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Date: 14 January 2020

Dear Sir/Madam

You are invited to the following meeting:

**Environment and Transport Committee
Council Chamber, Town Hall, Lerwick
Tuesday 21 January 2020 at 10am**

Apologies for absence should be notified to Leisel Malcolmson, at the above number.

Yours faithfully

Executive Manager – Governance and Law

Chair: R Thomson
Vice Chair: R McGregor

AGENDA

- (a) Hold circular calling the meeting as read.
- (b) Apologies for absence, if any.
- (c) Declarations of Interest - Members are asked to consider whether they have an interest to declare in relation to any item on the agenda for this meeting. Any Member making a declaration of interest should indicate whether it is a financial or non-financial interest and include some information on the nature of the interest. Advice may be sought from Officers prior to the meeting taking place.

- d) Confirm the minutes of the meeting held on 20 November 2019 (enclosed).
- e) Petition - Speed Limit, Tresta
- 1. Infrastructure Directorate Performance Report
Environment & Transport Committee Performance Report;
Quarter 2 and Quarter 3 to 31 December 2019
ISD-05
- 2. Grounds Maintenance Provision – Burial Grounds & Amenity Areas
EO-01
- 3. Winter Maintenance Review 2020
RD-01
- 4. Climate Change – Strategic Outline Programme
ISD-01
- 5. Infrastructure Services Business Programme – 2019/20
ISD-03



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Shetland Islands Council

MINUTE

A&B - PUBLIC

**Environment and Transport Committee
Council Chamber, Town Hall, Lerwick
Wednesday 20 November 2019 at 2.00pm**

Present:

P Campbell	S Coutts
C Hughson	S Leask
A Manson	R McGregor
A Priest	G Smith

Apologies:

D Sandison	R Thomson
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In Attendance (Officers):

J Smith, Director of Infrastructure Services
N Grant, Director of Development Services
A Inkster, Executive Manager – Marine and Airport Infrastructure
C Symons, Executive Manager – Environmental Services and Estate Operations
K Main, Team Leader – Port & Marine Operations
N Hutcheson, Team Leader – Roads
B Robb, Management Accountant
P Wishart, Solicitor
L Malcolmson, Committee Officer

Also:

M Lyall

Chair:

Mr McGregor, Vice-chair, presided in the absence of the Chair of the Committee.

The Chair reminded the Committee of their responsibilities in terms of Pre-election Guidance already provided when

Circular:

The circular calling the meeting was held as read.

Declarations of Interests

None

Petition – Traffic Calming – Gilbertson Road etc.

The Chair drew attention to the terms of the petition at agenda Item C and read out the following response from the Roads Service

“The Roads Service is to hold a public meeting in mid-December at the Gilbertson Park Games Hall to discuss proposals for a 20 mph speed limit on Gilbertson Road

and the crescents to the north of Hayfield Lane. This proposal would link with the existing 20 mph zone covering the south crescents and the south end of Gilbertson Road outside Bell's Brae School. Traffic calming on Gilbertson Road, including the south section at the school, will be one of the proposals discussed.

This meeting will be followed by the formal consultation required by legislation and in due course, probably in April 2020, the findings from the meeting and consultation will be reported to Committee for decision."

Minutes

The Committee approved the minutes of the meeting held on 4 September 2019 on the motion of Mr G Smith, seconded by Mr Leask.

21/19 Development Directorate Performance Report – Q2 2019/20

The Committee considered a report by the Director of Development Services (DV-34-19-F) that summarised the activity and performance of the Development Directorate for Q1 & Q2 2019/20, enabling Members to analyse its performance against the Directorate's Service objectives and the Corporate Plan outcomes.

The Director of Development Services introduced the report in terms of the matters that related to the Environment and Transport Committee.

(Mr Campbell attended the meeting)

There being no questions and no debate the Committee noted the report.

Decision:

The Committee NOTED the content of the report.

22/19 Strategic Roads Network – Strategic Outline Programme

The Committee considered a report by the Executive Manager Roads Services and Team Leader – Asset and Network (RD-06-19-F) that provided information on current and projected needs, issues and opportunities around large-scale potential projects which might be required to maintain or develop the capability of the core Roads network in Shetland.

The Executive Manager – Roads Services summarised the main terms of the report.

During discussions a question was raised in regard to the previous Council's intent when the maintenance programme was put on hold. It was noted however that questioning the previous Council's decision in regard to priorities could not be answered by an Officer. It was acknowledged however that there had been no strategic programme in place for some time therefore it was important that this report is brought to Member's attention.

The Executive Manager – Roads Services was asked to provide an explanation on which roads are identified as part of the core road network when other important routes are not. He explained that the strategic network had been developed over many years and the main route was detailed closely using the maintenance hierarchy. He said that the main

principal roads were established by the government and in addition to the spine network there are also the routes that link the ferry terminals. In responding specifically on the Walls Pier Road the Executive Manager – Roads Services advised that an assessment was needed to see if it should be added. The Executive Manager – Roads Services explained that West Burrafirth had been added as it is the only route linking with a ferry terminal that is not included in the strategy.

