest levels of fuel poverty. Of those not adequately heating their home, most had electric storage heaters (60%).

- The highest fuel poverty rates were found in households whose water was heated by electricity and solid fuel.

- The **highest fuel poverty was found to be in older, solid wall constructed properties.**

- **Properties with low insulation levels showed the highest fuel poverty.**

- The survey responses evidenced a level of under occupation, where households are living in properties larger than their household's needs.

- **Single person households living in their own homes, over the age of 65 were most likely to be in fuel poverty.**

- The highest levels of Fuel Poverty were found in properties with Council Tax Band A.

- Scottish Hydro (SSE) was the energy supplier for 93% of respondents.

- **Those paying by direct debit were less likely to be in fuel poverty than those paying weekly or by cash.**

- **The higher the annual electricity expenditure, the higher the fuel poverty level.**

- **The lower the annual household income, the higher the fuel poverty level.**

- **Those claiming benefits, regardless of age, were more likely to be in fuel poverty (81%).**

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- Of those who did not adequately heat their home, most were owner occupiers (64%) and most were living in properties having 3 bedrooms.

- **Pre payment meters were the most expensive way of paying for electricity but were often used by those on low incomes.**

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Shetland Fuel Poverty Action Group Action Plan

Context: Shetland's Commission on Tackling Inequality report made the following recommendations on how to address Fuel Poverty in Shetland:

1.1 A5.1 Work closely with UK and Scottish Government including through Our Islands Our Future and the Islands Bill process, to ensure the needs of Shetland households are understood and supported by national support available

1.2 A5.2 Investigate the potential for small-scale local dispersed community based district heating schemes drawing in external funding, in order to increase the heating options available in local areas across Shetland

1.3 A5.3 Request that SHEAP review pricing to investigate potential for pre-payment meters to be the same cost for electricity as other customers

1.4 A5.4 Raise awareness of the value of moving to smaller properties, if available, and provide support to householder, if necessary

The Fuel Poverty Action Group has taken the Commission's report recommendations and the evidence in the Fuel Affordability Report to develop the detailed action plan below:

No.	Action	Lead Organisation
1	Maximise achievement of external energy efficiency/fuel poverty grant funding available from Scottish Government through writing grant funding bids eg Home Energy Efficiency Area Based Scheme; Scottish Energy Efficiency Programme.	SIC Carbon Management Team
2	Deliver a programme of fuel poverty grants to private householders throughout Shetland maximising the take up of all Grant Schemes and promoting access to householder support mechanisms.	SIC Carbon Management Team
3	Design and deliver a programme of energy efficiency works within Shetland Council houses e.g. EEESH.	SIC Housing Services
4	Design and deliver a programme of energy efficiency works , including the design of new energy efficient homes for Registered Social Landlord tenants throughout Shetland.	Hjaltland Housing Association
5	Manage the Repair Fund available for homes in need of minor works in order to help householders access energy efficiency grant funding which could not be accessed without this pre repair work.	Hjaltland Housing Association
6	Manage the Fuel Poverty and Energy Advice Service of Shetland Citizens Advice Bureau including the delivery of capacity building training for professionals working with vulnerable clients and direct support to vulnerable clients to support them to access Grant Schemes and/or better energy tariffs.	Shetland Citizens Advice Bureau

7	Carry out benefits checks for householders to maximise their income and offer debt advice to support income stabilisation.	Shetland Citizens Advice Bureau
8	Carry out home energy advice visits to support householders better understand their energy needs and promote access to the local and national grant and loan schemes.	ES Energy Advisor(Shetland based)
9	Carry out in depth home energy surveys for the production of Energy Performance Certificates as a basic requirement of grant or loan funding referrals for the Home Energy Efficiency Area Based Scheme, the Warm Homes Scheme and for the energy efficiency loan schemes offered by the Scottish Government.	SIC Carbon Management Team
10	Manage the Home Energy Scotland phone line for referrals and advice, including benefits checks and general energy advice.	Home Energy Scotland
11	Commitment by all partners on the Fuel Poverty Action Group to cross refer clients (as indicated on the Fuel Poverty flowchart) to ensure that everyone is able to benefit from all the support available and to promote all schemes that benefit householders.	FPAG
12	Support the recommendations of the Scottish Rural Fuel Poverty Task Force by working closely with Scottish Government to act on its recommendations.	FPAG
13	–Work with Scottish Government to ensure funding streams reflect rural disadvantage for example using a Minimum Income Standard index and an energy price index for all fuel types as a basis for calculating funding levels.	FPAG
14	Work closely with Scottish Government to influence the design of the RdSAP tool and Energy Performance Certificates so that they better reflect the range of prevailing climate conditions experienced in Shetland including taking effect of draughts and wind driven rain on heat loss and fabric condition. This would better reflect Shetland needs in grant funding levels.	FPAG
15	Work closely with Government, Ofgem and energy suppliers to offer the best rate tariffs to all customers – particularly those on restricted meters targeting priority service register customers first ensuring that they are transferred to the best tariff for their needs.	FPAG
16	Investigate collective buying clubs for domestic oil and LPG to ensure Shetland customers obtain the cheapest rates possible for their needs.	FPAG
17	Work closely with Scottish Government to extend the 5p remote Areas Fuel Duty Discount to domestic oil and LPG.	FPAG
18	Work closely with the UK Government to ensure that the Smart Meter rollout is delivered in Shetland early in the programme and that the smart meters offered are of at least SMETS 2 capability.	FPAG

19	Work closely with Scottish Government to ensure that there is available grant or loan funding for pre insulation repair works to ensure homes where insulation cannot be installed due to pre-existing damp or fabric problems can be repaired as a pre cursor to further energy efficiency work.	FPAG
20	Encourage local construction firms to upskill to the necessary levels of accreditation to enable them to deliver the grant/loan funding programmes available within Shetland. This could be means of offering training programmes or funding training elsewhere.	SIC
21	Encourage private sector landlords to upgrade the energy efficiency of their properties by accessing available grant and loan funding.	FPAG
22	Work closely with Ofgem, UK and Scottish Governments to ensure that electricity costs within Shetland are contained at an affordable level – particularly in light of the proposed new generation costs.	FPAG
23	Encourage local employers to pay the full living wage and ensure that appropriate sick pay is available to all employees.	SIC
24	Support local initiatives which circumvent the grid constraints currently experienced in project development in the use of renewables and support local energy production and self sufficiency thus enabling communities to derive and pass onto consumers the full social and economic benefits of the energy they generate.	SIC
25	Work closely with Scottish Government and Ofgem on the development of the new ECO 2 to ensure that those areas which pay in the most through high energy use receive the highest level of funding to support energy efficiency works.	FPAG
26	Respond to the Government's Social Security consultation to ensure that Winter Fuel Payments and Cold Weather Payments reflect the weather conditions in Shetland and are better targeted at those in Fuel Poverty.	FPAG
27	Maintain the successful working partnership with Warm Works to ensure that all available grant funds are delivered to the best advantage of Shetland householders sharing the burden of costs where applicable to obtain a holistic end energy efficiency improvement for the property.	Carbon Management Team
28	Explore opportunities for developing a process by which the Council's Estate Operations Service can subcontract local installers not yet able to achieve PAS2030 to work under the Council's accreditation to carry out works to support the various energy efficiency grant funds to increase access to grants and speed of delivering energy efficiency measures.	Director of Infrastructure Services

Shetland Islands Council

Environment and Transport Committee   **3 October 2016**

Charter for Household Recycling In Scotland
ES-01-16-F

Executive Manager- Environmental Services	Environmental Services Infrastructure Services

1.0   Summary

1.1   This report presents the Scottish Government Household Recycling Charter for adoption by the Council. The Council will then complete a gap analysis to generate an options appraisal to redesign the Waste & Recycling Collection Service in Shetland. The options appraisal will be presented to a future Committee for decision.

2.0   Decision Required

2.1   That the Committee adopt and sign the Charter for Household Recycling in Scotland; and

2.2   Instruct officers to work with Zero Waste Scotland to develop an Options Appraisal and Transition Plan to deliver Shetland's household waste and recycling collection services in line with the new Code of Practice.

3.0   Detail

3.1   In 2014 Zero Waste Scotland conducted an analysis of waste collection in Shetland which considered the best practicable environmental option for the key recyclates in the waste stream to determine the most appropriate way of disposing waste in Shetland. The report concluded that the best economical and environmental way of disposing of waste was to continue burning the waste at the Energy Recovery Plant until such time as another source of energy was available to supply heat to the district heating. The report highlighted that textiles, metals and glass were best recycled and more attempt should be made to capture this waste without incurring excessive costs. The report also acknowledged that if there was an alternative source of heat for the district heating scheme the case for incineration on island became less clear and a full range of recycling would then be required. Min Ref 33/14

3.2   The Energy Recovery Plant has to conform to the Pollution Prevention and Control (Scotland) (PPC) Regulations 2012, which includes the implementation of the controls required under the European Waste Incineration Directive (WID) . The controls are implemented by the conditions detailed in the PPC permit issued and enforced by SEPA . A new condition in this year's PPC Permit states that as far as practicably possible non ferrous metals shall be removed from the waste stream by December 2017.

3.3   A further condition to remove hard plastic has been omitted because it is recognised that there is a need to retain plastic to maintain the calorific value of the waste in order to deliver sufficient heat output for the District Heating Scheme. To compensate for this omission however the permitted level of waste throughput for the Energy Recovery Plant has been lowered to below 25000 tonnes per year. As the calorific value of waste changes due to reductions in packaging or increased recycling levels then there will be a requirement to burn more tonnage to deliver the same heat output to maintain the heat for the District Heating Scheme so this upper limit will create a challenge for the Plant's ongoing operation. In 2015/16 23453 tonnes of waste was incinerated. The first 5 months this year it is 9710 tonnes

3.4   In 2015 the Scottish Government and COSLA launched the Charter for Household Recycling and approved a Code of Practice (CoP) for collection waste for the whole of Scotland.   The aim of the new CoP is to ensure consistency of collection systems across Scotland to encourage greater participation in recycling schemes to increase the capture of resources from waste.

3.5   It is the decision of each individual Council whether or not they wish to sign up to the Voluntary Charter. To date over half of Scottish Councils have signed up to the Charter. It has been recognised by Scottish Government and Zero Waste Scotland that many Councils have invested in infrastructure to deliver waste and recycling solutions (like the ERP) and many have contractual arrangements in place which might limit their capacity to change services immediately. Therefore the first step after signing the Charter is for the Council to assess their current service provision against the CoP with support from Zero Waste Scotland.   This produces a gap analysis between the CoP and their current waste services and an option appraisal to determine the preferred collection system. The Council then develops a Transition Plan to implement the changes and these can be scheduled to be implemented in the medium to longer-term depending on the circumstances for the Council.

3.6   By signing the Charter the Shetland Islands Council would be committing to that process. Should any changes to current services be recommended following the gap analysis and options appraisal, these would be reported back to this Committee. Where there is a funding shortfall, when compared to existing budgets, the Transition Plan can be submitted to Zero Waste Scotland for capital support to facilitate the transition. This option appraisal will be the basis of Shetland's future Waste Strategy if it is approved by the Council.

3.7 There is a need to review Waste and Recycling Services given the change to the ERP permit anyway as it may not be possible to demonstrate to SEPA that the current recycling bring sites are sufficient to separate the non-ferrous metals out of the waste stream. Signing the Charter enables the Council to call on Zero Waste Scotland's expertise and knowledge of best practice and also opens the opportunity for the support funding to change services, if necessary. The CoP does recognise that whilst there is a need to create a consistency of approach across Scotland that the arrangements in Remote Rural and Island Authorities may, by necessity; need to be different from the urban approach to recycling. The principle of island and rural proofing appears to be recognised in an approach that seeks wider conformity across the Scottish local authorities

Strategic

4.1 Delivery On Corporate Priorities – Our Plan sets out 20 Actions to be achieved by 2020. Developing a Waste Strategy for Shetland would be a key component of action 17 "We will have reduced the effect we have on the local environment, particularly reducing carbon emissions from our work and buildings.".

4.2 Community /Stakeholder Issues – Any change to waste and recycling services will need effective community engagement strategy to maximise participation with waste prevention, recycling, and reuse.

4.3 Policy And/Or Delegated Authority – In accordance with Section 2.3.1 of the Council's Scheme of delegations, the Environment and Transport Committee has responsibility for discharging the powers and duties of the Council within its functional area.

4.4 Risk Management – The major risk in failing to carry out the separation of the waste streams is to the ongoing operation of the Energy Recovery Plant. If the permit conditions cannot be met the Energy Recovery Plant will cease to operate lawfully and the Council could be subject to enforcement action by SEPA. The District Heating Scheme is reliant on the heat from the ERP and there could be reputational issues if the Council's failure to comply with the Waste Regulations resulted in SEPA requiring that the operation cease. There could be financial implications due to the conditions in the contract between the Council and SHEAP if the heat provision requirements were unable to be fulfilled.

4.5 Equalities, Health And Human Rights – The District Heating Scheme significantly reduces heating costs for householders compared to electric heating. This has had a positive impact on reducing Fuel Poverty in Shetland.

4.6 Environmental – Recycling and Reuse of non ferrous metals, textiles and glass has been demonstrated to be the best practical environmental option for these waste streams. Improving the waste segregation prior to incineration has potential to improve emissions from the ERP.

4.7   Financial – By adopting the Charter for Household Recycling in Scotland, where there is a funding shortfall when compared to existing budgets, the Transition Plan can be submitted to Zero Waste Scotland for capital support to facilitate the transition. This may be used to procure part or all of the additional equipment required should changes to services be recommended following the option appraisal, including the additional cost of vehicles and waste collection receptacles.

4.8   Legal – The ERP must operate in a manner that complies with its PPC permit conditions which are applied to ensure that the relevant waste and pollution control regulations are implemented.

4.9   Human Resources – A review of current waste collection and recycling arrangements following adoption of the charter will result in an option analysis and transition plan to bring the current arrangements in line with the CoP. This transition plan will describe any impacts on staff.

4.10   Assets And Property – A review of current waste collection and recycling arrangements following the adoption of the charter will result in an option analysis and transition plan to bring the current arrangements in line with the CoP. This transition plan will describe any impacts on Assets and Property.

5.0   Conclusions

5.1   Adopting the Charter for Household Recycling in Scotland gives the council an opportunity to use Zero Waste Scotland's expertise and knowledge in developing a new waste strategy for Shetland including potential access to available capital funding to transition to a model of recycling collection and reuse which is in line with the CoP.

For further information please contact:
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16 September 2016

List of Appendices
Appendix 1- Charter for Household Recycling in Scotland

Background documents:
Code of Practice –Household Recycling in Scotland
http://www.zerowastescotland.org.uk/sites/default/files/Household%20Recycling%20COP%20v2.pdf

END

Charter for Household Recycling in Scotland

This charter is a declaration of our organisation's intent to provide services that deliver local and national benefits, encouraging high-levels of citizen participation in waste prevention, recycling and reuse.

We, as leaders in local government and the main providers of services to households, acknowledge that significant progress has been made in achieving greater value from recycling and reusing household waste over the past 10 years. We also acknowledge that further progress is required to achieve better national and local outcomes.

We welcome the opportunity to make a commitment to our future waste, recycling and reuse services that will build on the progress achieved to date to ensure that waste is considered a resource and our services support sustainable employment and investment within the Scottish economy.

We recognise the opportunities of a more circular economy and better resource management to support sustainable employment and investment in the economy for the benefit of Scotland and its local communities.

We commit:

- To improve our household waste and recycling services to maximise the capture of, and improve the quality of, resources from the waste stream, recognising the variations in household types and geography to endeavour that our services meet the needs of all our citizens.

- To encourage our citizens to participate in our recycling and reuse services to ensure that they are fully utilised.

- To operate our services so that our staff are safe, competent and treated fairly with the skills required to deliver effective and efficient resource management on behalf of our communities.

- To develop, agree, implement and review a Code of Practice that enshrines the current best practice to deliver cost effective and high-performing recycling services and tell all of our citizens and community partners about both this charter and the code of practice.

Signatories

…………………………………… ………………….………………………… Council Leader

…………………………………… ………………… …………………………… Chief Executive

Scottish Ministers welcome this declaration and will work in partnership with the signatories and their representatives to support the delivery of these commitments.

…………………………… …………………………… …………………………… ……………………………

Cabinet Secretary for Rural Affairs, Food and Environment

To achieve this, we will do the following:

Designing our services

1. We will design our household collection services to **take account of the Code of Practice (CoP)** for the variety of housing types and geography in our community. In doing so, over time, **we will establish common collection systems,** *as appropriate,* for paper, card, glass, plastics, metals, food and other commonly recycled materials deemed feasible(e.g. textiles, small WEEE, nappies) across Scotland.

2. We will ensure that **all citizens have access to services** for recycling to include paper, card, glass, plastics, metals and food. Thus, we will ensure that all citizens, whether at the kerbside or within their local community, are provided with adequate volumes of containers in line with the Code of Practice (CoP).

3. We will ensure that our household collections give **consistent definition of materials** (paper, card, glass, plastics, metals and food) that can be competently recycled in line with the Code of Practice (CoP). Thus, we will eradicate discrepancies on what can and cannot be recycled in different localities across Scotland.

4. We will **reduce the capacity provided for waste that cannot be recycled** to give the appropriate motivation to our citizens to recycle. Thus, we will ensure that all citizens, whether at the kerbside or within their local community, are limited to non-recyclable (i.e. black bag/general waste/residual waste) waste volumes in line with the established Code of Practice (CoP).

Deliver consistent policies

5. We will ensure that our local policies, in line with the Code of Practice (CoP), encourage citizens to recycle by **reducing the collection of waste that cannot be recycled (i.e. excess waste/side waste).**

6. We will ensure that our local policies **provide citizens with sufficient capacity for their waste**, recognising that some households will produce more waste than others, in line with the Code of Practice (CoP).

7. We will ensure that our local policies **direct our collection crews to not collect containers for waste that cannot be recycled that clearly contain recyclable materials** (including paper, card, glass, plastics, metals and food) in line with the Code of Practice (CoP).

8. Where citizens have not followed our collection advice and policies, we will ensure our **policies for communicating and taking corrective action are delivered consistently** in line with the Code of Practice (CoP).

9. We will ensure that policies for **bulky or excess waste encourage citizens to recycle and reuse,** *where this is practicable to do so*.

Operating our services

10. We will **collect household waste when we have said we will** and ensure materials are managed appropriately upon collection.

11. We will manage materials so that the **highest possible quality is attained and we seek to accumulate value** by working with partners to encourage inward investment for our economy.

12. We will ***record complaints and alleged missed collections*** and ensure that we respond to these in line with the Code of Practice (CoP).
13. We will ***listen to special requests or challenges*** that citizens are having in relation to household waste collections and ensure that we respond to these in line with the Code of Practice (CoP).
14. We will deliver services so that they ***take account of current policies with regards to environmental crime, litter and flytipping*** in line with the Code of Practice (CoP).
15. We will deliver services so that our ***staff and citizens are not endangered or at risk from harm*** in line with the Code of Practice (CoP).

Communicating our services

16. We will ***clearly explain to all citizens*** what services we provide by providing information on a regular basis. This will take recognition of different housing types, collection routes and service availability and be as specific to each property as necessary, in line with the Code of Practice (CoP).
17. We will ***deliver service information directly*** to citizens periodically in line with established Code of Practice (CoP).
18. Where we need to ***change our services for any reason, we will communicate with citizens directly***.
19. We will ***provide clear instructions to citizens on what can and cannot be recycled***, giving clear explanations where materials cannot be competently recycled.
20. We will communicate with citizens when they have not understood our services to ***improve awareness and reduce contamination of recyclable materials***.
21. We will ***record accurate information*** on the amount of waste collected and the destinations, as far as practicable, of these materials in order to give confidence to citizens that it is being properly managed.

Citizens

To aid with the delivery of this charter and the Code of Practice, we expect our citizens to participate in the recycling, re-use and non-recyclable waste services that we deliver, using them in accordance with the policies communicated to them, and hence assisting in improving both the quality and the quantity of materials provided for recycling.

Partners

In committing to this charter we request that our partners in national and local government, the resource management industry, retailers, manufacturers, packagers, the third sector and others provide leadership and support in helping us deliver this commitment.

This charter is a clear statement of local government's intent to encourage high-levels of citizen participation in waste prevention, recycling and reuse. All of our partners will have a part to play in utilising the influence they have on our citizens to compliment this intent.

Furthermore, our partners are requested to assist the development of the Code of Practice by providing expertise, information and evidence wherever possible.

The following commitments have been given by each of our partners:

Scottish Government

- To provide the leadership in supporting the delivery of this commitment.

- To provide the necessary policy framework to support local government in delivering the commitments in this Charter and the associated Code of Practice

- To liaise with partners to support the local government delivery of this commitment.

- To support the national behaviour change process required to deliver the foundations of a circular economy

Zero Waste Scotland

- To provide the evidence, research, benchmarking and examples required to deliver the commitments in this Charter and the associated Code of Practice

- To provide support, advice and guidance to local government that allows successful implementation of changes to services.

SEPA

- To advise local government on the regulatory impacts of the commitments in this Charter and the associated Code of Practice.

- To regulate waste and recyclate processors to ensure compliance with relevant legislation, particularly with respect to achieving appropriate destinations and markets for material.

Retailers, brands and packaging manufacturers

- To provide information to inform specifications for local government that will encourage consistent collections

- To provide technical, public relations and consumer behaviour advice to local government and its partners.

- To consider what resources, 'in kind', including behaviour changing measures, or financial, they can provide to support the delivery of the Charter.

- To inform, advise and guide local government and its partners on the technical scope of this Charter and related Code of Practice

The resource management industry

- To provide information to inform specifications for local government that will encourage consistent collections which consistently achieve high quality recycling and reuse.

- To support local government by providing targeted information and data that allows them to reduce contamination and improve public participation and confidence in recycling and reuse.

- To provide leadership and public support for the Charter and the related Code of Practice.

The third sector

- To provide leadership within the Third Sector on waste prevention, recycling and reuse and work in partnership with local authorities to develop the Code of Practice and support the effective delivery of the commitments in the Charter.

- To work with the Scottish Government and local authorities to promote effective communication with communities, groups, organisations and individuals on waste prevention, recycling and reuse and facilitate engagement in the design and development of services in line with the commitments in the Charter.

- To encourage and support practical action by communities, groups, organisations and individuals at a local level on waste prevention, recycling and reuse in line with the commitments in the Charter

Shetland Islands Council

Environment and Transport Committee   **3 October 2016**

Audit Scotland - Maintaining Scotland's Roads: A follow up report
RD-04-16-F

Executive Manager - Roads	Roads Infrastructure Services Department

1.0 Summary

1.1 This report provides an opportunity for this Committee to consider the key findings and recommendations made by Audit Scotland in their document "Maintaining Scotland's Roads: A follow up report" published on 4 August 2016.

2.0 Decisions Required

2.1 That the Committee:

2.1.1 considers the comments made in response to Audit Scotland's key findings;

2.1.2 considers the detail given, within this report, of the progress that has already been made on a number of Audit Scotland's recommendations; and

2.1.3 RESOLVES to approve the implementation of the proposed actions planned to comply with the remainder of Audit Scotland's recommendations.

3.0 Background

3.1 <u>Initial Report</u>
In November 2004 the Auditor General for Scotland and the Accounts Commission published "Maintaining Scotland's Roads" in which recommendations were made that Councils should:

- use the information from the Scottish Road Maintenance Condition Survey (SRMCS) to calculate the size of the maintenance backlog in their area;

- monitor and report publicly on the condition of their road network and their road maintenance backlog on an annual basis;

- review their budget setting process for road maintenance to ensure that an appropriate and cost-effective balance of expenditure between routine, winter emergency and structural maintenance is achieved;

- review their capital expenditure on structural maintenance to ensure that it achieves value for money and meets the key principles of the Prudential Code. In particular, Councils should conduct an option appraisal for procuring and financing road maintenance services;

- should examine whether cost savings are possible if their unit costs are above average;

- consider whether their road maintenance service could be improved by entering into consortia arrangements to achieve economies of scale;

- review their performance against the Code of Practice for maintenance management;

- collect better inventory information about the assets they are managing, including roads, bridges and street lighting;

- ensure that they have up-to-date IT systems and asset management systems;

- develop a framework of performance indicators and outcome targets against which to measure the performance of the road maintenance system;

- take into account the views of road users and the wider community in the development of road maintenance strategies;

- ensure that their road maintenance activities contribute to the environment and to sustainability.

3.2 Follow Up Report 2011
"Maintaining Scotland's roads: A follow-up report" was published in February 2011. Its main finding, relevant to Councils, was that Roads authorities could improve how they manage roads maintenance by introducing Roads Asset Management Plans (RAMPs) and using performance indicators to help them benchmark against other roads authorities.

3.3 Follow Up Report 2013
"Maintaining Scotland's roads: An audit update on councils' progress" was published by the Accounts Commission in May 2013. The audit examined councils' progress in implementing the 2011 recommendations. It found that some progress had been

made with the introduction of RAMPs and performance indicators but further work was needed.

4.0   Detail

4.1   Key Findings of Follow Up Report 2016
This latest report considers the cost of maintaining Scotland's roads and reviews the progress made in improving the management of roads maintenance. The main findings relative to the maintenance of the nation's roads together with information on how the Roads Service is or will be addressing these issues in Shetland is detailed in Appendix 1.

4.2   Recommendations of Follow Up Report 2016
A number of recommendations are made as to how Council's are to address the issues identified in the latest report's key findings. Progress has already been made on a number of these issues. The recommendations and our progress to date are detailed below together with information on our planned actions to address any outstanding issues.

4.3   "Maintaining Scotland's Roads" Action Plan
The actions that the Roads Service intends to take to address any outstanding issues raised in Audit Scotland's findings or recommendations are summarised in the Action Plan enclosed in Appendix 3.

5.0   Implications

Strategic

5.1   Delivery On Corporate Priorities – This report contributes to improving the arrangements for member engagement in monitoring Council performance and contributes to high standards of governance.

5.2   Community /Stakeholder Issues
No direct implications.

5.3   Policy and/or Delegated Authority – All Audit Scotland and other External Adviser's reports should be presented to the relevant Committee within 2 cycles of publication.

5.4   Risk Management – External advisors reports provide useful information on best practice. A failure to deliver effective external engagement or to learn from best practice elsewhere increases the risk of the Council working inefficiently.

5.5   Equalities, Health And Human Rights
No implications.

5.6 <u>Environmental</u>
No implications.

<u>Resources</u>

5.7 <u>Financial</u> – Under the Local Government in Scotland Act 2003, the Council has a duty to make arrangements that secure Best Value. Best Value is continuous improvement in the performance of the authority's functions taking into account efficiency, effectiveness, economy and equal opportunities.

There are minimal direct cost implications arising from the Action Plan but complying with it and Audit Scotland's recommendations assist the Council in securing Best Value. These minimal costs would be met from within existing budgets.

5.8 <u>Legal</u> – No implications.

5.9 <u>Human Resources</u> – No direct implications.

5.10 <u>Assets And Property</u> – The road network is the largest community asset for which Shetland Islands Council is responsible. It is vital and fundamental to the economic, social and environmental well being of the community. It helps to shape the character of an area, the quality of life of the local community and makes an important contribution to wider Council priorities including growth, regeneration, education, health and community safety. Roads also make a wider contribution to society, providing access to ferry terminals, ports and airports.

6.0 Conclusion

6.1 This report is for the Committee, in its monitoring and scrutiny role, to consider and comment on:

- the findings and recommendations made in "Maintaining Scotland's Roads: A follow up report;"
- the progress that has already been made within Shetland on a number of these findings and recommendations; and
- the Roads Services' planned actions summarised in the Action Plan.

For further information please contact:

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19 September 2016

List of Appendices

Appendix 1 – Key Findings of Follow Up Report 2016
Appendix 2 – Recommendations of Follow Up Report 2016
Appendix 3 - "Maintaining Scotland's Roads" Action Plan

Background Documents

"Maintaining Scotland's Roads: A follow up report"
http://www.audit-scotland.gov.uk/uploads/docs/report/2016/nr_160804_maintaining_roads.pdf

END

Key Findings of Follow Up Report 2016

1   Road Accidents
    "Police accident records indicate that poor road conditions are a contributory factor in around 0.7 per cent of fatal road accidents in the UK, 0.8 per cent of serious road accidents and 0.6 per cent of slight road accidents. Between 2010 and 2014, there were 865 fatal, 8,039 serious and 38,957 slight road accidents on Scottish roads. Extrapolating these figures means that poor and defective road condition may have been a contributory factor in six fatal, 64 serious and 234 slight road traffic accidents on Scottish roads over the five-year period."

    The Police have a policy of immediately contacting the local roads authority if they consider a road defect to have been a contributory factor in an accident. The Police have not expressed any such concerns to the Roads Service in the period considered by the follow up report.

2   Road Condition
    "In the period between 2011/12 and 2014/15 the overall condition of Scotland's Council maintained roads has stabilised at a figure of 63% that are in an acceptable condition."

    In the same period Shetland's overall road condition has changed from 54.91 to 58.09%, an improvement of 3.18%. This means that a further 33.5 kilometres of the Shetland road network was deemed by the report to be in an acceptable condition. This placed Shetland's roads in 25th place out of the 32 Scottish local authorities. However, the latest condition survey, completed in July 2016, shows that there has been a further improvement in Shetland's roads with 62.3% now considered acceptable meaning their condition is now much nearer the Scottish average.

3   Road User Concerns
    "The 2011 and 2013 audit reports both indicated that road users were increasingly dissatisfied with the condition of Scottish roads, which they believed was getting worse. In particular, the 2013 audit report referred to an AA survey in January 2013, which found that 45 per cent of local road users in Scotland considered road conditions to be poor, very poor or terrible. This was the worst rate in the UK. In response to actions contained in the National Road Maintenance Review (NRMR), a question was included in the 2014 Scottish Household Survey (SHS) to capture levels of user satisfaction with road condition on a more consistent basis than Councils had done previously. The results indicated that a third of respondents felt satisfied with road condition while 57 per cent felt dissatisfied. The remaining ten per cent felt neither satisfied nor dissatisfied, or had no opinion."

It is 8 years since a road user satisfaction survey has been undertaken in Shetland and the intention this year, as stated in our finalised RAMP, is to undertake a survey based on the model provided by the Association for Public Service Excellence (APSE). For information in Autumn 2008, when a survey was last done, 86% of Shetland's road users considered the "general condition of road surface" to be satisfactory or better. This figure is similar to that obtained for the SHS question from the 190 Shetland respondents. The data indicated that 91% of Shetland residents are satisfied with the road condition in their area, with 6% dissatisfied and 3% without an opinion.

4   Road Maintenance Spend
"Councils' net revenue and capital expenditure on general fund services (that is, the cost of all service provision except some Council Housing costs), decreased by £0.97 billion (7.5 per cent) between 2011/12 and 2014/15, after taking inflation into account. Councils' revenue and capital spending on roads maintenance fell from £302 million to £259 million over the same period (14 per cent). In percentage terms therefore, the reduction in Councils' expenditure on roads maintenance between 2011/12 and 2014/15 was almost double that of their reduction in net spending on general services. Councils spent £4,935 per kilometre on local roads maintenance in 2014/15."

In the same period Shetland Islands Council's expenditure on road maintenance has increased by 3.5%. This now equates to an annual spend of £3,148 per kilometre of road network. While this is an increase it still leaves our spend per kilometre as the 6th lowest of the 32 Scottish local authorities. The latest available figure, from the 2016 SCOTS/APSE return is a spend of £3,274 per kilometre.

5   Effect of Spending Levels on Road Condition
"SCOTS estimates that Councils need to spend £246 million each year, excluding inflation, on planned and routine maintenance to maintain the local road network in its current condition. Overall, councils spent £33 million (13 per cent) less on planned and routine maintenance in 2014/15 than SCOTS considers was necessary to maintain the current condition of local roads. According to SCOTS' figures, 14 councils spent more in 2014/15 than that necessary to maintain their current condition, while 18 councils spent less."

Shetland Islands Council spent £3.2 million on planned and routine maintenance in 2014/15. According to SCOTS this was £2.4 million or 75% less than was necessary to maintain the current condition of our road network. This discrepancy would appear to be too high especially when considering that the current budget has enabled a 6% improvement in the overall road condition indicator in the past 5 years.

6   Information on Expected Effect of Spending Decisions

"Councils are beginning to use financial modelling tools to analyse how different levels of spending on roads maintenance is likely to impact on road condition. SCOTS is also promoting the use of Annual Statement of Options Reports (ASOR) to allow elected members to consider how different budget decisions will affect road condition. These reports can help Councils decide whether they want to invest to improve road condition, maintain steady state or identify budget savings that may impact on road condition. However, only a third of councils are presenting options to elected members on the road condition that can be expected from different levels of spending."

The Road Service has presented a road condition report to this Committee for a number of years. It includes sections on the "Carriageway Maintenance Backlog" (the expenditure required to bring the entire road network of an authority to the acceptable or "Green" condition) and the "Steady State" figure (the annual budget required to maintain carriageways in a "steady state" so that they are neither improving nor deteriorating). The condition reports have explained how the SCOTS financial model has been used to predict changes to road condition and these financial figures as a result of maintaining or altering maintenance expenditure.

7   Road Asset Management Plans (RAMPs) Lack Detail
"The 2013 audit report found that about half of Councils had approved their RAMP and the remainder were in the process of doing so. The 2013 report also found that half of councils had information gaps in their RAMPs, including incomplete or unreliable asset inventory data, incomplete asset lifecycle plans and a lack of detailed long-term funding requirements."

The Roads Service had produced final versions of its RAMP and Road Maintenance Manual (RMM) following recommendations made in an "informal" review of the services' asset management planning practices undertaken by the Society of Chief Officers of Scotland (SCOTS). This final RAMP has addressed the requirement for asset lifecycle plans and detail on the long-term funding requirements for road maintenance in Shetland. A report recommending the approval of these documents is also on this meeting's agenda.

8   Performance Information
"The 2011 audit report recommended that councils should adopt the suite of performance indicators that SCOTS was developing. This would allow councils to consistently measure the performance of roads maintenance activities. It also recommended that Councils should make greater efforts to benchmark roads maintenance activities to drive out cost inefficiencies. The 2013 audit report found that Councils were making more use of performance information but further work was needed to improve the quality and consistency of data to allow meaningful benchmarking to take place."

Shetland Island Council and the majority of the other Scottish local authorities have adopted a common set of performance indicators developed between SCOTS and the Association of Public Service Excellence (APSE). Key roads maintenance indicators within the set include:

- spend per kilometre of network;

- overall road condition and by classification;

- percentage of budget spent on each of planned, reactive and routine maintenance;

- percentage of customer enquiries dealt with in target time;

- percentage of major defects dealt with in target time; and

- percentage of the road network treated each year.

9   Changes in the Management of Road Maintenance
"There is evidence that Councils are changing the way they manage roads maintenance. In part this has been due to public sector budgetary constraints. Examples include:

- prioritise roads of greater strategic importance;

- intervene earlier when roads begin to deteriorate, rather than treating those in the worst condition;

- greater use of modelling has led several councils to modify how they carry out planned maintenance by paying more attention to long-term costs;

- there are moves to adopt lean management techniques as a systematic process for improving efficiency;

- roads authorities are focusing savings on activities which contribute least to road condition;

- changing the treatment method used, for example from resurfacing to surface dressing; and

- changes to treatment criteria such as only repairing a pothole when it is 60mm rather than 40mm deep."

A number of these practices have been put in place by the Roads Service, some recently and some over a number of years. The Roads Service have certainly prioritised roads of "greater strategic importance" in the past but are now realising that greater

importance should be given to our unclassified roads if the greatest improvement in overall road condition is to be achieved. The Service is also intervening earlier to maintain roads when they can be surface dressed thereby delaying the need for more expensive structural repairs such as an overlay or reconstruction. The Service is beginning to use models, such as the "Carriageways Cost Projection" financial reporting tool produced by SCOTS, to predict long-term costs as addressed in the final version of our RAMP. The maintenance of verges, traffic signs and other features that contribute least to carriageway condition have had a larger proportion of their budget reduced. Historically Shetland Islands Council has always been one of the leading local authorities in terms of the percentage of our road network that is treated with surface dressing.

10   Innovation
"In response to the NRMR, Transport Scotland and SCOTS set up the Scottish Roads Research Board (SRRB) in 2011. SCOTS and Transport Scotland jointly fund the SRRB which has an annual budget of around £400,000 to fund research projects. Its main objectives are to promote and deliver innovation and share new products, techniques and knowledge across Scotland's road sector."

The Roads Service has introduced a number of new products and treatments in recent years in an effort to improve efficiency. These include:

- "bagged" asphalt instant repair materials that allow defects to be repaired without the need for the lengthy use of temporary traffic lights;
- the replacement of standard streetlighting lanterns with their LED equivalent to reduce energy and maintenance costs;
- new proprietary safety barrier systems that allow increased distance between posts thereby reducing costs;
- micro-surfacing of our urban streets that is a cost effective method of preventing water ingress, regulating uneven reinstatements and reducing further structural deterioration.

11   Staff Reduction
"Roads authorities are increasingly concerned about the potential effect of staff reductions arising from budgetary constraints on future roads maintenance activities. In particular, they are concerned at the loss of technical and commercial skills and expertise, the presence of an ageing workforce and how they can attract and train new staff. Scotland wide there are approximately 5,000 Council staff currently engaged in roads activities, 40 per cent are aged over 50 years and only 13 per cent are aged under 30 years."

These are very much issues of concern for the Roads Service with total staff numbers having fallen from 112 in 2011/12 to a current figure of 68.

The age demographic is worse than the national average with 54.5% aged over 50 years and only 3% aged under 30 years. We are attempting to address this and currently employ one modern apprentice "Roadworker" and are in the process of recruiting another.

12   Collaboration
"The steering group overseeing the NRMR identified the need for a more detailed assessment of the 'optimum arrangements for the management and maintenance of roads in Scotland' (known as Option 30). A separate Option 30 report, published in June 2012, concluded that current arrangements could be improved on and that all councils should explore sharing services in the short term." This led to the establishment of the Road Collaboration Programme.

The National Roads Maintenance Review was published in July 2012, following a recommendation from Audit Scotland. The review in its "Option30: Consideration of Optimal Delivery Structures for Roads Management and Maintenance" report established the Road Collaboration Programme and tasked it with identifying the potential benefits to roads authorities arising from innovation, collaborative working and shared services. Its aim is to ensure resilient and sustainable roads services with the approach that, due to the current economic pressures on roads authorities, sharing should be seen as the default position.

A report was presented to the Environment and Transport Committee on 15 June 2015 regarding the Council's participation in the Road Collaboration Programme. The report informed the Committee of the Council's involvement to date but also sought approval for the Council to withdraw from the programme on the basis that benefits warranting the cost of participation had not been identified. This was largely due to our geographical location. The Committee resolved to approve that the Council should no longer participate in the Road Collaboration Programme and should instead seek to enter into "memoranda of agreement" with other Councils or public bodies for specific collaborations (E & T Min Ref 25/15).

Recommendations of Follow Up Report 2016

1   <u>Roads Collaboration Programme</u>
Councils are to "ensure that they work closely with the Roads Collaboration Programme and regional group partners to determine the extent of shared service models for roads maintenance operations."

See the response given in Appendix 1 para 9 above.

2   <u>Road Asset Management Plan (RAMP)</u>
Councils are to "implement the findings of the consultant's review of Roads Asset Management Plans (RAMPs) where relevant."

See the response given in Appendix 1 para 7 above.

3   <u>Assessing and Comparing Efficiency</u>
Methods for assessing and comparing Councils' roads maintenance efficiency are to be implemented with the aim of "identifying and learning from Councils delivering services more efficiently."

The Roads Service currently uses a number of indicators to compare its performance with other roads authorities and from year to year (see Appendix 1 para 8 above). The Service also update a number of these indicators on an annual basis on the Council's "Covalent" software that is used to monitor and report on a range of performance indicators. This has allowed the Service to identify the most efficient Councils but we have yet to contact or meet with their roads authorities to share and learn good practice or identify the underlying reasons for variations. Discussions would be of mutual benefit and it is our intention that, following the publication of this audit, we could arrange a meeting with the other Island Councils. Since Orkney has the best overall road condition in Scotland it would perhaps appear that we would have much to gain from such a meeting. However, there are significant differences in geology, topography and historical spending that mean many of their methods may not be transferable. These differences include the proportion of single track roads that make up the road network. In Shetland 68% of the network consists of single track roads whereas in Orkney this type of road makes up only 48% of their network.

4   <u>Road Users Views and Perceptions</u>
"The National Highways & Transport (NHT) Network Survey, or similar, should be used to obtain consistent data on user views and perceptions of roads services."

See the response given in Appendix 1 para 3 above.

5   Engaging with the Public
The results of user surveys should be "used to develop more proactive ways of engaging with the public over roads maintenance issues, and to help inform scrutiny and challenge of roads maintenance budgetary proposals."

The Roads Service makes use of its webpage to inform the public about a range of issues including winter maintenance, asset management, road design, safety and performance indicators. The Council's Communication Section use social media such as Twitter to update the public on the progress being made on larger projects like the micro-surfacing of carriageways in Lerwick. They also assist with the issuing of news releases informing the public of the approach of the surface dressing season. The Service also recently had a campaign requesting the assistance of primary school pupils to name newly acquired gritters allocated to the roads in their community. The aim being to make the pupils and their parents more aware of the winter maintenance service.

6   Informing Elected Members
Councils are to "use their RAMPs to inform elected members of long-term investment plans for maintaining roads that take into account the whole-life costing of treatment options."

This recommendation has been addressed in the final version of the Council's RAMP which is recommended for approval in another report on this meeting's agenda.

7   Consequences of Budget Setting
"The consequences of spending less than that necessary to maintain current road condition should feature in budget-setting processes to allow elected members to make informed choices which take account of competing demands and priorities."

This is partly addressed by the annual road condition reports, made to this Committee, which detail the implications for maintenance spending on the "backlog" and "steady state figures (see Appendix 1 para 6 for detail). However, the contents of the condition report, according to Audit Scotland, should "feature in budget-setting processes." They go on to state "a good quality RAMP should set out the expected standard of service to be provided by the road network. This can be used to help inform the consideration of options based on the level of spending and prioritisation given to roads maintenance. In turn, these can help inform Councils' corporate budget decisions." This requirement, to explain the affects of budget setting on road condition, is better met by the Members' Seminars relating to service provision requirements.

"Maintaining Scotland's Roads" Action Plan

1. Roads Collaboration Programme
   Recommendation - Councils are to "ensure that they work closely with the Roads Collaboration Programme and regional group partners to determine the extent of shared service models for roads maintenance operations."

   Planned Action – Shetland Islands Council will seek to enter into "memoranda of agreement" with other Councils or public bodies for specific collaborations.

2. Assessing and Comparing Efficiency
   Recommendation - Methods for assessing and comparing Councils' roads maintenance efficiency are to be implemented with the aim of "identifying and learning from Councils delivering services more efficiently."

   Planned Action - Discussions with similar local authorities would be of mutual benefit and it is our intention that, following the publication of this audit, the Roads Service shall arrange a meeting with the other Island Councils.

3. Road Users Views and Perceptions
   Recommendation - "The National Highways & Transport (NHT) Network Survey, or similar, should be used to obtain consistent data on user views and perceptions of roads services."

   Planned Action - It is 8 years since a road user satisfaction survey has been undertaken in Shetland and the intention this year (2016/17), as stated in our finalised RAMP, is to undertake a survey based on the model provided by the Association for Public Service Excellence (APSE).

4. Engaging with the Public
   Recommendation - The results of user surveys should be "used to develop more proactive ways of engaging with the public over roads maintenance issues, and to help inform scrutiny and challenge of roads maintenance budgetary proposals."