Concern was expressed in regard to the progression of the rest of the priorities listed on the programme and clarity was sought in terms of how these other priorities would be carried forward to reporting stage. The Director of Infrastructure Services provided a fulsome explanation and concluded that no action would be taken without a complete business case process. He advised that there would be an update provided in January alongside a commitment to revisit the programme, and that on each occasion reports would reflect back on the programme and what steps would be taken next.

Reference was made to the Cullivoe Road and concern was expressed in regard to the planning/development restrictions in place as a direct result of the current road condition. The Executive Manager – Roads Services explained that without any resolution to the condition of the road he was unable to determine how long the road could remain open. He explained the patching work that had been undertaken and advised that Road Inspectors were now in a monitoring regime to see how long it can last or how long before a weight restriction is in place.

It was further acknowledged that there are problems across Shetland's road network and it was stressed that mitigation is required now.

The Chair referred to a recent visit to Mid Yell school by the Chair of the Committee and it was noted that there was much interest in the Cullivoe Road by the pupils. He said that he would report back to the Chair of the Committee in order that he could pass on the decision of the Committee to the pupils.

During debate the previous Councils decisions were again questioned on whether they were prudent or thrifty but this Council was in a process to looking after the roads. The Council recognised that there is now a build up of roads that need extensive maintenance and these were not just school routes but service every part of life and that a certain level of standard is expected.

In addition concern was expressed in regard to the time taken to bring some of these projects forward and it was noted that the priority lists constantly shift and change to accommodate emergency situations elsewhere on the network. A call was made for proper planning and capital investment.

The Leader paid tribute to the Roads Services for maintaining the roads to the current standard within budget and stated that these are political choices that this Council now had control over.

Mr Priest moved that the Council approve the recommendations contained in the report. Ms Manson seconded.

Decision:

The Committee recommended that the Council:

- **NOTE** actions taken to date regarding the development and maintenance of Shetlands Strategic Roads network.
- **ENDORSE** the objectives and critical success factors set out in the Strategic Outline Programme including the proposed reporting arrangements;
- **APPROVE** the identification of the B9082 Cullivoe road as the priority project for resolution within the Strategic Roads network;
- **DELEGATE** authority to the Director of Infrastructure Services or his nominee to initiate the preparation of a Strategic Outline Business case for the B9082 Cullivoe Road again in January 2020; and
- **NOTE** the addition of the road to the West Burrafirth Ferry Terminal to the strategic road network.

23/19

Carriageway Condition of Shetland's Roads

The Committee considered a report by the Team Leader – Asset and Network (RD-07-19-F) that presented an overview of carriageway conditions of Shetland roads and options for the future maintenance of the road network.

The Chair advised that there was a change in the wording of the decision required with the removal of the word “overall” and insertion of “A class”.

The Team Leader – Asset and Network introduced the report and apologised for the error in the report stating that the overall condition of Shetland's roads had deteriorated. In responding to questions the Team Leader – Asset and Network advised that the road condition survey does not take account of how many houses are occupied in the area but when the road maintenance hierarchy is applied consideration is given to population.

Reference was made specifically to the condition of the old North Road and the Team Leader – Asset and Network confirmed that this was a public road that required to be maintained by the Council. He said that although most of the damage to the road will be from the quarry, the quarry is well established and the Council has responsibility to keep the road maintained. He said that where an existing road is damaged due to a new development project, it would be appropriate to charge the developer to contribute to repairing the road.

Decision:

The Committee NOTED the contents of this report including the improvement in the “A class” Road Condition Indicator (RCI) figure shown in the 2017-19 results, the benchmarking of Shetland’s roads against the other Scottish local authorities and the predicted impact of budgetary decisions on the future condition of our carriageways.

24/19 **Environment and Transport Committee Business Programme – 2019/20**

The Committee considered a report by the Director of Infrastructure Services (ISD-15-19-F) that provided information on the Business Programme of the Committee for the financial year 1 April 2019 to 31 March 2020 including items where the date is still to be determined.

In introducing the report the Director of Infrastructure Services indicated that the January 2020 meeting had a number of reports on it and there may be a need to move some business into the next meeting.

During discussion concern was expressed that the gritting review was not taking place until the new year. A request was made that the report include an explanation of the hierarchy applied to the gritting of roads. In response to a question the Director of Infrastructure Services confirmed that the service were working to the enhanced policy approved last year.

A request was made that Infrastructure Service Performance Report is presented in January before budget setting meetings.

Decision:

The Committee NOTED the business planned in the financial year 2019/20.

The meeting concluded at 2.45pm.

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Chair

Petition – Speed Limit – Tresta

Online and paper Petition from Debra Nicolson with 72 signatures has been received in the following terms.