   Planned Action –The Roads Service web page and social media will continue to be used to inform the public of the services provided, Council policies and ongoing projects. The Service will also run further "campaigns" such as the gritter naming when the opportunity arises.

5.   <u>Informing Elected Members</u>
Recommendation - Councils are to "use their RAMPs to inform elected members of long-term investment plans for maintaining roads that take into account the whole-life costing of treatment options."

Planned Action - This recommendation was addressed in the final version of the Council's RAMP which was recommended for approval to the meeting of the Environment and Transport Committee on 3 October 2016.

6.   <u>Consequences of Budget Setting</u>
Recommendation - "The consequences of spending less than that necessary to maintain current road condition should feature in budget-setting processes to allow elected members to make informed choices which take account of competing demands and priorities."

Planned Action – This recommendation is already being addressed by the annual road condition report and Members' seminars relating to service provision.

Shetland Islands Council

Environment and Transport Committee	**3 October 2016**
Policy and Resources Committee	**24 October 2016**
Shetland Islands Council	**2 November 2016**

Road Asset Management Plan and Road Maintenance Manual
RD-05-16-F

Executive Manager - Roads	**Roads** **Infrastructure Services Department**

1.0 Summary

1.1 The purpose of this report is to present the Road Asset Management Plan for Shetland's public road network. The Plan would apply to construction, acquisition, operation, maintenance and disposal of all Council road assets. The Road Maintenance Manual sets out the key processes and procedures within the Roads Service that underpin the delivery of the Plan.

2.0 Decisions Required

2.1 That the Environment and Transport Committee consider and comment on the Road Asset Management Plan and the Road Maintenance Manual, and RECOMMENDS that:

2.2 The Policy and Resources Committee RECOMMENDS, having taken account of any comments from the Environment and Transport Committee, that the Shetland Islands Council RESOLVES to approve the Road Asset Management Plan [Appendix 1] as part of the Council's Strategic framework documents, as set out in Part A of the Council's Constitution, to be managed by the Environment and Transport Committee.

3.0 Background

3.1 The road network is the largest asset for which Shetland Islands Council is responsible. It is fundamental to the economic, social and environmental well being of the community. It helps to shape the character of an area, influences the quality of life of the local community and makes an important contribution to wider Council

priorities including economic growth, regeneration, education, health and community safety. Roads are a key element of Shetland's connectivity providing access to ferry terminals, ports and airports.

3.2   The proposed Roads Asset Management Plan sets out the Roads Service plans for the management of the road asset for the next 5 years. It has been produced in accordance with national guidance and recommended good practice developed through the Society of Chief Officers of Transportation in Scotland (SCOTS) Roads Asset Management Project. The development meetings for this project have had input from all 32 of Scotland's local authorities.

4.0   Plan Objectives

4.1   The Road Asset Management Plan (RAMP) aims to guide the management of the Council's Road Assets to ensure that:

- assets continue to deliver a service to the community at an agreed level of service;
- national and local political outcomes are delivered;
- there is clear direction for staff to make informed decisions;
- statutory duties are met;
- exposure to risk is limited to acceptable levels;
- asset purchases or construction are only approved after whole of life costs and benefits are assessed; and
- clear allocation of responsibility for the management of each class of asset are given.

5.0   Plan Details

5.1   Asset Planning

5.1.1   The Roads Service is proposing the adoption of an asset management planning approach for the management of road infrastructure assets including the application of life cycle cost analysis as advocated in the Asset Management Framework published by SCOTS.

5.1.2   Prior to acceptance, proposed Capital Works projects shall be subjected to technical and life cycle cost evaluation and prioritised using predetermined criteria developed to satisfy the goals of the Corporate Plan and the Road Asset Management Plan (RAMP). The prioritised Capital Works will then be reported to the Environment and Transport Committee for approval.

5.1.3   Wherever possible predictive modelling will be used to develop and implement preventative maintenance programs to ensure lowest life cycle costs. The model used

will be the "Carriageway Cost Projection Tool" developed by SCOTS. Further models for streetlighting and the other asset groups will be employed as and when they are developed.

5.2 <u>Community Expectations</u>

5.2.1 All road infrastructure services will be regularly reviewed to ascertain the community level of service expectations and whether road users needs are being met. This will be done through a bi-annual questionnaire circulated to all Community Councils asking them to record levels of satisfaction with, and the relevant importance of all aspects of road management and maintenance. The most recent survey model used was the 'Highway Maintenance Services Customer Satisfaction Survey' as produced by APSE.

5.2.2 The Roads Service will seek and value community input regarding desirable infrastructure before projects are commissioned for Asset planning investigations.

5.2.3 The Roads Service will regularly review its asset inventory and identify opportunities for rationalisation in line with community requirements.

5.3 <u>Risk Assessment and Management</u>

5.3.1 The Roads Service will maintain a programme of regular inspections of assets to minimise risk to the Council and the community.

5.3.2 The Roads Service will maintain and regularly review a Road Asset Risk Register that will identify the risks associated with the Council's Road infrastructure and record the controls in place to manage them. The risks on this register will also be included on the Roads Service list in the Council's RiskWEB Risk register system. The entries from the Road Asset Register onto RISKWEB will be made and reviewed by the Team Leader - Asset and Network Management.

5.3.3 The allocation of Maintenance and capital work to assets will be guided by the Council's risk management policy.

5.4 <u>Asset Accounting</u>

5.4.1 The Roads Service will maintain asset registers as required to meet the requirements of the CIPFA Code of Practice on the Highways Network Asset.

5.4.2 Useful "design lives" shall be determined and given to each asset group or component based on past experience and current benchmarked standards.

5.4.3 Annual Depreciation costs will be calculated in accordance with the CIPFA Code of Practice on the Highways Network Asset and reported annually with gross replacement and depreciated replacement cost figures.

5.5 Budget Allocation

5.5.1 The Council budgets for Roads including the funding for all asset purchase, maintenance, rehabilitation and replacement shall be guided by the Council's Road Asset Management Plan.

5.5.2 The allocation of budgets (capital and revenue) will be reviewed annually taking into account the status of each asset and the level of service achieved in the preceding year(s) shown in the annual status and options report.

5.6 Road Asset Management

5.6.1 The Roads Service will in time develop a 10 Year Road Asset Management Plan covering all of the Council's Road Assets including carriageways, footways, street lights, structures, traffic signals and street furniture. However, SCOTS are still in the process of developing their recommendations for the inspection criteria and regimes for the footways, structures, traffic signals and street furniture groups. Therefore, initially the 10 Year Road Asset Management Plan will only be developed for carriageways and street lighting. The other groups will be added as the SCOTS Asset Management project progresses.

5.6.2 Road Asset Management Plans shall define the management strategies to be adopted throughout the life cycle of the asset.

5.6.3 The Road Asset Management Plan sets out for each asset group:

- predicted future changes in demand;
- levels of service required;
- the investment required in the maintenance, renewal and replacement of assets required to meet the levels of service;
- methods of performance monitoring and appraisal;

- financial projections; and
- the risks associated with the plan.

5.6.4 The proposed Road Asset Management Plan is attached as Appendix 1 to this report for consideration and approval.

5.7 Road Maintenance Manual

5.7.1 The Roads Service will maintain a manual detailing how Road maintenance is carried out. The manual will ensure that the strategic asset management, as described in the RAMP will be implemented in the day to day processes and procedures within the Road Service.

5.7.2 The Road Maintenance Manual defines how and when activity occurs including:

- inspection;
- categorisation and prioritisation of reactive repairs;
- assessment condition;
- identification and prioritisation of sites for renewal or replacement;
- choice of the materials used;
- preparation of works programmes;
- procurement and management of works;
- recording and reporting costs; and
- recording and responding to customer contacts.

5.7.3 The proposed Road Maintenance Manual is attached at Appendix 2 to this report for consideration and approval.

5.8 Reporting

5.8.1 The Roads Service will prepare an annual status and options report that summarises:

- the status of the carriageway and street lighting asset groups in terms of their condition and the Council's ability to meet their reactive repair standards (the other asset groups detailed in 4.6.1 will be added as soon as their inspection criteria are agreed by SCOTS);
- the result of the previous year's investment in terms of meeting the target service standards;
- the options available for the future in term of both short and long term predictions of levels of defects and condition that can be afforded for different budget levels.

5.8.2 This report will replace the "Carriageway Condition of Shetland's Road" report that is currently presented to the Environment and Transport Committee on an annual basis.

5.8.3 When the annual budget is set any amendments required to the service standards specified in the asset management plan will be made and an updated asset management plan published.

5.9 Roles and Responsibilities

5.9.1 Council
The roles and responsibilities of the Council will be:

- to act as custodians of road assets;
- to set corporate asset management policy with linkage to the Council's "Our Plan 2016 to 2020";
- to set agreed Levels of Service and Levels of Acceptable Risk for each asset class;
- to allocate budgets to achieve the levels set; and
- to ensure appropriate resources for Asset Management activities are made available.

5.9.2 Director/Executive Manager
The roles and responsibilities of the Director/Executive Manager will be:

- to provide strategic direction and leadership;
- to ensure there is continuous improvement in asset management;
- to review existing policies and develop new policies related to asset management;
- to implement Corporate Asset Management Strategies with agreed resources;
- to monitor and review managers and staff success in achieving the Asset Management Strategy; and
- to ensure accurate and reliable asset information is presented to the Council.

5.9.3 Team Leaders and Staff
The roles and responsibilities of the Team Leaders and Staff will be:

- to implement the Asset management policy and plan with agreed resources;.
- to develop and implement improvement plans for individual asset groups;
- to develop and implement Maintenance and Capital Works programs in accordance with Asset Management Plan and budgets;

- to deliver levels of service to agreed risk and cost standards;
- to present information to the Council, Director and Executive Manager in terms of life cycle risks and costs; and
- to seek community feedback on proposed changes to service levels and willingness to pay for increased levels.

5.9.4 <u>Asset Management Working Group</u>
An Asset Management working group will be established to assist and have input with strategic asset management planning. Staff with responsibilities for Asset Management activities shall be referred to in the Asset Management Plan and also be reflected in individual job descriptions.

6.0 Implications

<u>Strategic</u>

6.1 <u>Delivery On Corporate Priorities</u> – The local outcomes from Shetland's Outcome Improvement Plan include "Shetland stays a safe place to live, and we have strong, resilient and supportive communities." The condition of the road assets, including the carriageway and streetlighting, has direct implications for road and public safety.

The Council's Our Plan 2016 to 2020 identifies the importance to Shetland of connectivity, including transport assets. "Our internal and external transport systems are efficient, sustainable, flexible and affordable, meet our individual and business needs and enable us to access amenities and services." The Road Asset Management Plan is a key activity in delivering the two actions:

"there will be transport arrangements in place that meet people's needs and that we can afford to maintain in the medium term".

"We will have a clearer understanding of the options and the investment needed to create a sustainable internal transport system over the next 50 years".

The strategic asset management approach set out in the RAMP also delivers the 20 by 20 action, number 16:

"we will have prioritized spending on building and maintaining assets and be clear on the whole of life costs of those activities to make sure funding is being targeted in the best way to help achieve the outcome asset in this plan and the community plan".

6.2 Community /Stakeholder Issues
Failure to effectively manage the condition of the road network could affect its reliability which in turn will impact on stakeholders and the community if there are delays and temporary road closures due to maintenance works.

The proposed road asset management plan also requires that the opinion of the community is sought and considered on a regular basis to inform the Council's decisions with regard to managing its road assets.

6.3 Policy and/or Delegated Authority – 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.

Policy and Resources Committee has delegated authority for asset management, and has referred authority to advise the Council in the development of its strategic objectives, policies and priorities. The Council has reserved authority to determine and approve the overall goals, values and strategy framework documents.

6.4 Risk Management – Failure to manage and maintain the road network would result in an increase in maintenance. The resulting increase in the net ongoing running costs of the Council would carry a significant risk of the Council's financial policies not being adhered to and could require a further draw on Reserves to maintain assets which have failed. The strategic approach set out in the RAMP ensures that the Roads Service is delivering best value in managing the assets and helps to ensure resources are allocated where they would provide the best long term benefit having considered risks and community and council priorities are met. The RAMP is set in the context of managing the asset within the Council's existing budgetary policy and constraints.

6.5 Equalities, Health And Human Rights – Access and connectivity is significant in supporting services to improve the health outcomes for individuals and community. Inequality of access impacts on the life chances of individuals and restricts their ability to maximise their potential.

6.6 Environmental - None

Resources

6.7 Financial – Under the Local Government in Scotland Act 2003, the Council has a duty to make arrangements that secure Best

Value. Best Value is continuous improvement in the performance of the authority's functions taking into account efficiency, effectiveness, economy and equal opportunities. The use of lifecycle planning and decision making improves the process of applying resources to the areas which would deliver the best long term benefits.

6.8   Legal – None.

6.9   Human Resources – None.

6.10   Assets And Property – The road network is the largest community asset for which Shetland Islands Council is responsible.

7.0   Conclusion

7.1   Approval of the Road Asset Management Plan, and the associated documents, detailed in this report would provide the Council's Roads Service with a formally approved means of demonstrating the need for funding, identifying and providing efficiencies, measuring performance and compliance, and driving continual improvement.

For further information please contact:

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26 September 2016

List of Appendices

Appendix 1: Road Asset Management Plan 2016-21

Appendix 2: Road Maintenance Manual 2016-21

Background Documents
None

END

Shetland Islands Council

Roads Asset Management Plan

Version 2

May 2016

Foreword

This plan sets out the Council's intentions for the management of its road asset for the next 5 years and beyond. It has been produced in accordance with national guidance and recommended good practice.

In essence asset management sets out an approach to be used in acquiring, maintaining, improving and disposal of an asset. In terms of roads Asset Management can be defined as:

"A structured, long-term approach to planning optimal maintenance and eventual renewal of infrastructure."

It is widely recognised that the application of modern asset management practices can enable improved value for money. In these challenging times is it essential that the Council embraces these methods and strives to ensure that every penny spent is invested as wisely as possible. This plan forms an important part of the Council's commitment to apply good asset management to roads.

The plan has recognised the views of road users and residents and in particular the importance that is placed upon our road assets. However, the opinion of residents needs to be updated so new opinion surveys will now be undertaken on a bi-annual basis. Recent harsh winters have shown that our roads are susceptible to damage when bad weather occurs. It is essential that an appropriate level of investment is put into the road network to maintain and ultimately contribute to the main principles of the Council, that of the economic wellbeing of the locality.

…………………………………………..
Executive Manager – Roads Service

Document Control & Council Approval

Version Number/Date	Approved by Council
v1	Progress with this document's development has been noted at various meetings of the Environment and Transport Committee and the Roads – Member Officer/Working Group.
v2	Approved by Environment & Transport Committee on ??
Next Update Due	June 2021

Responsibility for the Plan

The persons responsible for the delivery of and updating of this plan are shown below

Position	Name	Responsible for
Shetland Islands Council		To approve material changes to the RAMP, act as custodians of community assets and to set policy.
Environment & Transport Committee		Approval of the functional amendments to the RAMP.
Executive Director of Infrastructure Services	Maggie Sandison	Approval of functional amendments to be proposed to Committee.
Executive Manager of Roads Service	Dave Coupe	Champion of RAMP.
Team Leader-Asset and Network Management	Neil Hutcheson	Monitoring improvement actions, informed decision making & ensuring updates to the documents. Identifying where improvements to the service can be made.
Programme Manager	Bill Peterson	Updating RAMP document as required. Producing integrated forward work programmes, both long and short term, and ensuring their availability to all interested parties. Identifying conflicts and opportunities for rationalisation of works.
Network Engineer	Neil Robertson	Ensuring data management procedures are followed and that all information is kept up to date. Providing requested information outputs to other parties.
Team Leaders	Neil Hutcheson, George Leask, Barrie Scobie & Brian Wood	Monitoring and updating risk registers, ensuring control measures are put in place & identifying risks that need to be passed up the management tree.
Asset "Owner" Carriageways	Neil Hutcheson	Updating lifecycle plans, ensuring implementation of improvement actions. Identifying asset specific investment requirements; works programmes and changes to procedures and documentation.
Asset "Owner" Footways	Barrie Scobie	
Asset "Owner" Structures	George Leask	
Asset "Owner" Street Lighting and Traffic Signs	Mervyn Smith	
Asset "Owner" Drainage	Brian Wood	

1. Introduction

Overview

This Road Asset Management Plan (RAMP) sets out and records the plans for Shetland's road assets for the period 2016-2021. The "road asset" comprises of carriageways, footways, structures, street lighting, traffic management and street furniture (also drainage etc). The definition of asset management adopted by Shetland Islands Council is that contained within the County Surveyor's Society Framework for Highway Asset Management:

"Asset management is a strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers."

The Society of Chief Officers of Transportation for Scotland (SCOTS) guidance requires the RAMP to be produced together with a road maintenance manual (RMM) and an annual status and options report (ASOR).

Purpose

There are many reasons for implementing a RAMP which include:

- providing evidence of strategic thinking and long term planning with regard to maintenance and management of the road infrastructure ;
- to identify and take account of the needs of road users;
- a satisfactory explanation to stakeholders of a fair and reasonable way of allocating limited operational, maintenance and improvement resources;
- the introduction of Whole of Government Accounts (WGA) and Resource Accounting and Budgeting (RAB), whereby local authorities are to be required to provide financial forecasting and valuation information to central government;
- in order to meet both national and local outcomes as specified within the single outcome agreement;
- formalising strategies for investment in road asset groups; and
- defining service standards.

The plan aims to improve how the road asset is managed and to enable the delivery of a better value for money roads service. Local authorities have a statutory duty to pursue best value. Expenditure must be prioritised to ensure corporate objectives can be effectively delivered within budgetary constraints. Asset management assists this process by enabling the allocation of resources based upon assessed need.

The use of lifecycle planning, the minimisation of whole life costs and decision making informed by an appreciation of risk and benefit are key asset management components that will help the Roads Service allocate resources to where they are likely to provide the best long-term benefits.

RAMP and Other Plans

The RAMP relates to the Council's other strategic documents and plans as illustrated below:

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                    │   Single Outcome    │
                    │     Agreement       │
                    └─────────────────────┘
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                    │   Community Plan     │
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                    │   Corporate Plan     │
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│ Annual Options   │ │ Shetland Regional    │
│ and Status Report│ │ Transport Strategy   │
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┌──────────────────┐ ┌─────────────────────┐ ┌──────────────────┐
│ Road Asset       │←→│ Road Asset          │←→│ Road Maintenance │
│ Valuation Report │ │ Management Plan      │ │ Manual           │
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    ┌──────────────┐        ┌──────────────────────┐
    │ Revenue      │        │ Capital Works        │
    │ Works        │        │ (Asset Investment    │
    │              │        │ Plan)                │
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│ Roads Action │  │ Annual Work  │  │ Roads Service│
│ Plan         │  │ Programme    │  │ Plan         │
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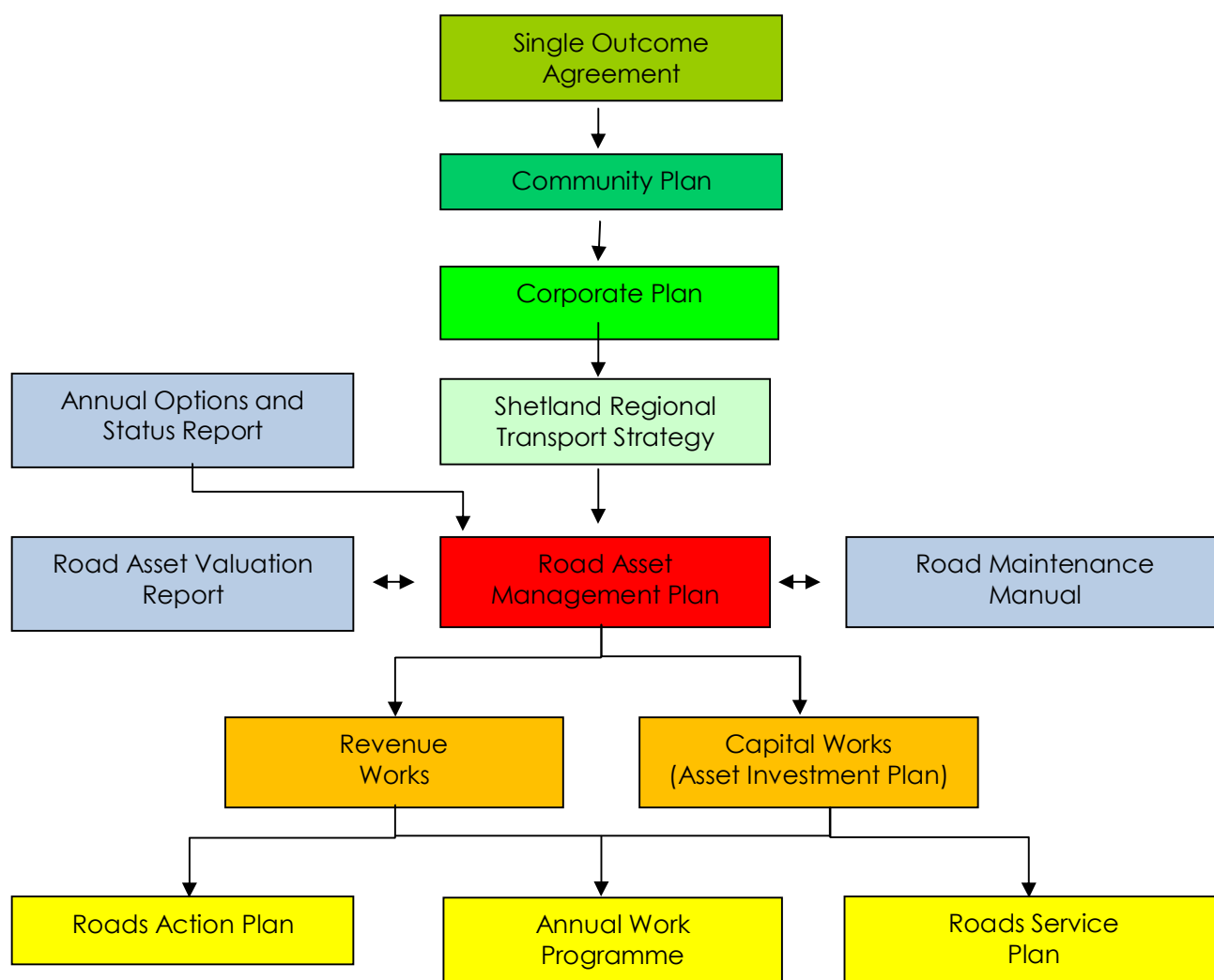
The RAMP is informed directly by the Shetland Regional Transport Strategy, the Annual Status and Options (Carriageway Condition) Report and the Road Maintenance Manual.   Targets and strategies contained in the RAMP are used to develop annual works programmes once the Council's annual budget for roads has been agreed.

2. Road Assets

Road Assets

The Council's road assets covered by this plan are:

- Carriageways   1,054 km
- Footways   114 km
- Structures   308 Bridges, Culverts, Underpasses etc
- Street Lighting   3,908 Lighting Columns
- Traffic Management Systems   10 Pedestrian Crossings
- Road Drainage Infrastructure   (extent unknown)

The asset also includes traffic signs, roadside safety barriers, pedestrian barriers, gullies, ditches, traffic calming features, road markings, car parks, verges and street furniture such as bollards.

Assets Not Covered

Some related assets that the Roads Services maintain are the responsibility of other Council departments. The Council owned road assets not covered in this RAMP are:

- footpaths managed by the Housing Service and Sport & Leisure Service;
- bus shelters managed by Estate Operations;
- amenity grassed areas which are maintained by Environmental Services;
- private roads;
- private bridges;
- public rights of way and
- water related infrastructure that does not form part of the road network.

Inventory Data

This plan is based upon currently available inventory data for road assets, i.e. carriageway, footway, structures, street lighting, traffic signals and street furniture. For some minor road assets inventory data is not currently held, however, an attempt has been made to incorporate these assets within this plan using local estimates and sample surveys. The continual improvement of the asset data will form an important part of the process of updating the road asset data management plan.

3. Customer Expectations

Customer Preferences

The expectations of road users need to be sought and understood as part of the asset management process. The Council takes part in national performance reviews through APSE and SCOTS as well as seeking the views of the local community by undertaking general "your voice" surveys regularly over a number of years. Questions related to roads were included in the autumn 2005 survey, with exactly the same questions repeated in autumn 2008. The survey allowed satisfaction to be rated at one of five levels, from very poor to excellent. By repeating exactly the same questions, it was possible to monitor changes in satisfaction levels over that three-year period. A new survey is overdue and will be undertaken this year, 2016/17. The format used will be as provided by APSE so that it is consistent with surveys undertaken by other local authorities enabling comparisons to be made for benchmarking purposes.

In addition project specific consultation is undertaken for all major works and traffic management schemes where local residents, Councillors and appropriate user groups are consulted to gauge their opinion of the scheme.

Performance and maintenance issues shall be consulted on bi-annually. A questionnaire is circulated to all Community Councils asking them to record levels of satisfaction with, and the importance of all aspects of road maintenance. The most recent survey model used was the 'Highway Maintenance Services Customer Satisfaction Survey' as produced by APSE. The results of this consultation will feedback into the road maintenance plan, determining the respective priorities within each Community Council area.

Additional consultation takes place with transport stakeholders on an as required basis, for example, reviewing specific issues such as winter maintenance, or parking restrictions and traffic management.

Consultation Results

Full results of the latest "Your Voice" survey can be found in the survey report itself, however some of the findings in relation to roads are:-

- 86% rated the general standard of the road surface as satisfactory or better.
- 79% rated the repair of potholes and road surface defects as satisfactory or better (70% in 2005).
- 76% rated the general standard of footway maintenance as satisfactory or better (78% in 2005)
- 60% rated the gritting and snow clearing of rural main roads as good or excellent with 93% rating it as satisfactory or better (89% in 2005).
- 75% rated the gritting or snow clearing of footways in residential areas as satisfactory or better (72% in 2005)
- 86% rated the speed of repairs of Street lights as satisfactory or better (93% in 2005).

The results of the surveys can be used by the Roads Service to identify areas of the service that may require revised strategies to be implemented.

Customer Contacts

Customers or road users make contact with the Roads Service in the traditional way via letters, personally visiting the office and through the local Community Council or their Council member. A more common method in recent times has been to e-mail the Roads Service at our address which is available on the Council's website. The Council also has a Twitter address and the Roads Service has occasionally received messages for our attention over this newer form of social media. In addition to these methods Roads also has a link from its webpage to our Pavement Management System. A member of the public can "create" a defect on the system if they wish to report a fault such as a damaged kerb or blocked gully. The Area Maintenance Engineers can then access this defect and, when necessary, create a works order for the necessary repairs.

4. Demands

Asset Growth

The road asset has increased by approximately 0.8 per year over the last 5 years, mainly due to a number of small housing developments complete with attendant footways and lighting columns. This low rate of growth, equating to only 0.1 % p.a., was in part due to the Council's Housing debt and a reduction in funding to Housing Associations. However, this rate is expected to increase in the next 5 years with a number of developments being planned by the Council, Hjaltland Housing Association and private developers. There may be as many as 300 houses built requiring approximately 8 construction consents for the associated roads. Currently the largest of these will be by Hjaltland at the Staney Hill on the north-west outskirts of central Lerwick. This development will account for almost 200 of these houses with a considerable increase in our road network required to service these properties.

Recent additions in the use of traffic calming features and high friction surfacing have increased the maintenance budget requirements due to additional maintenance costs for their repair but again the increase in their use is likely to recede in the near future as most problem areas have now been addressed.

New or additional assets create the need for maintenance, management and associated funding in future years as these assets age. This is particularly relevant to street lighting as energy cost increases immediately result in an increase in the budget required. However, as we are now in the process of replacing conventional streetlighting lanterns with LED equivalents on existing public roads we now require developers to provide this energy efficient form of lighting on any roads that they construct.

Traffic Growth and Composition

The SIC traffic section keeps records of traffic volumes from a number of permanent and temporary counter sites throughout the Isles. As would be expected the majority of HGV traffic occurs on the principal roads. However, largely due to the aquaculture industry, there are a number of unclassified routes where significant volumes of HGV vehicles are present and this is undoubtedly causing significant damage to single track roads which were never intended to be subjected to this level of traffic loading. This created a growing need for investment in the maintenance of these single track roads.

Environmental Conditions

Pressure has also been placed upon the asset as a result of environmental conditions, most notably the harsh winters experienced in 2009/10 and 2010/11. These caused significant damage to carriageways with a freeze/thaw action resulting in cracking of the road surface, throughout Shetland. There is also a noted increase in the occurrence of landslips on hillsides where peat overlies a rock substrate. These are usually as a result of high intensity rainfall events which now appear to be more common, possibly as a result of climate change. These have the potential to damage roads and/or disrupt travel. The most notable incidents in the past were the landslides across the A970 at Channerwick and the Maywick Road in the South Mainland.

Utility Activity (For Example:- Scottish Water, BT, SSEB, District Heating)

Utility activity can have a major effect on the maintenance and management of the road assets. There is undoubtedly a significant increase in the number of defects found following the disturbance of the carriageway or footway surface due to utilities. This is apparent even when the utility has reinstated the surface to the required standard. In the recent past the renewals of water mains within Lerwick and the installation of district heating scheme infrastructure has increased maintenance costs. Fortunately Scottish Water has recently been making use of "pipe bursting" technology to replace or line existing pipework without the need for excavations in the carriageway. We also understand that the district heating scheme is now operating at capacity so there is unlikely to be any significant increase in new connections in the immediate future.

Statutory undertakers are responsible for carrying out their own reinstatements although these may be contracted and/or sub-contracted to others. This can cause programming problems where different contractors are responsible for different aspects of the reinstatement. The Roads Service enforces a 2-year guarantee period on all re-instatements and 3 years for those entailing deep excavations.

Where statutory undertakers have caused damage to Council assets it is SIC practice to endeavour to reclaim the costs of repair or replacement from the responsible party. This is not always possible but recently we have had more success with the most notable repair being the inlay resurfacing of a half lane width of Commercial road along a failed water main reinstatement.

It is difficult to predict the amount of utility activity in any one year although the recent rise in activity related to a large capital investment by Scottish Water is likely to tail off over the next three years. Work is in progress on upgrading broadband in Shetland with fibre optic cables being installed in existing ducts between exchanges and newly installed service cabinets. This has required some work in the carriageway and roadside verges. While this work may be ongoing over the next 5 years it is not expected to require a large number of excavations in the carriageway.

5. Service Standards

This plan is based upon delivering the service standards listed below. The standards reflect the funding levels in section 6. They are the standards that road users can expect from Shetland's road assets during the plan period. This plan targets delivery of service standards shown below. Details of how the specific measures shown below are calculated are included in the road maintenance manual.

SCOTS CORE PERFORMANCE INDICATORS

Service	Measured By	Target	Standard
		2016	2021
Carriageways			
Safety	Percentage of Cat 1 defects made safe within response times.	100%	100%
	Percentage of safety inspections completed on time	96.9%	96.9%
Condition	Percentage of all roads to be considered for maintenance treatment	38.9%	38.9%
	Percentage of "A" Class roads to be considered for maintenance treatment	20.7%	20.7%
	Percentage of "B" Class roads to be considered for maintenance treatment	34.4%	34.4%
	Percentage of "C" Class roads to be considered for maintenance treatment	35.0%	35.0%
	Percentage of unclassified, non-principal roads network where maintenance should be considered	51.1%	51.1%
	Percentage of carriageway length treated	4.6%	4.35%

Footways			
Safety	Percentage of Cat 1 defects made safe within response times.	Not applicable	TBA
	Percentage of safety inspections completed on time	100%	100%
Condition	Percentage of footway area to be considered for maintenance treatment	Not formally inspected	TBA
	% of footway area treated	0.7%	1%

Street Lighting – Core Indicators			
Safety	Percentage of repairs within 7 days	34.6%	70%
	Percentage of street lights not working as planned on any one evening	5.7%	5%
Environment	Average annual electricity consumption per street light (kwHrs)	527.5	320

Structures			
Condition	Percentage of primary inspections carried out on time	Not available	TBA
	Percentage of general inspections carried out on time	100%	100%
	Bridge Stock Condition Indicator (An alternative method is used to assess the condition of our bridges)	Not available	TBA
	Bridge Stock Condition Index (An alternative method is used to assess the condition of our bridges)	Not available	TBA

An action for the Engineers with responsibility for bridges, over the next two years, is to re-assess them and update their entries in the data inventory. The above table will be populated at that time. It is likely that during the plan period inspections will identify additional structures that have deteriorated to the point of requiring attention. Priorities may need to be adjusted to accommodate this.

6. Financial Summary

Sources of Funding and Budget Allocation

Revenue

Revenue funding within roads is based on historical precedence and identified need and is split between a number of service headings which are broadly in line with Asset Management elements. Currently within the service individual budget holders are encouraged to make a case for any additional funds that are required to enable the ongoing maintenance and management of the assets such that the funding split can be adjusted to reflect current priorities. Each of the budget holders is then responsible for determining how the funding is used within their service area. Revenue funding for roads maintenance has been reduced in recent years due to pressure on the funding of the Council's overall revenue budgets.

A large part of the budget is dictated by the cost of running the Council's Roads Maintenance Section which is predicated upon the labour required to deliver the winter service. All routine and reactive works are carried out by the Maintenance Section. Therefore there is little scope to vary the total Roads budget unless there is a corresponding reduction or increase to the extents of the road network gritted/ploughed during the winter months. However there is scope for improving the use of the current budget via the exploration of differing ways of directing the resources to the most productive work and that which has the greatest benefit to the asset. From 2017-18 the method of optimising this "direction of resources" will be the "carriageway cost projection model" produced by SCOTS. This spreadsheet has been developed and refined over the duration of the SCOTS RAMP project. Many authorities already use it for this purpose and this will ensure that our budget method is consistent and can be compared to other Scottish Councils.

It should be noted that the opportunity to vary budgets may also be constrained by resource considerations. As the majority of the works is carried out by "in house" resources it may be that a need to provide work that the resources are most able to do is, in some part, a stronger consideration than doing the work that is most beneficial to the asset. This can be offset to a certain extent by reallocating a proportion of, for example, the surface dressing budget to slurry sealing which requires a specialist contractor. The same process can be applied with the budgets for our traffic signs, safety barriers and cattle grids maintenance which is undertaken by a private contractor.

Capital

Roads capital projects are included as part of the Council's Asset Investment Plan. The plan is co-ordinated by the Capital Programme Service. Currently funding is allocated to Roads projects through a Business Justification Case or "Gateway" process where each proposal is assessed and prioritised by the Council's Asset Investment Group. This ensures that only the proposals, which will yield the most benefit for the Shetland public, are added to the Asset Investment Plan. The Council's capital budget

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allocation has been reduced in recent years and the allocation for Capital road schemes has followed suit. The schemes "promoted" by Roads through the Business Justification Case process are generally carriageways needing reconstruction, streetlighting that needs replacement and structures such as bridges or retaining walls that need significant maintenance. These are issues that require immediate investment to maintain the value of the asset.

Where a capital roads scheme is being undertaken largely for maintenance purposes the required funding is to be related to an "asset investment plan" derived from a carriageway cost model. A capital investment project was undertaken in 2014 using a model from the Highways Maintenance Efficiency Programme (HMEP) project. In future the model used will, in common with the revenue funding, be the "carriageway cost projection spreadsheet" produced by SCOTS.

Further sources of funding for works on the public road include the following:

Income

The Roads Service operated a trading account until 2014-15. Since then works have been done on an "at cost" basis. However, the service shall still tender for external contracts when it has sufficient available resources (labour and plant). These works, which vary from resurfacing to harbour works, generate an income for the Council as well as ensuring resources are fully utilised thereby reducing their unit cost. The income generated varies greatly from year to year but has increased recently due to works associated with the construction of the TOTAL Gas Plant at Sullom Voe. This has mainly been due to the supply of asphalt from the batching plant at the Scord Quarry.

Grants

Individual grants may be available for specific types of improvement work from Government or specialist interest groups. Budget holders produce applications for external grants which are used for the specific projects identified. Recent examples of this are the new Clickimin Foot/Cyclepath, Lerwick and the Millbrae Footway Improvements, Scalloway that were part funded by SUSTRANS and the Scottish Government's Cycling, Walking and Safer Streets funding.

Other

The Council seeks to obtain costs from developers, or works done by them, as contributions towards improvements to the road infrastructure that are required in the local vicinity due to their development. The most notable example of this was the contribution made towards the construction of the A970 South Road/South Lochside Roundabout by Safeway Ltd when they built their nearby supermarket. Developers of housing estates are on occasion required to make smaller contributions such as meeting the costs of a new footpath to link the development with a nearby settlement.

Asset Valuation

As at May 2016 the Road asset is valued as follows:

Asset Type	Gross Replacement Cost (GRC) (£000k)	Depreciated Replacement Cost (DRC) (£000k)	Annualised Depreciation Cost (ADC) (£000k)	Comments
Carriageways	953,507	819,480	11,584	
Footways & Cycleways	29,544	21,212	293	
Structures	45,171	43,591	160	
Street Lighting	27,738	14,573	702	Condition survey in progress to facilitate column replacement and lantern upgrade to LED
Traffic Management	200	149	10	Only 10 Sets of Pedestrian Crossing Lights
Street Furniture	20,668	10,284	976	
Land	6,634	-6,634	-	
Total	**1,1083,462**	**915,923**	**13,725**	

The valuation figures above illustrate the very high financial value of the road asset which is calculated on the basis of a depreciated replacement cost. This method of valuation provides the current costof replacing an asset with its modern equivalent less deductions for all physical deterioration and obsolescence.

Historical Expenditure

Historical expenditure invested in works on the Road asset is shown below:

Asset	Works	Historical Expenditure £ 000				
		11/12	12/13	13/14	14/15	15/16
Carriageways	Capital	1,322	832	342	303	1,125
	Revenue	2,929	2,799	2,835	2,719	2,446
Footways	Capital	534	87	82	103	325
	Revenue	62	46	41	50	58
Structures	Routine & Reactive	5	9	2	2	3
	Planned	96	381	287	628	552
Street Lighting	Energy Costs	190	212	189	224	228
	Routine & Reactive	0	0	0	0	0
	Planned	516	276	344	452	395
Traffic Signals	Energy Costs	Energy Costs included in Street Lighting				
	Routine, Planned & Reactive	Included in Street Lighting				
Totals:		6,047	4,642	4,083	4,591	5,149

Investment in carriageways, especially revenue spending, has significantly reduced since 2011/12. The effect of this reduction was initially exacerbated by construction inflation which, due to the increased costs of bitumen and fuel, impacted on the area of carriageway that could be treated. This was reflected in the data gathered during the annual condition survey and the resulting statutory performance indicator. The Road Condition Indicator (RCI) for all of Shetland's roads initially increased from 40.7 to 43.7 in 2011/12 and then reduced slightly to 42.5 in 2012/13. This figure is the percentage of "the road network that should be considered for maintenance treatment." However, in the past 3 years the RCI has reduced to 38.9% as a result of better use of the SCANNER survey data to target the most appropriate roads for preventative maintenance.

Footway spending has also had a significant reduction. The main impact being that no new footpaths have been constructed recently until 2015/16 when the grant assisted Millbrae footpath began construction. This situation is likely to continue for the immediate future. However, the slurry sealing of footways has been increased to treat footway surfaces as this will prevent more costly repairs being required in the long term.

There has also been a general reduction in planned spending on structures/bridges down from £380,000 to approximately £150,000 if only the smaller schemes undertaken on an annual basis are considered. This reduction has been met by undertaking repairs to existing bridges rather than replacing them with culverts. While this work extends the life of the bridge there will inevitably come a time when the only option is their replacement with a large diameter culvert. In recent years the spend on planned works has increased due to essential maintenance to the bearings of the Burra and Trondra bridges.

This is reflected in the increase in expenditure on planned structural maintenance in the financial years 14/15 and 15/16.

Planned Funding

The service standard targets shown in section 5 are based upon the following funding levels. The funding for years 17/18 to 19/20 is based upon the budget for the 2016/17 financial year as confirmed by the full Council at their meeting on 10 February 2016. This decision was based on previous budgets, the length of the network this allowed to be treated and an estimated improvement in road condition.

Funding beyond 19/20 shown below is an estimate included solely to allow the prediction of long term condition. It has been assumed that a level of funding similar to current funding levels (the average of the last 3 years) will be provided. Any changes to these funding predictions in the future will require an update of this RAMP.

Asset	Works	Funding Required £k			Long Term Funding Assumed £k
		17/18	18/19	19/20	Y3-Y20 pa
Carriageways	Reactive	62	62	62	62
	Routine	883	883	883	883
	Planned	1,866	1,866	1,866	1,866
Footways	Reactive	35	35	35	35
	Routine	5	5	5	5
	Planned	0	0	0	0
Structures	Reactive	40	40	40	40
	Planned	80	80	80	80
Street Lighting	Energy Costs	230	230	230	350
	Reactive	25	25	25	25
	Planned	145	145	145	145
Traffic Signals	Energy Costs	Included in Street Lighting Energy Costs			
	Reactive	Included in Street Lighting Reactive Costs			
	Planned	20	20	20	20
Totals:					

Energy cost are shown at 2014/15 value although it is very likely that these will escalate significantly if recent trends in prices continue as they are predicted (12.5% annual increase).

7. Asset Investment Strategies

The strategies in this section have been determined using predictions of future condition over a 3-year period. In future the predictions will be made over a 20 year period by making use of the "carriageway cost projection model" produced by SCOTS. This will enable strategies to be created to look at the whole life cost of maintaining the asset. Using long term predictions means that decisions about funding levels can be taken with due consideration of the future maintenance funding liabilities that are being created.

Investment strategies for the major asset types are summarised below. These strategies are designed to enable the service standards in section 5 to be delivered.

Investment between Asset Types

In comparison to historical investment, future investment, for the main asset types, is planned to be:

- Carriageways: level of investment maintained at similar levels

- Footways: level of investment maintained at similar levels

- Structures: level of investment maintained at similar levels

- Street lighting; level of investment maintained at similar levels, but this is only made possible by the approved "savings" policy that will see streetlights being removed in some areas. This reduction in the asset will allow our rapidly deteriorating streetlighting to be maintained/replaced providing the budget is not further reduced. The aim in the medium term is also to replace our existing conventional lanterns with their LED equivalent. The cost of these replacements, and the replacement of a substantial number of "failed" lighting columns, would be met from the energy savings accrued by the use of these energy efficient lanterns. Therefore, until the lights are replaced the investment will be maintained at similar levels. When this replacement scheme is completed the streetlighting energy expenditure will be almost halved. The reactive maintenance expenditure would also be reduced to approximately 60% of the current figure. The completion of the replacement scheme could initially result in the planned maintenance being reduced to less than 50% of the current figure. However, in time this would need an increase to allow for planned replacements of columns in order to avoid the current situation where a significant proportion of our columns have reached the end of their useful life at the same time.

- Traffic signals; level of investment maintained at similar levels

Carriageways

Category	Description	Basis of Strategy
Routine and Reactive Repair	Repair of defect to current intervention standards and response times.	The strategy requires the deployment of roadworker squads on seasonal repairs such as patching prior to surface dressing. To a lesser extent they are also deployed to undertake urgent and/or emergency repairs.
Planned Maintenance Preventative	A programme of preventative treatment or roads in the initial stages of deterioration.	The strategy is predicted to require approximately – A roads: Surface dressing 12.0 km pa on average – B & C Roads: surface dressing 12.0 km pa – U Roads: Surface dressing 11.0 km pa This split reflects the respective area of each road classification. Priority has been given to "A class" roads in the past at the expense of other classifications. This is shown by comparing the RCI for each classification. The aim is that this split will result in a greater improvement in the overall RCI for the given budget. This approach is supported by the "Financial Reporting Tools for Carriageways" produced by SCOTS. This totals 35 km so it would take 30 years for the entire 1049 km carriageway network to be surface dressed.
Planned Maintenance Corrective	Programme of resurfacing where a preventative treatment cannot be applied due to rutting or poor longitudinal profile.	The strategy is predicted to require: – A roads 3.4 km resurfacing pa – B & C roads 3.1 km of resurfacing pa – U roads 3.0 km of resurfacing pa. This split reflects the respective area of each road classification. Priority has been given to "A class" roads in the past at the expense of other classifications. This is shown by comparing the RCI for each classification. The aim is that this split will result in a greater improvement in the overall RCI for the given budget. This approach is supported by the "Financial Reporting Tools for Carriageways" produced by SCOTS. This totals 9.5 km so it would take 166 years for the entire carriageway network to be resurfaced. (Please note that there are significant lengths of unclassified road in Shetland where the surface construction consists of layers of surface dressing. They have never been surfaced with bitmac/asphalt and are unlikely to be in the future as their running surface is adequate for roads of this nature with low traffic volumes.)

The strategy will apply a low cost preventative treatment, such as surface dressing, before carriageways deteriorate to a condition where more expensive treatments are required. The level of investment is predicted to be insufficient to allow any long term improvement to be made in the condition of Shetland's carriageways. However, it may be possible to maintain the current condition if the proposed preventative maintenance funding is approved. This will require full use of the condition surveys to be made to target the lengths of road that should be repaired and the most appropriate treatment method.

Footways

Category	Description	Basis of Strategy
Routine and Reactive Repair	Repair of defect to current intervention standards and response times.	The majority of Shetland's footways have been maintained to a high standard and there is only occasionally a need for a roadworker squad to repair or undertake other urgent or emergency repairs.
Planned Maintenance Preventative	A programme of preventative treatment of bituminous footways in the initial stages of deterioration.	The strategy is predicted to require: – Footway Surface Treatment (slurry sealing) 4.0 km pa on average Coverage at this rate means that it would take 28.5 years to treat the entire 114 km footway network.
Planned Maintenance Corrective	Programme of resurfacing/renewal of footways.	The strategy is predicted to require approximately: – Renewal of flagged footways 100 sqm pa – Resurfacing of bituminous footways 800sqm pa This is a relatively low figure because as stated above our footways have been maintained to a high standard and slurry sealing will be targeted to prevent further deterioration..

The strategy will apply a low cost preventative treatment, such as slurry sealing, before the footways deteriorate to a condition where more expensive treatments are required. The level of investment should be sufficient to maintain the generally good condition of the footways. There are some footpaths in adopted housing estates that are deteriorating and may need resurfacing in the near future. However, they are not significant lengths and the proposed preventative maintenance funding should allow the worst of these to be resurfaced.

Structures

Category	Description	Basis of Strategy
Routine and Reactive Repair	Repair of defect to current intervention standards and response times.	The strategy requires the deployment of roadworker squads on minor repairs to parapets, movement joints, patching of the bridge deck surfacing and the pointing of stonework walls or abutments.
Replacement	Replacement of deteriorated bridges or those assessed as being weak.	The strategy involves the replacement of "traditional" bridge types with large diameter twinwall culverts. The older bridges are generally short span reinforced concrete slabs with concrete or stonework abutments. It is generally more cost effective to replace these with culverts than to strengthen the existing structure.
Refurbishment	Refurbishment of structures that show signs of deterioration	The strategy involves the annual inspection of Trondra, Burra and Muckle Roe bridges with any defects being rectified shortly thereafter. The bearings on both the Burra and Trondra have recently been replaced by a private contractor.
Parapet works	Strengthening or replacement of weak parapets	Existing parapets on older bridges are generally of sub-standard height so unsuitable for pedestrians. They are usually constructed from in-situ concrete so are a hazard to vehicles. They are replaced with galvanised pedestrian barrier panels on bridge parapets for safety reasons. Consultants inspect the parapets at Burra, Trondra and Muckle Roe bridges regularly.
Scour Protection	Scour protection works on structures susceptible to scour	As appropriate from surveys but this type of work is reducing as large diameter twinwall culverts replace "traditional" bridge types.

The structures strategy will see the inspection and reassessment of all of our bridges over a two-year period. The proposed funding for replacements is £80,000 per year that would allow 2 to 3 new culverts to be installed. The maintenance budget of £40,000 in addition to some minor repairs monies would perhaps be sufficient to allow the repair or refurbishment of a further large diameter culvert. The Trondra Bridge is to be painted this financial year (2016/17) and bolts on its parapet rail are to be replaced. The Muckle Roe Bridge is to be painted in 2017/18.

Street Lighting

Category	Description	Basis of Strategy
Routine and Reactive Repair	Repair of defect to current intervention standards and response times.	The strategy requires the deployment of a single two man squad to undertake the routine inspections of the streetlighting asset. The same squad will repair any defects that are identified during the inspections.
Planned Maintenance Preventative	There are no plans to undertake any significant level of preventative maintenance.	A number of local authorities have a programme of re-painting lighting columns to prevent corrosion. We have shown that this is not cost effective in Shetland. The majority of our columns are approaching 25 to 30 years old so are nearing the end of their design life. It is more cost effective to replace these with new hot dipped galvanised columns.
Planned Maintenance Corrective	Programme of structural renewal	The strategy is predicted to require approximately 140 columns replaced pa. Replacement at this rate means that it would take 28 years to renew every streetlight.
Invest to save		A savings review was undertaken in 2012/13 and its recommendations approved by the Environment and Transport Committee. This has seen part-night lighting introduced in some areas and the complete removal of columns where lighting is not considered necessary. Capital money has been required to remove columns but the long-term benefits are reduced spending on capital renewals, energy and inspections. The aim in the medium term is also to replace our existing conventional lanterns with their LED equivalent. The cost of these replacements, and the replacement of a substantial number of "failed" lighting columns, would be met from the energy savings accrued by the use of these energy efficient lanterns. The necessary funds would be borrowed with the repayments met from the resulting energy savings.

The level of investment may not be sufficient to maintain the streetlighting asset in its current condition. This is mainly due to the age of the columns. The majority were installed more than 30 years ago in the developments that were provided during the oil "boom". Therefore, they are now all approaching the end of their useful life, at the same time. The proposed investment would allow "failed" columns on main roads to be replaced. However, individual columns on low speed/low traffic volume roads that have

become unsafe may have to be removed without any prospect of being replaced in the immediate future. The reduction in the asset resulting from the streetlighting "savings" policy means that this can be managed to some extent but it is likely that the removal of specific columns, without their immediate replacement will remain an issue unless the budget is increased.

Traffic Signals ("Pelican" Controlled Pedestrian Crossings)

Category	Description	Basis of Strategy
Routine and Reactive Repair	Repair of defect to current intervention standards and response times.	The strategy requires the deployment of Electrician and assistant from the Council's Estate Operations on emergency repairs and on other non-emergency repairs. Occasionally assistance may be required from the supplier.
Refurbishment of signalised crossings	Refurbishment of controlled crossings that have deteriorated or the equipment has become obsolete/unreliable	When possible pedestrian crossings are refurbished with parts that are taken from crossings that are being replaced. The type of crossing currently in place is now obsolete so the supply of parts is limited and difficult to obtain.
Replacement of signalised crossings	Replacement of controlled crossings that have deteriorated or the equipment has become obsolete/unreliable	The strategy involves the renewal of 2 pedestrian crossings per year until all 10 are replaced. 5 had been replaced prior to 2016/17.

The 10 Pelican crossings in Lerwick are now in a poor condition due to their age. They were first "generation" LED technology so it is difficult to source spare parts. This means that when the lights are faulty they often remain out of service for some time. Should this situation worsen then more investment may be needed so that several crossings can be replaced each year.

8. Risks to the Plan

Risk Management

Risk management is a systematic approach to identifying and dealing with the risks that threaten our plans and projects and impact upon the continuation of service delivery.

The Shetland Islands Council has developed a risk management framework to define in a controlled way how risks and opportunities will be handled within the Council. The framework provides information on roles, responsibilities, processes and procedures. It sets the context in which risks are managed in terms of how they will be identified, assessed, managed and reviewed.

The Council has a four-step framework for identifying, assessing, managing and controlling and reviewing risk (See Figure 8.1). This is a continuous process and can easily be integrated with performance management. The Council has agreed criteria by which to judge the likelihood and impact of risks, effectiveness of control measures and required levels of management of residual risks.

Figure 8.1: Four-step risk management framework
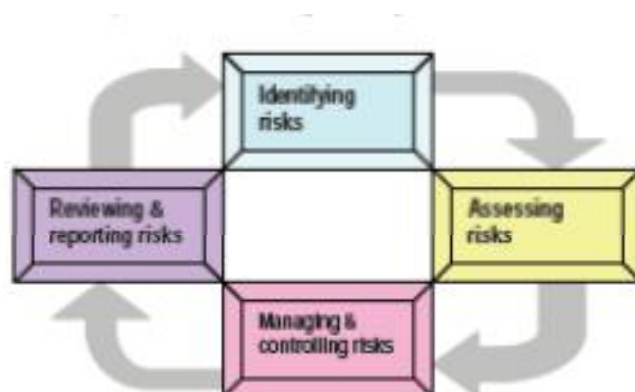
Risk Identification

Risk to the Council's business can take a variety of forms; for example, financial risk, risks to project and service delivery, its reputation, partnerships, employees and Councillors and risks from missed opportunities. Those risks could affect the council's performance, its assets, stakeholders, customers or members of the public. They can also affect the Council's viability.

Risk Evaluation

The next step is to assess those risks in terms of the likelihood that they will occur and the impact if they do. The criteria for the levels of likelihood and impact for risks are shown in tables 8.1 and 8.2 below.

Table 8.1: Description and definitions of LIKELIHOOD of the RISK occurring

Descriptor	Description
Almost certain	I would not be at all surprised if this happened within the next few months
Likely	I think this could occur sometime in the coming year or so
Possible	I think this could maybe occur at some point, but not necessarily in the immediate future
Unlikely	I would be mildly surprised if this occurred, but cannot entirely rule out the possibility
Rare	I would be very surprised to see this happen, but cannot entirely rule out the possibility

Table 8.2: Description and definitions of IMPACT of the RISK should it occur

HAZARD IMPACT	Personal Safety	Property loss or damage	Failure to provide Statutory Service or breach of legal requirements	Financial Loss or Increased cost of Working	Disruption in Service (Days) (This may vary with the criticality of the service)	Personal Privacy Infringement	Environmental	Community	Embarrassment
Insignificant	Minor injury or discomfort to an individual	Negligible property damage	Litigation, claim or fine <£2k	<£10k	None	Isolated personal detail revealed	Minor localised - damage to plants	Inconvenience to an individual or small group	Contained within Service Unit
Minor	Minor injury or discomfort to several people	Minor damage to one property	Litigation, claim or fine £2k to £50k	£10k to £100k	1	Isolated personal detail comprised	Death of invertebrates	Impact on an individual or small group	Contained within Service
Significant	Major injury to an individual	Significant damage to small building or minor damage to several properties from one source	Litigation, claim or fine £50k to £250k	£100k to £500k	2-3	Several persons details revealed	Death of fish	Impact on a local community	Local public or press interested
Major	Major injury to several people or death of an individual	Major damage to critical building or serious damage to several properties from one source	Litigation, claim or fine £1m or custodial sentence imposed	£500k to £1m	4-14	Several persons details comprised	Death of animals	Impact on several communities	National public or press interest
Catastrophic	Death of several people	Total loss of critical building	Multiple civil or criminal actions. Litigation, claim or fine above £1m	>£1m	>14	All personal details revealed/comprised	Permanent damage to site of special interest	Impact on the whole of Shetland	Officer(s) and/or members forced to resign

Multiplying the likelihood score by the impact score gives the uncontrolled risk score. The next stage identifies controls (strategy, policies, practices that exist currently) and their efficacy (ineffective, partially effective, effective, and very effective).

The risk is then re-assessed for likelihood and impact. The new score is the current risk score that exists after controls have been applied and so the real level of risk. That information is then recorded in the risk register. The risks are then prioritised to enable decisions to be made about the significance of those risks to the Council, and how they will be managed.

Table 8.3: Residual Risk Rating Matrix

<div style="text-align:center">**F R E Q U E N C Y**</div>

SEVERITY		Rare	Unlikely	Possible	Likely	Almost Certain
	Insignificant	1	2	3	4	5
	Minor	2	4	6	8	10
	Significant	3	6	9	12	15
	Major	4	8	12	16	20
	Catastrophic	5	10	15	20	25

Risk Control

When the risks and opportunities have been identified and assessed for likelihood and impact, there needs to be agreement on who will "own" the risk and how it will be managed, controlled or exploited. When the existing controls and action plans have been identified, the risks are re-assessed for likelihood and impact. This gives a forecasted controlled score of the Risk Profile as a result of the mitigation action plans. That information is then recorded in the risk register.

Risk Register

A risk register has been developed for the Roads Service (See Table 8.4 below). These are risks that could prevent achievement of the standards specified in this plan (section 6). Further detail on the major risks identified within the Road Asset Risk Register is given in Table 8.5 below.

Table 8.4: Roads Service Risk Register

	SIC Transportation Services Roads & Fleet Risk Register				
No.	Risk	Gross Risk Profile	Uncontrolled Rating	Residual Risk Profile	Controlled Rating
FR0128	Staff number/skills shortage	High	12	High	12
FR0126	Plant/Equipment - breakdown/failure disruption	Medium	6	Low	3
FR0059	Contaminated land, air, water, structure	Medium	9	Low	3
FR0053	Budget control failure	Medium	9	Low	3
FR0054	Bad debts	Medium	9	Low	3
FR0130	Fire, lightning, aircraft, explosion	Medium	8	Low	3
FR0084	Storm, Flood, other weather related, burst pipes etc	Medium	8	Medium	8
FR0131	After Hours/ Lone working	Medium	6	Low	4
FR0135	Staff number/skills shortage	High	12	Low	4
FR0113	Late delivery	Medium	6	Low	4
FR0125	Records/Research data/systems/security/confidentiality/ back-up.	Medium	6	Low	3
FR0122	Failure of Key supplier	Medium	6	Low	3
FR0104	Public/products liabilities to third parties	Medium	6	Low	3
FR0096	Professional Errors and Omissions	Medium	6	Low	2
FR0061	Breach of Patent, copyright, trademark, Design Rights etc.	Medium	6	Low	2
FR0069	Communications poor	Medium	6	Low	2
FR0112	Noise	Low	4	Low	2
FR0119	Procurement policy - failure to observe	Low	4	Low	2
FR0016	Labour relations/disgruntled staff	Low	4	Low	2
FR0015	Other bodies - relations with	Low	4	Low	2
FR0093	Denial of Access	Low	4	Low	2
FR0056	Industrial action	Low	4	Low	2

Table 8.5: Road Asset Major Risks

Road Asset Major Risks							
Risk	Likelihood Score	Impact Score	Uncontrolled Risk Score	Current Controls In Place	Revised Likelihood Score	Revised Impact Score	Controlled Risk Score
Structures							
Inability to complete maintenance work due to lack of funding may lead to substantial failure of the structure causing injury and increased costs due to emergency works, or diversions due to bridge closure	3	3	12	Regular bridge inspections and allocating more of the budget to preventative/early repairs prior to the onset of structural damage.	1	3	3
Street Lighting							
Lack of funding may lead to reduction in the condition of the asset, may be unable to replace columns that are taken up for safety reasons leaving dark areas	4	4	16	Scheme to upgrade lanterns to LEDs and replace columns will be underway before the rate of column failures reaches a point where safety critical repairs cannot be done.	2	4	8
Carriageways							
Lack of funding for maintenance works may lead to a backlog of required works, the continued deterioration of the network and the need for higher cost remedial works in the future	4	4	16	Careful use of SCANNER survey data to target surface dressing may delay the deterioration in the short to mid-term but structural defects such as rutting will eventually require more expensive repairs.	3	4	12
Footways							
Lack of funding for maintenance works may lead to a backlog of required works, the continued deterioration of the network and the need for higher cost remedial works in the future	3	3	9		2	3	6
Drainage							
Standing water causing skid accidents due to reduced carriageway budgets	3	3	9	As per carriageways.	2	3	6

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Further more general risks that could have a significant impact on the delivery of the service are considered in Table 8.6 below.

Table 8.6: General Risks – Impact on Service Delivery

Plan Assumption	Risk	Action If Risk Occurs
The plan is based upon winters with an average number of frost days.	Adverse weather will create higher levels of defects and deterioration than have been considered.	Budgets and predictions will be revised and this plan updated if abnormally harsh winters occur.
Available budgets have been assumed as shown in section 7.	Pressures on budgets mean that the Council may reduce the funding available for Roads.	Target service standards will be revised to affordable levels.
Construction inflation will remain at level similar to the last 5 years.	Construction inflation will increase the cost of works (particularly oil costs as they affect the cost of road surfacing materials)	Target service standards will be revised to affordable levels.
Levels of defect and deterioration are based on current data which is limited for some assets (e.g. footways)	Assets deteriorate more rapidly than predicted and the investment required to meet targets is insufficient.	Split between planned and reactive maintenance budgets will be revised.
Resources are available to deliver the improvement actions	Pressures on resources mean that staff are not allocated to service improvement tasks, predicted benefits may not be fully achieved	Target dates will be revised and reported.

The risks have been evaluated in accordance with Council policy. The risks are reviewed regularly throughout the year.

References

1) Shetland Transport Strategy

2) Asset Management Policy

3) Network Management Plan

4) Road Asset Management Manual

5) Annual Status and Options Report

6) Road Asset Data Management Plan

7) Service Improvement Action Plan

ASSET MANAGEMENT PLANNING

RAMP

Shetland Islands Council

Road Maintenance Manual

Version 2.0

June 2016

Document Information

Title	Road Maintenance Manual
Author	Roads Service
Description	This document provides a template Road Maintenance Manual. It is presented as a model that can be used by authorities to record their road maintenance methods. It provides a useful reference for how the asset is managed and can be used to record policies, such as inspection policies which may be relied upon by the Council when defending 3rd party claims.

Document History

Version	Status	Date	Author	Changes from Previous Version
1.0	Template	Feb 2014	exp consulting	Not applicable
2.0	Final	May 2016	Roads Service	Not applicable

Document Control

Version	Status	Date	Authorised for Issue by SCOTS RAMP Steering Committee
1.0	Template	Feb 2014	Issued to SCOTS/CSSW for comment.
2.0	Final	May 2016	Approved by Environment & Transport Committee on ??

1 Introduction

Purpose

This manual records how Shetland Islands Council manages and maintains the Council's roads assets.

Separate sections are provided for carriageways, footways, street lighting, structures, traffic management systems and street furniture. The grouping match those required for financial reporting under the CIPFA Transport Infrastructure Code.

Use

It is expected that this manual will be used as a reference by those tasked with the management of the road asset.

It contains details of important policies and procedures used by the council to maintain and operate the road asset.

2 Financial Management – Cost Categories

Each financial transaction associated with road maintenance should be allocated to one of the following Cost Categories.

Planned Maintenance - Preventative	Planned maintenance activities that are designed to ensure that more expensive future repairs may not be needed.
Planned Maintenance - Corrective	Planned maintenance activities that correct the condition of the asset and which would not cost significantly more if delayed.
Routine Cyclic Maintenance	Scheduled works consisting of activities that are based on a prescribed time interval.
Routine – Reactive Maintenance (Emergency)	Reactive repair of potentially dangerous defects identified from inspection or customer complaint / notification.
Routine - Reactive Maintenance (Non-Emergency)	Other less urgent minor repairs
Routine – Inspection and Survey	Cost of specialist inspection and surveys
Operating Costs	Costs of operating elements of the asset
Overhead	Internal costs associated with the management of the asset. NB it is accepted that these costs may not be available at an asset group level
Loss	Money expended that is effectively "lost" to the council from which no benefit to the asset or user is gained.
Improvements	Works that add new infrastructure to the asset.

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3 Risk Management

We are maintaining a Risk Register following the Corporate Risk Strategy which can be found on the Council's intranet. This includes risks to the Council's roads assets.

Responsibility for maintaining each asset Risk Register is as follows:

Asset	Position Responsible for Risk Register	Location of Risk Register
Carriageway	Team Leader – Asset & Network	web-based JCAD RiskWEB
Footways	Team Leader- South Mainland & Lerwick Roads Maintenance	web-based JCAD RiskWEB
Street Lighting	Network Engineer	web-based JCAD RiskWEB
Highway Structures	Team Leader - Design	web-based JCAD RiskWEB
Traffic Signals	Network Engineer	web-based JCAD RiskWEB

All Risk Registers are reviewed annually as part of the process for developing the Annual Status and Options Report

4 Procurement

Works on the asset are undertaken as follows:

Asset	Routine & Reactive Repairs	Planned Maintenance
Carriageway	"In-house" by the Council's Road Maintenance Section	"In-house" by the Council's Road Maintenance Section. Occasional contract for slurry sealing
Footways	"In-house" by the Council's Road Maintenance Section	"In-house" by the Council's Road Maintenance Section
Street Lighting	Civils "in-house" and electrical by Council's Building Service	Civils "in-house" and electrical by Council's Building Service
Highway Structures	Minor structures "in-house" with painting of larger bridges contracted	Minor structures, culvert replacement etc "in-house" with work to larger bridges contracted
Traffic Signals	Council's Building Service	Installation of replacements contracted from supplier
Street Furniture	Local contractor	Local contractor

The Capital Programme Service is responsible for the tendering of all contracts and for larger procurements made through the Scotland Excel collaborative contract. Details of the methods used to tender the works identified above as being undertaken by external contractors can be obtained from the Procurement and Contract Compliance Section of the Capital Programme Service.

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4.1 Carriageways

The carriageway asset consists of the following assets:

- Carriageways

4.1.1 Inventory

There is an inventory of assets which is kept in the Council's Routine Maintenance System (RMS) software produced by WDM Ltd.

4.1.2 Categorisation of Inventory: Hierarchy

The carriageway asset is categorised into the following hierarchy:

Category	Hierarchy Description	Type of Road General Description
M1	Strategic Route	**Road Maintenance Hierarchy Score of 30 or above.** Principal roads linking major centres of population, major industrial sites and ferry terminals. Access routes to some schools and hospitals. Main through routes in Lerwick.
M2	Main Distributor	**Road Maintenance Hierarchy Score of 17 to 29**. Other principal roads not included above linking smaller centres of population to the M1 network. Major loop roads. Main town streets in Lerwick and Scalloway. Accesses to any schools not on Priority 1 routes.
M3	Secondary Distributor	**Road Maintenance Hierarchy Score of 12 to 16**. Minor roads in Lerwick, Scalloway and Brae. Roads linking rural settlements, residential and industrial developments.
M4	Link Road	**Road Maintenance Hierarchy Score 11 or under.** Side roads linking isolated communities to the M1, M2 and M3 network. Minor roads in housing schemes in Lerwick and Scalloway.
M5	Local Access (Isles) Road	All roads on Foula, Fair Isle and Papa Stour.

4.1.3 Quality of Inventory Held

20% of inventory is validated each year.

The process for completing the Inventory Validation is held in WDM.

4.1.4 Asset Register

The Asset Register is held in the Routine Maintenance System (RMS).

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4.1.5 Budget Allocation

The process for allocating the carriageway budget is as follows:

From 2017-18 the method of optimising the "direction of resources" will be the "carriageway cost projection model" produced by SCOTS. This spreadsheet has been developed and refined over the duration of the SCOTS RAMP project. Many authorities already use it for this purpose and this will ensure that our budget method is consistent with and can be compared with other Scottish Councils.

4.1.6 Customer Consultation

The following surveys provide the customers perception of the asset:

"Highway Maintenance Services Customer Satisfaction Survey" produced by APSE, undertaken on a bi-annual basis.

4.1.7 Use

Traffic information is available from the Roads Service, Traffic and Development Section.

4.1.8 Safety Considerations

Safety information is available from the Roads Service and the Safety Manager, Human Resources.

4.1.9 Utility Activity

Utility activity information is available from the Network Section of the Roads Service with information being stored on the Scottish Road Works Register managed by the Scottish Roadworks Commissioner.

The New Roads and Works Street Act details the statutory requirements of the Utility Companies regarding notification and co-ordination of their roadworks.

4.1.10 Programme Co-ordination

The Network Engineer is responsible for ensuring an integrated approach in undertaking roadworks.

4.1.11 Third Party Claims

Third party claims information is available from the Council's Governance and Law Section.

4.1.12 Network Availability Considerations

There are no traffic sensitive roads on the Shetland network.

4.1.13 Amenity Value Considerations

The following sites are constructed of non standard materials to meet the amenity conditions of the area.

Location	Material Details	Quantity (m^2)
Commercial Street, Lerwick	Caithness Flagstones	5,000

4.1.14 Policies

The following policies associated with the carriageway asset have been approved by the Council Members:

See Task 1P Policy Review Spreadsheet in Appendix 1.

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4.1.15 Safety Inspections

Safety inspections are undertaken on carriageways at the following frequencies

Carriageway Hierarchy	Hierarchy Description	Inspection Frequency Rural	Inspection Frequency Urban
M1	Strategic Route	Monthly	Monthly
M2	Main Distributor	3 month	3 month
M3	Secondary Distributor	6 months	6 months
M4	Link Road	Annually	Annually
M5	Local Access (Isles) Road	Annually	Annually

The process for completing safety inspections is detailed in the Inspection Policy enclosed in Appendix 2.

Information from the safety inspections is stored in the Routine Maintenance System.

4.1.16 Condition Assessments

There are two conditional assessment undertaken on carriageways

    i.   SCANNER (Surface Condition Assessment of the National Network of Roads)

    ii.   SCRIM (Sideway-force Coefficient Routine Investigation Machine

The SCANNER and SCRIM assessments are undertaken at the following frequencies

Road Class	% Inspected Annually	
	SCANNER	SCRIM
A Roads	100	100
B Roads	50	50
C Roads	50	50
Unclassified Roads	10	10

SCANNER and SCRIM surveys are undertaken by WDM Ltd.

Details of the contractual arrangement are held with the Society of Chief Officers of Transportation in Scotland (SCOTS).

The contractor provides the information via DVD and a download via external server.

Condition assessment information is stored in the WDM Ltd Pavement Management System (PMS).

The following condition reports are available from WDM Ltd Pavement Management System (PMS).

4.1.17 Construction / Asset Acquisition

The following processes need to be undertaken prior to the Council taking ownership of a new section of carriageway. All information and forms for asset acquisition are located with the Traffic & Development Section.

    a.   Onsite inspection to ensure the quality of the carriageway meets the Council standards. The Construction Consent process is used for this process for new roads or those constructed since 1984. For roads that were in use prior to 1984 the road adoption process is used.

    b.   Obtain all information relating to the carriageway asset including as-built drawings and design calculations/structural certificates for construction consents. Structural certificates are not required for

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the pre-1984 road adoption process. The relevant forms, guidance and a checklist of all information that is required for submission, for both processes, is available on the Roads Service website. These checklists must be completed and are kept with the Construction Consent/Road Adoption files in the Traffic & Development Section.

4.1.18   Routine Maintenance

4.1.18.1   Physical Processes

The following types of defects following specific work instructions are undertaken as Routine Maintenance.

Defect	Work Instruction
Pothole	WDM Routine Maintenance System
Minor pavement defect	WDM Routine Maintenance System
Unevenness caused by rutting	WDM Routine Maintenance System
Smoothness caused by lack of texture	WDM Routine Maintenance System
Removal of debris	WDM Routine Maintenance System
Street sweeping	WDM Routine Maintenance System

4.1.18.2   Management Processes

The following process details the management aspects of treating a defect.

1.   Routine Maintenance defects are identified by roads inspectors, customers and other Council staff.

   All defects are entered into the defect module of the Routine Maintenance System by the following two methods:

   i.   Download from Road Inspector Handheld Devices
   ii.   Manually entered by Area Maintenance Engineer or their assistant.

   The minimum information required for all defects is:

   - Location
   - Type
   - Size or quantity
   - Person who identified defect eg. Road Inspector, Customer or Council Member

2.   Identify the true state of the defect

   To ensure that each defect is consistently rated the safety inspectors or area maintenance engineer/assistant are responsible for locating and assessing the action required on each customer identified defect.

   They will confirm the location, type and size of defect. The Area Maintenance Engineer or their assistant will allocate an action for the repair of the defect.

   This information is entered into the Routine Maintenance System.

3.   Routine Maintenance Programme Development

   On a weekly basis the Area Maintenance Engineers will compile a list of defects from the Routine Maintenance System and from their own or the Area Foreman's observations.

   The list will be provided to the Area Foremen who will then be responsible for undertaking the work in an efficient manner.

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4. Post Work Process

On completion of the work the Maintenance Team Leader will record for each defect or set of defects if a combined treatment was completed the following:

    i.   Location of completed work Physical dimensions of the completed work
        a. Length (in metres)
        b. Width (in metres)
        c. Area (in square metres)
    ii. Details of treatment used
        a. Specification
        b. Material type

The following information having been entered from timesheets into the Servitor Repairs Management software will be automatically updated into the Routine Maintenance System:

    iii.   Date Completed
    iv. Financial details of work
        a. Quantity of hours
        b. Cost of materials
        c. Vehicles used for work

When the works are complete the Area Maintenance Engineer or Engineer/Technician will change the status of the defect to 'COMPLETE.'

4.1.19 Planned Maintenance

4.1.19.1 Scheme Identification

The Planned Maintenance Identified Scheme List is the responsibility of the Team Leader – Asset & Network.

Schemes are identified from the following sources

    i.   SCANNER – The UKPMS (United Kingdom Pavement Management System) provides a report detailing all the sections of road with red and amber levels of condition.
        The Team Leader – Asset & Network inspects each section identified by UKPMS. The Team Leader decides what action is required and notes it on the report.
        Planned Maintenance Schemes are added to the Planned Maintenance Identified Scheme List
    ii. SCRIM – The UKPMS provide a report detailing all the sections of road where the skid resistance value was less than the assigned Investigatory Level. Note: the assigned Investigatory Levels are documented in "The Measurement and Management of Skid Resistance on Council Roads - Review and Revision to the Shetland Islands Council's SCRIM Policy.''
    iii. Follow the process described in the Sections of the SCRIM policy which require Planned Maintenance and add these sections to the Planned Maintenance Identified Scheme List.
    iv. Area Maintenance Engineers – Area Maintenance Engineers may recommend that the best treatment for one or a group of more than one safety defects is a planned maintenance treatment.
    v. Council Members – Council Members on occasion contact the Council about carriageway defects raised by their constituents. The Area Maintenance Engineer or Team Leader – Asset & Network is responsible for inspecting and evaluating the defects. The more significant defects will be inserted into the Planned Maintenance Identified Scheme List.
    vi. Customers – Customers also contact the council about carriageway defects. The Area Maintenance Engineer or Team Leader – Asset & Network is responsible for inspecting and evaluating the defects. The more significant defects will be inserted into the Planned Maintenance Identified Scheme List.

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4.1.19.2 Scheme Selection

The following actions are completed by the Team Leader – Asset & Network.

All schemes on the Planned Maintenance Identified Scheme List are rated using the condition data for each criteria (texture, cracking, rutting and longitudinal profile) recorded during the SCANNER survey.

The programme of schemes is confirmed when the planned maintenance budget is approved. The highest rated schemes from the Carriageway Prioritisation Process to the value of the planned maintenance budget become the Planned Maintenance Programme. The remaining schemes will be reconsidered the following financial year.

The Planned Maintenance Programme is sent to the Roads Service Executive Manager.   Information required for each scheme is:

- Location,
- Length (metres)
- Area (square metres)
- Treatment type
- Cost of Treatment

All this information should be provided in an Excel Spreadsheet.

The Roads Service Executive Manager will write to Council members and Community Councils to inform them of the Planned Maintenance Programme.

4.1.19.3 Management Processes – Pre Physical Works

The following process details the management aspects of completing the planned maintenance treatment. These will be completed by the Team Leader – Asset & Network.

1. Each scheme is allocated an estimated timeframe for the completion of the physical works. This information will be provided to the Resurfacing Team's Foreman.
2. Complete design process to identify material quantities and estimated costs.
3. Recalculate the total cost of your Planned Maintenance Programme and compare with approved budget.
   a. If the approved budget is less than the cost of the estimated budget schemes will need to be removed from the Planned Maintenance Programme. Ideally the removed scheme should be the lowest rated from the Carriageway Prioritisation Process.
   b. If the approved budget is more than the cost of the estimated budget schemes will need to be added to the Planned Maintenance Programme. New schemes added to the programme should always be the next highest rated from the Carriageway Prioritisation Process
4. Identify who is going to complete the physical work component of the scheme
   a. Reconstruction Treatments – completed by DLO
       The DLO will be responsible for procuring the materials and completing the physical works
   b. Resurfacing Treatments – completed by DLO
       The DLO will be responsible for procuring the materials and completing the physical works
   c. Surface Dressing Treatments – completed by DLO
   d. The DLO will be responsible for procuring the materials and completing the physical works
   e. Specialist Surfacing Treatments (e.g. Slurry Sealing) – completed by Specialist Contractor
       Acquiring a Specialist Contractor is the responsibility of the Team Leader – Asset & Network.

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4.1.19.4 Management Processes – Post Physical Works

On completion of the work the Team Leader – Asset & Network will record for each scheme the following:

    i.   Inventory Information – Complete the updating of the carriageway layers in the Road Maintenance System so that there is a record of the work done and when it was done.

    ii.   Date completed

The following information having been entered from timesheets and plant sheets into the Servitor Repairs Management software will be automatically updated into the Routine Maintenance System:

    iii.   Financial details of work
        a.   Quantity of hours
        b.   Cost of materials
        c.   Vehicles used for work

When the works are complete the Team Leader – Asset & Network will change the status of the defect to 'COMPLETE.'

4.1.20 Disposal

The 'Stopping Up' process is managed by the Traffic & Development Section.

The process for archiving all carriageway information is located in the Routine Maintenance System.

4.1.21 Works Delivery

Not used

4.1.22 Performance Measurement

This section describes the management process for the carriageway performance measures. It describes the following:

- Process for how they are recorded
- How each performance measure is calculated
- Where the performance measure is stored
- Where and when the performance measure is reported

CI   **% of Category 1 defects made safe within response times**

Officer responsible for completing this Performance Measure: Network Engineer

Process required to obtain information to complete calculation:
    i.   Defect is identified by various parties
    ii.   The defect (unless identified by Roads Inspectors) is entered into the Routine Maintenance System. This includes the date and time of identification.
    iii.   Defect is inspected and categorised as a Category 1 defect requiring 'making safe'
    iv.   If the defect was entered into the Routine Maintenance System in ii). the information is updated and the Category is assigned an '1'.
    v.   If the defect was identified by the roads inspector all information is entered into the Routine Maintenance System.

Calculation of Performance Measure:
    i.   For each category 1 defect requiring making safe:
        Time to make safe (hours) = Time defect completed – Time defect identified
    ii.   Sum all the defects with actual 'Times to make safe' below the required 'time to make safe'.

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This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **% of safety inspections completed on time**

Officer responsible for completing this Performance Measure: Network Engineer

Process required to obtain information to complete calculation:
   i.   At the beginning of the financial year enter the safety inspection programme into the Routine Maintenance System
   ii. The safety inspector shall confirm completion of each inspection in the Routine Maintenance System.

Calculation of Performance Measure:
   i.   For each Safety Inspection allocate:
        Yes if Actual Completion Time of Safety Inspection is before Target Completion Time of Safety Inspection
        No if Target Completion Time of Safety Inspection is before Actual Completion Time of Safety Inspection
   ii. Sum Yes's from i). / total number of programmed surveys
This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **Percentage of principal roads network where structural maintenance should be considered**

Officer responsible for completing this Performance Measure: Team Leader – Asset & Network.

Process required to obtain information to complete calculation:
   i.   Complete SCANNER condition surveys
   ii. Enter SCANNER condition survey results into United Kingdom Pavement Management System (UKPMS)

Calculation of Performance Measure:
(Sum (lengths of principal roads with 'Red' Condition (RCI > 100) and 'Amber Condition (40 < RCI < 100))) / Total length of principal roads.
This information is stored in the UKPMS.
Methods for calculating the lengths of principal roads with different conditions in UKPMS
   • Create a report
   • Use a query
   • Copy the raw information to Excel and process the information.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **Percentage of "B" Class roads to be considered for maintenance treatment.**

Officer responsible for completing this Performance Measure: Team Leader – Asset & Network.

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Process required to obtain information to complete calculation:
  i.   Complete SCANNER condition survey
  ii.   Enter SCANNER condition survey results into United Kingdom Pavement Management System (UKPMS)

Calculation of Performance Measure:
(Sum (lengths of non-principal "B" roads with 'Red' Condition (RCI > 100) and 'Amber Condition (40 < RCI < 100))) / Total length of non-principal "B" roads.
This information is stored in the UKPMS.
Methods for calculating the lengths of non-principal "B" roads with different conditions in UKPMS
  • Create a report
  • Use a query
  • Copy the raw information to Excel and process the information

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **Percentage of "C" class roads to be considered for maintenance treatment.**
Officer responsible for completing this Performance Measure: Team Leader – Asset & Network.

Process required to obtain information to complete calculation:
  i.   Complete SCANNER condition survey
  ii.   Enter SCANNER condition survey results into United Kingdom Pavement Management System (UKPMS)

Calculation of Performance Measure:
(Sum (lengths of non-principal "C" roads with 'Red' Condition (RCI > 100) and 'Amber Condition (40 < RCI < 100))) / Total length of non-principal "C" roads.
This information is stored in the UKPMS.
Methods for calculating the lengths of non-principal "C" roads with different conditions in UKPMS
  • Create a report
  • Use a query
  • Copy the raw information to Excel and process the information

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **Percentage of unclassified, non-principal roads network where maintenance should be considered**
Officer responsible for completing this Performance Measure: Team Leader – Asset & Network.

Process required to obtain information to complete calculation:
  i.   Complete condition survey
  ii.   Enter condition survey into United Kingdom Pavement Management System (UKPMS)

Calculation of Performance Measure:
(Sum (lengths of unclassified non-principal roads with 'Red' Condition (RCI > 100) and 'Amber Condition (40 < RCI < 100))) / Total length of unclassified non-principal roads.
This information is stored in the UKPMS.
Methods for calculating the lengths of unclassified non-principal roads with different conditions in UKPMS
  • Create a report
  • Use a query

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- Copy the raw information to Excel and process the information

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

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4.2 Footways

The footway asset consists of the following assets:

- Footways

4.2.1 Inventory

There is an inventory of assets which is kept in the Routine Maintenance System.

4.2.2 Categorisation of Inventory: Hierarchy

The footway asset is categorised into the following hierarchy:

Category	Category Name	Description
M1	Strategic Route	Footways on strategic, major roads. This category includes most of the A class roads and some lower class roads of strategic importance.
M2	Main Distributor	Largely footways on B and C class roads..
M3	Secondary Distributor	Footways serving residential and industrial developments
M4	Link Road	Footways and remote footpaths on residential loops and cul-de-sacs.
M5	Local Access (Isles) Road	Distant Islands of Papa Stour, Fair Isle and Foula.

4.2.3 Quality of Inventory Held

20% of inventory is validated every year.

The process for completing the Inventory Validation is held in WDM

4.2.4 Asset Register

The Asset Register is held in the Routine Maintenance System

4.2.5 Budget Allocation

The process for allocating the footway budget is as follows:

The revenue budget for footpath maintenance is almost all utilised on preventative maintenance in the form of slurry sealing. Therefore, the budget is based on the previous year's costs and the lengths of footpath that need urgent treatment. However, the pressure on revenue funding means there is little scope to increase this budget if required and the less urgent works have to wait to the following year.

4.2.6 Customer Consultation

The following surveys provide the customers perception of the asset:

 "Highway Maintenance Services Customer Satisfaction Survey" produced by APSE, undertaken on a bi-annual basis.

4.2.7 Use

Pedestrian footfall information not available.

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4.2.8 Safety Considerations

Safety information is available from the Roads Service and the Safety Manager, Human Resources.

4.2.9 Utility Activity

Utility activity information is available from the Network Section of the Roads Service with information being stored on the Scottish Road Works Register managed by the Scottish Roadworks Commissioner.

The New Roads and Works Street Act details the statutory requirements of the Utility Companies regarding notification and co-ordination of their roadworks.

4.2.10 Programme Co-ordination

The Network Engineer is responsible for ensuring an integrated approach in undertaking roadworks.

4.2.11 Third Party Claims

Third party claims information is available from the Governance and Law Section.

4.2.12 Network Availability Considerations

There are no traffic sensitive footpaths on the Shetland network.

4.2.13 Amenity Value Considerations

The following sites are constructed of non standard materials to meet the respective amenity conditions of the area.

Location	Material Details	Quantity (m^2)
New Town, Lerwick (Footpaths)	Marshalls Conservation Slabs	6,500

4.2.14 Policies

The following policies associated with the carriageway asset have been approved by the Council Members:

See Task 1P Policy Review Spreadsheet in Appendix 1.

4.2.15 Safety Inspections

Safety inspections are undertaken on carriageways at the following frequencies

Footway Hierarchy	Hierarchy Description	Inspection Frequency Rural	Inspection Frequency Urban
M1	Strategic Route	Monthly	Monthly
M2	Main Distributor	Every 3 months	Every 3 months
M3	Secondary Distributor	Every 6 months	Every 6 months
M4	Link Road	Annually	Annually
M5	Local Access (Isles) Road	Annually	Annually

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The process for completing safety inspections is detailed in WDM

Information from the safety inspections is stored in the Routine Maintenance System.

4.2.16   Condition Assessments

The Footway Network Survey (FNS) methodology is used to monitor the condition of the footway. The survey is undertaken as part of the Road Inspection. The Roads Inspector records the condition on the handheld device. This enables the full footway network to be surveyed every year.

The process for completing the FNS is to be advised

4.2.17   Construction / Asset Acquisition

The following processes need to be undertaken prior to the Council taking ownership of a new section of carriageway.   All information and forms for asset acquisition are located with the Traffic & Development Section.

   a.   Onsite inspection to ensure the quality of the footpath or footway meets the Council standards. The Construction Consent process is used for this process for new roads or those constructed since 1984. For roads that were in use prior to 1984 the road adoption process is used.

   b.   Obtain all information relating to the footpath/footway asset including as-built drawings and design calculations/structural certificates for construction consents. Structural certificates are not required for the pre-1984 road adoption process. The relevant forms, guidance and a checklist of all information that is required for submission, for both processes, is available on the Roads Service website. These checklists must be completed and are kept with the Construction Consent/Road Adoption files in the Traffic & Development Section.

4.2.18   Routine Maintenance

4.2.18.1   Physical Processes

The following types of defects following specific work instructions are undertaken as Routine Maintenance.

Defect	Work Instruction
Pothole	WDM Routine Maintenance System
Loose Flags	WDM Routine Maintenance System
Damaged Flags	WDM Routine Maintenance System
Kerbing defects	WDM Routine Maintenance System
Depressions	WDM Routine Maintenance System

4.2.18.2   Management Processes

The following process details the management aspects of treating a defect.

   1.   Routine Maintenance defects are identified by road inspectors, customers and other Council staff.

      All defects are entered into the defect module of the Routine Maintenance System by the following two methods:

      iii.   Download from Road Inspector Handheld Devices
      iv.   Manually entered by Area Maintenance Engineer or their assistant

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The minimum information required for all defects is:

- Location
- Type
- Size or quantity
- Type of person who identified defect eg. Road Inspector, Customer or Council Member

2. Identify the true state of the defect

To ensure that each defect is consistently rated the safety inspectors are responsible for locating and assessing the action required on the defect.

They will confirm the location, type and size of defect. The Area Maintenance Engineer or their assistant will allocate an action for the repair of the defect.

This information is entered into the Routine Maintenance System.

3. Routine Maintenance Programme Development

On a weekly basis the Area Maintenance Engineers will compile a list of defects from the Routine Maintenance System and from their own or the Area Foreman's observations.

The list will be provided to the Area Foremen who will then be responsible for undertaking the work in an efficient manner.

4. Post Work Process

On completion of the work the Maintenance Team Leader will record for each defect or set of defects if a combined treatment was completed the following:

i. Location of completed work Physical dimensions of the completed work
  a. Length (in metres)
  b. Width (in metres)
  c. Area (in square metres)
ii. Details of treatment used
  a. Specification
  b. Material type

The following information having been entered from timesheets into the Servitor Repairs Management software will be automatically updated into the Routine Maintenance System:

iii. Date Completed
iv. Financial details of work
  a. Quantity of hours
  b. Cost of materials
  c. Vehicles used for work

When the works are complete the Area Maintenance Engineer or Engineer/Technician will change the status of the defect to 'COMPLETE.'

4.2.19 Planned Maintenance

4.2.19.1 Scheme Identification

The Planned Maintenance Identified Scheme List is the responsibility of the Area Maintenance Engineer.

Schemes are identified from the following sources

i. The Routine Maintenance System provides a report detailing all the sections of footway assessed as having a defect.

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The Roads Inspector suggests a remedial action and notes it on the report. The Area Maintenance or his assistant will approve or revise the remedial action and generate a works order on the Routine Maintenance System.

Planned Maintenance Schemes are added to the Planned Maintenance Identified Scheme List

ii.   Road Inspectors – Road Inspectors may recommend that the best treatment for one or a group of more than one safety defect is a planned maintenance treatment.

iii.   Council Members – Council Members on occasion contact the Council about footpath/footway defects raised by their constituents. The Area Maintenance Engineer or Team Leader – Asset & Network is responsible for inspecting and evaluating the defects. The more significant defects will be inserted into the Planned Maintenance Identified Scheme List.

iv.   Customers – Customers also contact the council about carriageway defects. The Area Maintenance Engineer or Team Leader – Asset & Network is responsible for inspecting and evaluating the defects. The more significant defects will be inserted into the Planned Maintenance Identified Scheme List.

4.2.19.2   Scheme Selection

The following actions are completed by the Area Maintenance Engineer.

All schemes on the Planned Maintenance Identified Scheme List are rated.

The first draft of the programme of schemes is confirmed when the planned maintenance budget is approved. The highest rated schemes from the Footway Prioritisation Process to the value of the planned maintenance budget become the first Draft Planned Maintenance Programme.

The first Draft Planned Maintenance Programme is sent to the Executive Manager - Roads. Information required for each scheme is:

- Location,
- Length (metres)
- Area (square metres)
- Treatment type
- Cost of Treatment

All this information should be provided in an Excel Spreadsheet.

4.2.19.3   Management Processes – Pre Physical Works

The following process details the management aspects of completing the planned maintenance treatment once they are approved. These will be completed by the Area Maintenance Engineer.

1. Each scheme is allocated an estimated timeframe for the completion of the physical works. This information will be provided to the Area Foreman.
2. Complete design process to identify material quantities and estimated costs.
3. Recalculate the total cost of your Planned Maintenance Programme and compare with approved budget.
   a. If the approved budget is less than the cost of the estimated budget schemes will need to be removed from the Planned Maintenance Programme. Ideally the removed scheme should be the lowest rated from the Footway Prioritisation Process.
   b. If the approved budget is more than the cost of the estimated budget schemes will need to be added to the Planned Maintenance Programme. New schemes added to the programme should always be the next highest rated from the Footway Prioritisation Process
4. Identify who is going to complete the physical work component of the scheme
   a. Reconstruction Treatments – completed by DLO
      The DLO will be responsible for procuring the materials and completing the physical works
   b. Resurfacing Treatments – completed by DLO
      The DLO will be responsible for procuring the materials and completing the physical works
   c. Surface Dressing Treatments – completed by DLO

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    d.   Relaying Flags – completed by DLO

    e.   The DLO will be responsible for procuring the materials and completing the physical works

4.2.19.4 Management Processes – Post Physical Works

On completion of the work the Maintenance Team Leader will record for each defect or set of defects if a combined treatment was completed the following:

    i.   Location of completed work Physical dimensions of the completed work
        a.   Length (in metres)
        b.   Width (in metres)
        c.   Area (in square metres)
    ii.   Details of treatment used
        a.   Specification
        b.   Material type

The following information having been entered from timesheets into the Servitor Repairs Management software will be automatically updated into the Routine Maintenance System:

    iii.   Date Completed
    iv.   Financial details of work
        a.   Quantity of hours
        b.   Cost of materials
        c.   Vehicles used for work

When the works are complete the Area Maintenance Engineer or Engineer/Technician will change the status of the defect to 'COMPLETE.'

4.2.20 Disposal

The 'Stopping Up' process is managed by the Traffic & Development Section

The process for archiving all footway information from the Routine Maintenance System is located WDM Pavement Management System.

4.2.21 Works Delivery

The process for managing the delivery of works in shown in WDM.

4.2.22 Performance Measurement

This section describes the management process for the footway performance measures. It describes the following:

- Process for how they are recorded
- How each performance measure is calculated
- Where the performance measure is stored
- Where and when the performance measure is reported

CI   **% of Category 1 defects made safe within response times**

        Officer responsible for completing this Performance Measure: Network Engineer

        Process required to obtain information to complete calculation:
           i.   Defect is identified by various parties
          ii.   The defect (unless identified by Safety Inspectors) is entered into the Routine Maintenance System. This includes the date and time of identification.
         iii.   Defect is inspected and categorised as a Category 1 defect requiring 'making safe'

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iv.   If the defect was entered into the Routine Maintenance System in ii). the information is updated and the Category is assigned an '1'.

v.   If the defect was identified by the safety inspector all information is entered into the Routine Maintenance System.

Calculation of Performance Measure:

i.   For each category 1 defect requiring making safe:
Time to make safe (hours) = Time defect completed – Time defect identified

ii.   Sum all the defects with actual 'Times to make safe' below the required 'time to make safe'.

This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

| CI | **% of safety inspections completed on time** |

Officer responsible for completing this Performance Measure: Network Engineer

Process required to obtain information to complete calculation:

i.   At the beginning of the financial year enter the safety inspection programme into the Asset Management System

ii.   The safety inspector shall confirm completion of each inspection in the Routine Maintenance System.

Calculation of Performance Measure:

i.   For each Safety Inspection allocate:
Yes if Actual Completion Time of Safety Inspection is before Target Completion Time of Safety Inspection
No if Target Completion Time of Safety Inspection is before Actual Completion Time of Safety Inspection

ii.   Sum Yes's from i). / total number of programmed surveys

This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

| PIFW7 | **% of footway area treated** |

Officer responsible for completing this Performance Measure: Team Leader – Asset & Network

Process required to obtain information to complete calculation:

i.   The approved Planned Maintenance Programme shall be inserted into the Routine Maintenance System. Each scheme should be identified either as 'Reconstruction', 'Resurfacing' or 'Slurry Sealing.'

ii.   On completion of the works the length of the scheme shall be measured and entered into the Routine Maintenance System.

Calculation of Performance Measure:

Length of footway treated = Sum of length of footway treated

% footway treated = Sum of length of footway treated / Total length of footway

This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

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4.3 Street Lighting

The street lighting asset consists of the following assets:

- Columns
- Luminaires
- Cables
- Cabinets

4.3.1 Inventory

There is an inventory of assets which is kept in the WDM Routine Maintenance System.

4.3.2 Quality of Inventory Held

20% of inventory is validated every year.

A Structural/Electrical Survey is to be undertaken during 2016-2017 and the inventory will be 100% updated on its completion.

4.3.3 Asset Register

The Asset Register is held in the WDM Routine Maintenance System

4.3.4 Budget Allocation

The process for allocating the street lighting budget is as follows:

The budget has been based on earlier budgets in the past with fluctuations dependent on the levels of repairs identified. However, the electrical testing and structural inspection surveys will enable a calculation of the required budget from first principles. The "Scottish Futures Trust Streetlighting Toolkit" will then be used to determine the capital funding required to replace the conventional lanterns with their LED equivalents and for the replacement of "failed" columns. The revenue funding in subsequent years will be reduced to take account of the reduction in the need for lamp replacements and the improvement in the general condition of the lighting asset.

4.3.5 Customer Consultation

The following surveys provide the customers perception of the asset:

"Highway Maintenance Services Customer Satisfaction Survey" produced by APSE, undertaken on a bi-annual basis.

4.3.6 Safety Considerations

Safety information is available from the Street Lighting Technician

4.3.7 Utility Activity

The process for reimbursing from Utility Companies for damage to Street Lighting Columns or Cables is the responsibility of the Network Engineer.

The New Roads and Works Street Act details the statutory requirements of the Utility Companies.

4.3.8 Programme Co-ordination

Utility activity information is available from the Network Section of the Roads Service with information being stored on the Scottish Road Works Register managed by the Scottish Roadworks Commissioner.

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The New Roads and Works Street Act details the statutory requirements of the Utility Companies regarding notification and co-ordination of their roadworks.

4.3.9   Third Party Claims

Third party claims information is available from the Governance and Law Section

4.3.10   Network Availability Considerations

There are no traffic sensitive footpaths on the Shetland network.

4.3.11   Amenity Value Considerations

The following sites are constructed of non standard materials to meet the respective amenity conditions of the area:

Commercial Street and Lanes, Lerwick

4.3.12   Policies

The following policies associated with the carriageway asset have been approved by the Council Members:

 See Task 1P Policy Review Spreadsheet in Appendix 1.

4.3.13   Night Inspections

Not currently undertaken in Shetland.

4.3.14   Structural Inspections

Structural testing is completed in accordance with Institution of Lighting Engineers (ILE) Technical Report TR22: Managing a Vital Asset: Lighting Supports Guidance.

4.3.15   Electrical Inspections

Electrical testing is completed in accordance with the requirements of BS7671: Requirements of Electrical Installations

Electrical testing is undertaken by the Council's Building Service.

4.3.16   Construction / Asset Acquisition

The following processes need to be undertaken prior to the Council taking ownership of a new section of carriageway. All information and forms for asset acquisition are located with the Traffic & Development Section.

a. Onsite inspection to ensure the quality and safety of the streetlighting meets the Council standards. The Construction Consent process is used for this process for new roads or those constructed since 1984. For roads that were in use prior to 1984 the road adoption process is used.

b. Obtain all information relating to the streetlighting asset including as-built drawings and design calculations/structural certificates for construction consents. Structural certificates are not required for the pre-1984 road adoption process. The relevant forms, guidance and a checklist of all information that is required for submission, for both processes, is available on the Roads Service website. These checklists must be completed and are kept with the Construction Consent/Road Adoption files in the Traffic & Development Section.

4.3.17 Routine Maintenance

4.3.17.1 Physical Processes

The following types of faults following specific work instructions are undertaken as Routine Maintenance.

Fault	Work Instruction
Lamp Change	WDM Routine Maintenance System
Blown Fuse	WDM Routine Maintenance System
Cable Fault	WDM Routine Maintenance System
Section Fault	WDM Routine Maintenance System

4.3.17.2 Management Processes

The following process details the management aspects of treating a fault.

1. Routine Maintenance faults are identified by Estate Operations electricians, road inspectors, customers and other Council staff.

    The electrician or road inspector identifies the faults during inspections. The electrician will complete the repair if time and resources are available. The inspector will enter the fault in the Routine Maintenance System.

    All faults are entered into the fault module of the Routine Maintenance System by the following two methods:

    i. Download from Electrician/Road Inspector Handheld Devices
    ii. Manually entered by the Streetlighting Engineer/Technician.

    The minimum information required for all faults is:

    - Location
    - Column ID
    - Fault Type
    - Type of person who identified defect eg. Road Inspector, Customer or Council Member

2. Routine Maintenance Programme Development

    On a weekly basis the Streetlighting Engineer/Technician will compile a list of defects from the Routine Maintenance System and from their own or the Roads Inspector's and/or Area Foreman's observations.

    The list will be provided to the Estate Operations Team Leader via the Network Engineer who will both then be responsible for ensuring the work is done in an efficient manner.

3. Post Work Process

    On completion of the work the Street Lighting Maintenance Engineer/Technician will record for each fault the following:

    i. Location of completed work
        Column ID
    ii. Details of Repair
        a. Repair Type
        b. Equipment type
    iii. Details of Replacement Lamps (if applicable)
        a. Lamp Type
        b. Lamp Wattage

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The following information having been entered from timesheets into the Servitor Repairs Management software will be automatically updated into the Routine Maintenance System:

iv.   Date Completed

v.   Financial details of work
   - a. Quantity of hours
   - b. Cost of materials
   - c. Vehicles used for work

All information will be entered into the Routine Maintenance System by the Street Lighting Maintenance Engineer/Technician who will change the status of the defect to 'COMPLETE.'

4.3.18 Planned Maintenance

4.3.18.1 Scheme Identification - Columns

The Planned Maintenance Identified Scheme List is the responsibility of the Street Lighting Maintenance Engineer/Technician.

Schemes are identified from the following sources

i.   Structural Inspections – These visual inspections provides a report detailing inspected column and their place on a column condition index. The index is as follows:
   - 1 = Good;
   - 2 = Fair;
   - 3 = Poor; and
   - 4 = Fail.

Columns with an index of 4 are added to the removal list and Planned Maintenance Identified Scheme list. Columns with an index of 3 will be re-inspected after 2 years, those with an inex of 2 after 4 years and those with an index of 1 after 6 years.

ii.   Electricians/Road Inspectors –may identify columns which need renewing.

4.3.18.2 Scheme Selection

The following actions are completed by the Street Lighting Maintenance Engineer/Technician.

All schemes on the Planned Maintenance Identified Scheme List are rated using the Column Prioritisation Process.

The first draft of the programme of columns is confirmed when the planned maintenance budget is approved. The highest rated schemes from the Column Prioritisation Process to the value of the planned maintenance budget become the first Draft Planned Maintenance Programme.

The first Draft Planned Maintenance Programme is sent to the Roads Department Manager who delivers it to the Council Members. Information required for each scheme is:

- Location,
- Column ID
- Material type
- Lamp type
- Cost of Treatment

All this information should be provided in an Excel Spreadsheet.

The Roads Service Executive Manager will write to Council members to inform them of the Planned Maintenance Programme.

4.3.18.3 Management Processes – Pre Physical Works

The following process details the management aspects of completing the renewed street lighting columns once they are approved. These will be completed by the Street Lighting Engineer/Technician.

1. Each column (or group of columns) is allocated an estimated timeframe for the completion of the physical works. This information will be provided to the Electrician and/or Area Foreman.
2. Complete design process to identify material quantities and estimated costs.
3. Recalculate the total cost of the Planned Maintenance Programme and compare with approved budget.
    a. If the approved budget is less than the cost of the estimated budget, columns will need to be removed from the Planned Maintenance Programme. Ideally the removed columns should be the lowest rated from the Column Prioritisation Process.
    b. If the approved budget is more than the cost of the estimated budget, columns will need to be added to the Planned Maintenance Programme. New columns added to the programme should always be the next highest rated from the Column Prioritisation Process
4. Columns are installed by the DLO Road Maintenance Section.

4.3.18.4 Management Processes – Post Physical Works

On completion of the installation of the columns the Street Lighting Engineer/Technician will record the following information:

i. Inventory Information – Complete the Street Lighting Inventory Update Sheet
ii. Date completed

The following information having been entered from timesheets into the Servitor Repairs Management software or equivalent and will be automatically updated into the Routine Maintenance System:

iii. Financial details of work
    a. Quantity of hours
    b. Cost of materials
    c. Vehicles used for work

All information will be entered into the Routine Maintenance System by the Street Lighting Maintenance Engineer/Technician who will change the status of the defect to 'COMPLETE.'

4.3.19 Disposal

The process for disposing of a column is organised by the Street Lighting Engineer/Technician.

The process for archiving all street lighting information from the Routine Maintenance System is located in WDM.

4.3.20 Works Delivery

The process for managing the delivery of works is shown in WDM.

4.3.21 Performance Measurement

This section describes the management process for the street lighting performance measures. It describes the following:

- Process for how they are recorded
- How each performance measure is calculated
- Where the performance measure is stored
- Where and when the performance measure is reported

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CI   **Percentage of street lamps Not working as planned**

Officer responsible for completing this Performance Measure: Street Lighting Engineer/Technician.

Process required to obtain information to complete calculation:
  i.   Street lamps not working are identified by various parties
  ii.   Street lamps are entered into the Routine Maintenance System. This includes the date and time of identification.

Calculation of Performance Measure:
  i.   The number of street lamps not working for each day is calculated
  ii.   Average number of lamps not working as planned = Sum of lamps not working as planned for each year.
  iii.   Percentage of street lamps not working as planned = Average number of lamps not working as planned / 365 days
This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **Percentage of repairs within 7 days**

Officer responsible for completing this Performance Measure: Street Lighting Engineer/Technician.

Process required to obtain information to complete calculation:
  i.   Street lamps not working are identified by various parties
  ii.   Street lamps are entered into the Routine Maintenance System. This includes the date and time of identification
  iii.   Street lamps are repaired
  iv.   The status of the street lamps are updated to 'Complete' in the Routine Maintenance System.
  v.   All information relating to the repair is entered into the Asset Management System.

Calculation of Performance Measure:
  i.   For each street lamp repaired:
          Time (repair street lamp) = Time (street lamp repaired) – Time (street lamp identified not working)
  ii.   Sum (street lamps repaired in 7 days or less)
  iii.   Percentage of lamps restored to working condition within 7 days = Sum (street lamps repaired in 7 days or less) / Sum (total street lamps identified).
This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

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CI   **Average annual electricity consumption per street light (kWh)**

<u>Officer responsible for completing this Performance Measure</u>: Council's Energy Manager

<u>Process required to obtain information to complete calculation:</u>

Obtain the annual electricity consumption from the Energy Company

<u>Calculation of Performance Measure:</u>
Average annual electricity consumption per street light (kWh) = Annual electricity consumption / total number of street lights

<u>When performance measure is required:</u>

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

4.4 Structures

The structures asset consists of the following assets:

- Road Bridges
- Footbridges
- Retaining Walls
- Culverts

4.4.1 Inventory

There is an inventory of assets which is kept in the Routine Maintenance System.

4.4.2 Quality of Inventory Held

17% of the inventory is validated every year.

The process for completing the Inventory Validation is held in WDM. An inspection of bridges and culverts

4.4.3 Asset Register

The Asset Register is held in the Routine Maintenance System.

4.4.4 Budget Allocation

The process for allocating the structures budget is as follows:

The budget has been based on earlier budgets in the past with fluctuations dependent on the levels of repairs identified. However, the structural inspection surveys will in time enable a calculation of the required budget from first principles.

4.4.5 Customer Consultation

The following surveys provide the customers perception of the asset:

"Highway Maintenance Services Customer Satisfaction Survey" produced by APSE, undertaken on a bi-annual basis.

4.4.6 Utility Activity

The process for reimbursing from Utility Companies for damage to structures is the responsibility of the Network Engineer.

The New Roads and Works Street Act details the statutory requirements of the Utility Companies.

4.4.7 Programme Co-ordination

Utility activity information is available from the Network Section of the Roads Service with information being stored on the Scottish Road Works Register managed by the Scottish Roadworks Commissioner.

The New Roads and Works Street Act details the statutory requirements of the Utility Companies regarding notification and co-ordination of their roadworks.

4.4.8 Third Party Claims

Third party claims information is available from the Governance and Law Section

The process for reimbursing from third parties for damage to structures is the responsibility of the Governance and Law Section

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4.4.9   Environmental Considerations

Information on Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) are recorded on the Routine Maintenance System.

4.4.10   Network Availability Considerations

There are no traffic sensitive roads on the Shetland network.

4.4.11   Policies

The following policies associated with the structures asset have been approved by the Council Members: See Task 1P Policy Review Spreadsheet in Appendix 1.

4.4.12   General Inspections

General inspections are undertaken on all structures every two years

General inspections are undertaken in accordance with recognised procedures

Information from the general inspections is stored in WDM.

4.4.13   Principal Inspections

Principal inspections are undertaken on all structure every six years.

These inspections are to commence in the near future.

Principal inspections will be undertaken in accordance with recognised procedures

Some of the requirements of the inspection are undertaken by outside consultants e.g. major bridges

4.4.14   Construction / Asset Acquisition

The following processes need to be undertaken prior to the Council taking ownership of a structure. All information and forms for asset acquisition are located with the Traffic & Development Section

a.   Onsite inspection to ensure the quality and safety of the streetlighting meets the Council standards. The Construction Consent process is used for this process for new roads or those constructed since 1984. For roads that were in use prior to 1984 the road adoption process is used.

b.   Obtain all information relating to the streetlighting asset including as-built drawings and design calculations/structural certificates for construction consents. Structural certificates are not required for the pre-1984 road adoption process. The relevant forms, guidance and a checklist of all information that is required for submission, for both processes, is available on the Roads Service website. These checklists must be completed and are kept with the Construction Consent/Road Adoption files in the Traffic & Development Section.

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4.4.15 Routine Maintenance

4.4.15.1 Physical Processes

The following types of faults following specific work instructions are undertaken as Routine Maintenance.

Work Type	Work Instruction
Repointing	WDM Routine Maintenance System
Brickwork Repairs	WDM Routine Maintenance System
Handrail Repairs	WDM Routine Maintenance System
Parapets	WDM Routine Maintenance System
Protective coatings Repairs	WDM Routine Maintenance System
Expansion joint replacement	WDM Routine Maintenance System
Vehicle Collisions	WDM Routine Maintenance System

4.4.15.2 Management Processes

The following process details the management aspects of treating a fault.

1. Routine Maintenance Fault Identification
   Routine Maintenance faults are identified by the Design Section, roads inspectors, customers and other Council staff

   All faults are entered into the fault module of the Routine Maintenance System by the roads inspector or Area Maintenance Engineer.

   The minimum information required for all faults is:

   - Location
   - Structure ID
   - Fault Type
   - Type of person who identified defect eg. Roads Inspector, Customer or Council Member

2. Routine Maintenance Programme Development

   The Routine Maintenance Programme is created by the Team Leader Design.

   A risk rating is allocated to each identified fault by the Team Leader Design.

   The structures with faults are listed in order of risk (ie. high risk to low risk) creating the Risk Rated Routine Maintenance Programme.

   The first draft of the programme is confirmed when the routine maintenance budget is approved. The highest rated schemes from the Risk Rated Routine Maintenance Programme to the value of the routine maintenance budget become the first Draft Routine Maintenance Programme.

   The first Draft Routine Maintenance Programme is sent to the Executive Manager - Roads. Information required for each highway structure is:

   - Structure Name
   - Structure ID
   - Location
   - Description of Routine Maintenance
   - Cost of Work

   All this information should be provided in an Excel Spreadsheet.

   The Executive Manger - Roads is responsible for approving the Planned Maintenance Programme.

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3. Management Processes – Pre Physical Works

The following process details the management aspects of completing the structures routine maintenance once approved. These will be completed by the Team Leader Design.

1. Each structure is allocated an estimated timeframe for the completion of the physical works. This information will be provided to the Area Maintenance Engineer and Area Foreman.
2. Complete design process to identify material quantities and estimated costs
3. Apply for all permits following instructions located
4. Recalculate the total cost of the Routine Maintenance Programme and compare with approved budget.
   a. If the approved budget is less than the cost of the estimated budget structures, will need to be removed from the Routine Maintenance Programme. Ideally the removed structures should be the lowest rated from the Risk Rated Routine Maintenance Programme.
   b. If the approved budget is more than the cost of the estimated budget structures, will need to be added to the Routine Maintenance Programme. structures added to the programme should always be the next highest rated from the Risk Rated Routine Maintenance Programme

Structures routine maintenance is completed by the Road Maintenance Section.

4. Post Work Process

On completion of the work the Structures Maintenance Team Leader will record for each structure repaired the following:

i. Structure Name
   Structure ID
   Location of completed work
ii. Details of Repair
   a. Repair Type

The following information having been entered from timesheets into the Servitor Repairs Management software or equivalent and will be automatically updated into the Routine Maintenance System:

iii. Date Repair Completed
iv. Financial details of work
   a. Quantity of hours
   b. Cost of materials
   c. Vehicles used for work

All information will be entered into the Routine Maintenance System by the Area Maintenance Engineer.

4.4.16 Planned Maintenance

4.4.16.1 Physical Processes

The following types of faults following specific work instructions are undertaken as Planned Maintenance.

Work Type	Work Instruction
Replacement of Structure	WDM Routine Maintenance System
Parapet Wall Renewals	WDM Routine Maintenance System
Replacement Wing Walls	WDM Routine Maintenance System
Renewal of Bridge Deck	WDM Routine Maintenance System

4.4.16.2 Management Processes

The following process details the management aspects of treating a fault.

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1. Planned Maintenance Fault Identification
   Planned Maintenance faults are identified by the Design Section, roads inspectors, customers and other Council staff

   All faults are entered into the fault module of the Routine Maintenance System by the roads inspector or Area Engineer.

   The minimum information required for all faults is:

   - Location
   - Structure ID
   - Fault Type
   - Type of person who identified defect eg. Roads Inspector, Customer or Council Member

2. Planned Maintenance Programme Development

   The Planned Maintenance Programme is created by the Team Leader – Design.

   A risk rating is allocated to each identified fault by the Team Leader – Design.

   The structures with faults are listed in order of risk (ie. high risk to low risk) creating the Risk Rated Planned Maintenance Programme.

   The first draft of the programme is confirmed when the planned maintenance budget is approved. The highest rated schemes from the Risk Rated Planned Maintenance Programme to the value of the planned maintenance budget become the first Draft Planned Maintenance Programme.

   The first Draft Planned Maintenance Programme is sent to the Roads Department Manager. Information required for each highway structure is:

   - Structure Name
   - Structure ID
   - Location
   - Description of Planned Maintenance
   - Cost of Work

   All this information should be provided in an Excel Spreadsheet.

3. Management Processes – Pre Physical Works

   The following process details the management aspects of completing the structures planned maintenance once approved. These will be completed by the Team Leader – Design.

   1. Each highway structure is allocated an estimated timeframe for the completion of the physical works. This information will be provided to the Street Works Team.
   2. Complete design process to identify material quantities and estimated costs
   3. Apply for all permits following instructions
   4. Recalculate the total cost of the Planned Maintenance Programme and compare with approved budget.
      a. If the approved budget is less than the cost of the estimated budget structures, will need to be removed from the Planned Maintenance Programme. Ideally the removed structures should be the lowest rated from the Risk Rated Routine Maintenance Programme.
      b. If the approved budget is more than the cost of the estimated budget structures, will need to be added to the Planned Maintenance Programme. Structures added to the programme should always be the next highest rated from the Risk Rated Planned Maintenance Programme.

   Structures planned maintenance can be completed by either the Road Maintenance Section or an external contractor.

4. Post Work Process

On completion of the work the Team Leader – Design will record for each highway structure repaired the following:

- i.   Structure Name
        Structure ID
        Location of completed work
- ii.   Details of Repair
    - a.   Repair Type
- iii.   Date Repair Completed
- iv.   Financial details of work
    - a.   Quantity of hours
    - b.   Cost of materials
    - c.   Vehicles used for work

All information will be entered into the Routine Maintenance System by the Area Maintenance Engineer.

4.4.17 Disposal

The process for disposing of a highway structure is located at Traffic & Development Section.

The process for archiving all highway structures information from the Routine Maintenance System is located in WDM.

4.4.18 Works Delivery

The process for managing the delivery of works in shown in WDM

4.4.19 Performance Measurement

This section describes the management process for the structures performance measures. It describes the following:

- Process for how they are recorded
- How each performance measure is calculated
- Where the performance measure is stored
- Where and when the performance measure is reported

CI   **% of Principal Inspections Carried Out on Time**

Officer responsible for completing this Performance Measure: Team Leader – Design.

Process required to obtain information to complete calculation:
- i.   Design Section undertakes principal inspections.
- ii.   Inspection findings are entered into the Routine Maintenance System. This includes the date and time of inspection.

Calculation of Performance Measure:
- iii.   The number of inspections undertaken in the prescribed period is calculated.

This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI	**% of General Inspections Carried Out on Time**

<u>Officer responsible for completing this Performance Measure</u>: Team Leader – Design.

<u>Process required to obtain information to complete calculation:</u>
   iv. Design Section undertakes general inspections.
   iii. Inspection findings are entered into the Routine Maintenance System. This includes the date and time of inspection.

<u>Calculation of Performance Measure:</u>
   i. The number of inspections undertaken in the prescribed period is calculated.

This information is stored in the Routine Maintenance System.

<u>When performance measure is required:</u>

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI	**Bridge Stock Condition Indicator – average BSCIav**

<u>Officer responsible for completing this Performance Measure</u>: Team Leader – Design.

<u>Process required to obtain information to complete calculation:</u>
   i. Bridge condition is inspected by Design Section with each bridge receiving a score or Bridge Condition Indicator value depending on its condition.

<u>Calculation of Performance Measure:</u>
   ii. The Bridge Stock Condition Indicator is the numerical value of a bridge stock condition evaluated as an average of the Bridge Condition Indicator values weighted by the deck area (m²) of each bridge.

This information is stored in the Routine Maintenance System.

<u>When performance measure is required:</u>

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

CI   **Bridge Stock Condition Indicator – average BSCcrit**

Officer responsible for completing this Performance Measure: Team Leader – Design.

Process required to obtain information to complete calculation:

    i.   Bridge condition is inspected by Design Section with each bridge receiving a score or Bridge Condition Indicator value depending on its condition.

Calculation of Performance Measure:

    ii.   The Bridge Stock Condition Indicator is the numerical value of the critical condition index for a bridge stock evaluated using the BSCIcrit values.

This information is stored in the Routine Maintenance System.

When performance measure is required:

The performance indicator is reported by SCOTS/APSE, in the Council's Covalent software and on the Roads Service website.

Shetland Islands Council

Environment and Transport Committee   **3 October 2016**

Capital Maintenance and Replacement Programme	
ISD-11-16-F	
Director Infrastructure Services	**Infrastructure Services**

1.0 Summary

1.1 This report sets out for approval the projects which fall within this functional Committee's remit which form part of the Infrastructure Services Department's Capital Maintenance and Replacement programme. These maintenance and replacement programmes are developed annually based on condition surveys of the service assets and are funded by an approved budget within the Council's 5 year Asset Investment Plan.

2.0 Decision Required

2.1 That the Committee APPROVE the projects in the Infrastructure Services Department's Capital Maintenance and Replacement Programme for 2017/18.

3.0 Detail

3.1 On 29 June 2016 the Council approved a revised "gateway process" for managing the Asset Investment Plan (AIP) which incorporated the five cases Business Case model. The guidance document on the Gateway Process for the Management of Capital Projects states that "where projects fall within a programme of Capital Maintenance, an annual budget may be included in the Council's Asset Investment Plan, covering several of these relatively low value projects. A Business Justification Case is required to establish such a programme, and the annual budget required, but the individual projects within such a programme are not listed and reported on as part of the Asset Investment Plan. The promoting service must however review the content of such programmes and submit these to the relevant service committee for approval annually."

3.2 The document in Appendix 1 sets out the individual projects forming the maintenance and replacement programmes in the AIP for

Infrastructure Services for the financial year 2017/18. These programmes were previously established in line with the guidance in paragraph 3.1 above, and have now been reviewed for 2017/18.

4.0   Implications

4.1   Delivery On Corporate Priorities – Our Plan 2016-2020 states "we will have prioritised spending on building and maintaining assets and be clear on the whole life costs of those activities to make sure funding is being targeted in the best way to help achieve the outcomes set out in the Corporate Plan".

4.2   Community /Stakeholder Issues – There is a clear expectation from the Community and our stakeholders that the Council will plan to maintain and replace its infrastructure assets to ensure the delivery of frontline service and maintain transport connectivity.

4.3   Policy And/Or Delegated Authority – In accordance with Section 2.3.1 of the Council's Scheme of delegations, the Environment and Transport Committee has responsibility for discharging the powers and duties of the Council within its functional area. The projects in these annual maintenance and replacement programmes in the AIP must be approved by this Committee

4.4   Risk Management – Failing to adequately resource the maintenance of the infrastructure that underpins the delivery of frontline services and transport connectivity creates a risk of service disruption and associated reputational damage. The regular maintenance of assets and replacement of end of life assets ensures compliance with legal duties. Routine regular maintenance prevents the deterioration of assets and keeps them functional saving more significant replacement costs.

4.5   Equalities, Health And Human Rights –N/A

4.6   Environmental – The department is responsible for ensuring infrastructure and assets are managed in away to prevent pollution and reduce carbon emissions. Routine maintenance programmes are a significant control measure to prevent accidental spills, pollution and enables energy efficiency measures to be put in place.

Resources

4.7   Financial – The total budget required for the capital maintenance programmes for Infrastructure Services in 2017/18 is £3,552,875. These will be incorporated into the 5 Year Asset Investment Plan 2017-22 and will be funded from the Scottish Government General Capital Grant and capital receipts in line with the Capital Funding Policy in the Medium Term Financial Plan.

4.8   Legal – The regular maintenance of assets and replacement of end of life assets ensures compliance with legal duties and compliance with relevant regulatory and inspection regimes.

4.9   Human Resources – N/A

4.10   Assets And Property – The routine maintenance and replacement projects within this programme are part of the Council's strategy to manage its existing assets in a functional condition and replace them at the end of their useful life.

5.0   Conclusions

5.1   The 5 year AIP contains a number of repair and replacement programmes for which a budget has already been approved through the gateway process, the detail of the individual projects are agreed each financial year by the Service Committee

For further information please contact:
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Director Infrastructure Services
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26 September 2016

List of Appendices
Infrastructure Services Department's Capital Maintenance and Replacement Programme 2017/18

END

Infrastructure Services Department's Capital Maintenance and Replacement Programme 2017/18

Item	Additional info / Details	Cost
Roads Service Capital Road Reconstruction		
Heylor Junction (Eshaness Junction B9078)	Edge widening, patching, verge realignment at various sections between the Heylor Junction and the Hillswick Hall.	£75,700
Little Ayre Road (Muckle Roe Brig)	Regulate and overlay, widen verges and Passing Places.	£16,400
Eswick Road (Nesting)	Regulate, lay steel mesh, overlay and relay verges over a 1000m section, where the road is in very poor condition, cracked and badly out of shape.	£103,200
W. Sandwick Loop (West Yell)	Replace crossdrains, relay filter drain, ditches,patch potholes, regulating layer, wearing course, verges over a 900m section (North section).	£63,500
North A Voe Junction (Colvister Junction)	Excavate, lay type 1, regulate and overlay a short section on the main road where the road has settled.	£24,200
North Road, Lerwick	Excavate existing, lay type 1 and two layers of bitmac, reinstate speed humps and replacement of damaged/worn kerbs.	£179,000
Commercial Street, Lerwick	Continuation of reflagging works between Post Office and Market Cross – Lift remaining flags and temporary bitmaced reinstatements, lay kerbs, lay new flags and pitch joints.	£40,000
Berry Road, Scalloway	Excavate existing, lay type 1 and two layers of bitmac and replacement of damaged/worn kerbs.	£48,000
Drop crossings	Scheme of drop crossings to meet Disability Shetlands route requirements	£22,000
		£572,000
Capital Spending Scord Quarry		
New Bitumen Storage	Tanks purchase and installation, including heating, control panels, pumps etc.	£5,000

New Emulsion Plant	Plant purchase and installation.	£10,000
Asphalt Batching Plant	Cold Bin maintenance – replace bean and welding and Hoppers - replace worn steel sheets.	£100,000
Quarry Sheds/Houses	Mixing Plant Hot Bins – sheeting and purlings	£80,000
		£195,000
Streetlighting Replacement		
A970 Cunningsburgh		£40,000
A970 Lerwick		£40,000
A970 Brae		£40,000
Varioius Throughout Shetland		£40,000
B9076, Brae		40,000
Scalloway		£25,000
		£225,000
Bridge Replacement Programme		
Tresta Retaining Wall Armouring		£180,000
Will Houll Culvert, Bressay		£20,000
Stonganess Bridge Design		£10,000
		£210,000
Maintenance and Statutory Programmes		
Pelican Crossings		£35,000
Traffic Management		£50,000
Road Accident Investigation & Prevention		£35,000
		£120,000
Safety Barrier		
Dales Lees		£120,000

Weisdale Voe		£18,000
		£138,000
Estate Operations Building Maintenance Capital Works		
Aith Junior High School	Reroofing works - Roof covering is life expired.	£250,000
Bell's Brae Primary	Pointing to brickwork - Pointing has failed and needs redone to stop water ingress. Programme 2014-18 at £25K total.	£8,500
Cunningsburgh Primary School	Electric Mains and Sub Mains Distribution - Upgrade distribution boards supplying power coming into building.	£20,000
Hamnavoe Primary School	Replacement of faulty copper pipe work with plastic - Pipework in various locations corroded and requires replacement with Instaflex or equivalent - access constrained project.	£50,000
Happyhansel Primary School	Replacement of faulty copper pipe work with plastic - Pipework in various locations corroded and requires replacement with Instaflex or equivalent - access constrained project.	£33,375
	Boiler replacement - Survey report indicates plant is nearing end of its life. New boiler system required	£55,000
Lunnasting Primary School	Lighting upgrade - Upgrade lights throughout building with new energy efficient units, reducing the energy and maintenance costs and increasing life cycle of component.	£8,000
Mossbank Primary School	Toilet upgrades - Toilets require refurbishment and floor coverings contain asbestos vinyl. Two year programme at £60K	£30,000
Ollaberry Primary School	Upgrade Emergency lighting - Upgrade emergency lights throughout building with new energy efficient units, reducing the energy and ongoing maintenance costs.	£10,000
	Minor external refurbishment - Spot repairs and refurbish external wood and metal surfaces to stop water penetration and deterioration of building fabric	£7,000
Sandness Primary School	Replacement of faulty copper pipe work with plastic - Pipework in various locations corroded and requires replacement with Instaflex or equivalent - access constrained project.	£27,000
Skeld Primary School	Lighting upgrade - Upgrade lights throughout building with new	£10,000

	energy efficient units, reducing the energy and maintenance costs and increasing life cycle of component.	
	Replacement of faulty copper pipe work with plastic - Pipework in various locations corroded and requires replacement with Instaflex or equivalent - access constrained project.	£18,750
Sound Primary School	Renewal of old wiring to meet with regulation - Phase 1 of the school re -wire had been completed. Phase 2 has to be actioned in 2015	£11,650
Urafirth Primary School	Minor external refurbishment work - Spot repair and refurbish external wood and metal surfaces to stop water penetration and deterioration of building fabric	£10,000
Whalsay Primary School	Re-roof main Primary Building - Fixings have rusted through the roof sheeting, and patching being done to keep reasonably watertight	£95,000
Whalsay Secondary	Boiler replacement - Survey report indicates plant is nearing end of it's life. New boiler system required	£85,000
Whalsay Secondary	Lighting upgrade - Upgrade lights throughout building with new energy efficient units, reducing the energy and maintenance costs and increasing life cycle of component.	£22,000
Edward Thomason House	En-suite refurbishment, 14 remaining bedrooms - Upgrade 15 en-suites with new shower and wet wall cladding, detail of floor at wall is poor and water has been leaking behind wall lining and under floor. Five year programme at £72K total.	£14,400
	Bedroom Track Hoist - Upgrade hoists so they can support more weight, Ceiling track hoists need to be upgraded so they can support more weight, this involves new track and hoists with supporting structure in loft upgraded. Three year programme at £18K	£6,000
Fernlea Care Centre	Handrails on paths - request from care commission to provide handrails to paths around property	£10,000
Isleshaven Care Centre	Bathrooms in client bedrooms severely outdated. Some bedrooms fabric is deteriorated. Remove existing sanitary services. Re-clad walls with wet wall. Replace sanitary services with Doc-M pack. Two year programme at £55K total.	£20,000
Montfield Care Home	Works to stabilize ceiling track hoists. Hoists fitted have movement in	£10,000

	them and need to be stabilized this involves taking the hoists down and upgrading the fixings to the ceiling above the existing suspended ceiling. Two year programme at £20K total.	
New Craigielea	Bathroom upgrade Item: Main bathroom needs floor altered and new wet wall around perimeter. - Main bathroom upgrade to floor and walls. Floor needs screed to falls so that the water does not swamp the room, wet wall panels need to be extended along wall so spay from shower can't damage wall.	£12,000
Nordalea Care Home	Lighting upgrade - Remove existing light fitting and replace with surface mounted low energy, existing fittings breach fire compartments as they are recessed, we would standardize the fittings for future maintenance, at present there is 26 different light fittings in the building.	£12,000
	Upgrade Emergency lighting - Upgrade emergency lights throughout building with new energy efficient units, reducing the energy and ongoing maintenance costs.	£10,000
Northhaven Care Centre	Sanitary Services - Showers are life expired and not fit for purpose anymore. Room 2, 11, 13, 14 have been upgraded. - Replace showers/upgrade as per new upgrade standard; this is a health and safety problem. This would help visual impaired persons and disabled persons to use the shower area in comfort. Five year programme at £66K total.	£13,200
Overtonlea Care Centre	Upgrade 4nr Showers units - Showers require upgrading to meet the needs of clients 16nr units to complete. Two year programme at £30K total.	£15,000
Seaview	Plant room access to loft - Safe access to loft area for statutory testing and maintenance works existing access is unsuitable and requires an alternative route, the provision of an access through the plant room to loft area will benefit both maintenance and minimize client disruption.	£17,000
	Floor repairs bathrooms, All bathroom and en-suites - Bathroom wet room area flooring needs replaced as the detail around the perimeter	£10,000

	is unsuitable and is letting water down the back of the floor covering, if this continues the floor underneath will be damaged. Refurbish external wood and metal surfaces to stop water penetration and deterioration of building fabric.	
Taing House	En-suite refurbishment 2remaining bedrooms - Upgrade en-suite to room 2 with new shower and wet wall cladding, detail of floor at wall is poor and water has been leaking into corridor. Provide ventilation system to office and reception area - All through the summer the rooms are overheating.	£16,000
Lystina House	Upgrade Emergency lighting - Upgrade emergency lights throughout building with new energy efficient units, reducing the energy and ongoing maintenance costs.	£8,000
Gilbertson Park & Jubilee Park (Bowlers hut)	Minor external refurbishment - Spot repair and refurbish external wood and metal surfaces to stop water penetration and deterioration of building fabric	£10,000
Islesburgh Community Centre	Upgrade Emergency lighting - Upgrade emergency lights throughout building with new energy efficient units, reducing the energy and ongoing maintenance costs. Battery backup and emergency lights at the end of life.	£15,000
NAFC	Resurface window frames and curtain walling - Aluminium degrading	£12,500
Waste to Energy Plant	Repair existing wall cladding - Cladding is corroding due to acid environment. Internal columns require shot blasting. Re-priming and painting due to the acidity affecting the surface of the structural steel. Cladding is corroding due to acid environment. Two year programme at £56K total.	£35,500
		£997,875
Vehicle and Plant Replacement Programme		
Ferry Operations	4 Nr Vans	£48,000
Housing Services	6 Nr Vans	£84,000
Estate Operations – Building Services	10 Nr Vans	£140,000
Residential Child Care	1 Nr Car	£16,000

Env Services – Burial Grounds	2 Nr Pickups	£32,000
Env Services – Cleansing	1 Nr Sweeper	£25,000
Env Services – Refuse collection	4 Nr Midi Refuse Vehicles	£320,000
Road Services	6 Nr Pickups	£180,000
	5 Nr 7.5 Tonne Trucks	£250,000
		£1,095,000
Environmental Services		
Energy Recovery Plant	Routine Plant maintenance	£50,000
		£50,000