“Petition to SIC to reduce the speed limit through Tresta to 50mph

Many cars/vans speed through Tresta at more than 60mph. Even cars going at 60mph can be intimidating and dangerous for pedestrians. There have been numerous accounts of cats being killed on this stretch of road. Are we going to wait until a child or an old person is hit and killed? We call upon the Council to act before tragedy strikes. “



Meeting(s):	Environment & Transport Committee	21 January 2020
Report Title:	Infrastructure Directorate Performance Reporting – Environment & Transport Committee Performance Report; Quarter 2 and Quarter 3 to 30 November 2019	
Reference Number:	ISD-05-20-F	
Author / Job Title:	John R Smith - Director of Infrastructure Services	

1.0 Decisions / Action required:

1.1 The Committee should **NOTE** the;

- plans and progress in 2019/20 and
- proposals for 2020/21 activity and priorities

2.0 High Level Summary:

2.1 This report summarises the activity and performance of the Infrastructure Directorate with particular reference to the Environment & Transport Committee's remit. It is intended to help the Committee analyse performance against its key objectives and responsibilities and against Corporate Plan and Shetland Partnership Plan outcomes.

3.0 Corporate Priorities and Joint Working:

3.1 Effective Planning and Performance Management are key aspects of Best Value and features of "Our Plan", the Council's Corporate Plan 2016-2020.

4.0 Key Issues:

Progress on Key Objectives and Outcomes

4.1 The following highlights Infrastructure Roads, Estates, Environmental, Ferry and Air Services activity most relevant to the Environment & Transport Committee remit.

4.2 Environmental Services

4.2.1 Household waste recycling roll-out has been completed successfully.

4.2.2 The new recycling shed was completed in November 2019 and is now operational.

4.2.3 Commercial recycling scheme is being implemented in line with the completion of the recycling shed.

4.2.4 A Zero Waste Shetland Partnership – a community based approach to waste awareness and prevention activities – was approved by Environment and Transport Committee on 26 April 2019 and a project officer to support this initiative has been appointed under the new graduate scheme.

4.2.5 A significant upgrade to the Energy Recovery Plant furnace has been commissioned and will be implemented mid 2020.

4.2.6 An Outline Business Case for future Energy Recovery Plant arrangements is nearing completion and will be reported in March 2020.

4.3 **Estates Services**

4.3.1 Vehicle information system now bedded in across the whole Council fleet with management information being used to improve safety and efficiency.

4.3.2 Pool car provision implemented with extensive support from the Council's Human Resources service. This has provided a particular success for care at home workers, however some additional work remains to be done for other staff groups.

4.3.3 Shetland Islands Council Fleet Management Unit won the 2019 - Association for Public Service Excellence national award for "*UK Most Improved Transport Operations & Vehicle Maintenance*".

4.3.4 Climate Change and Zero Carbon Shetland has been the recent focus of members briefing and considerable public discussion. Reports on this are also on this Committee agenda.

4.4 **Roads**

4.4.1 Winter Gritting Review is being reported on this Committee agenda.

4.4.2 The replacement of conventional street lights with LED lanterns has progressed well. A report on the consultation with Housing Schemes who's lights were previously removed will be brought to the March Committee cycle.

4.4.3 A Strategic Roads Network Programme was approved at the Councils November Committee cycle. The Strategic Outline Case for the Cullivoe road scheme which was identified as the priority project is complete and will be reported during the March Committee cycle. That Strategic Outline Case will also be accompanied by proposals for activity and sequencing of other potential strategic roads network development.

4.4 **Ferry Operations**

4.4.1 Funding asks for Fair Ferries Revenue and Capital funding has been provided to Scottish Government and Transport Scotland. Matters are also being progressed through Inter-island Transport Group meetings with SG, TS, SIC, OIC, HiTrans

and ZetTrans. Outline Business Cases are being progressed for (i) Revenue costs (ii) Fair isle route (iii) Whalsay route.

4.5 Airports

4.5.1 Business cases for resurfacing of Tingwall Airstrip and consideration of any other capital investment requirements are now being investigated for future reporting to Council.

4.5.2 A business case for the licensing of Foula Airstrip, is now also being progressed to the same timeline.

Infrastructure Services Directorate Risks and Service Challenges – Environment & Transport Committee Focus

4.6 Key risks and service challenges with most direct relevance to the Environment & Transport Committee are;

4.6.1 There are increasing **risks in operating ferry services with aging vessels and terminals**; both in terms of escalating costs and service interruptions. This creates an ongoing budget pressure on the service and directorate budgets.

- **Corrective Action-** A comprehensive link span repair and life extension programme is being finalised and the Council is pursuing capital funding for a vessel replacement programme from the Scottish Government.
- **Corrective Action-** Options for accessing additional vessel capacity to manage dry-docking and breakdown cover for the Councils Inter-Island ferry fleet are being actively investigated. A report on options, including service and financial implications will be brought to the next committee cycle.

4.6.2 **Climate change and carbon management** targets have been adopted by UK and Scottish Governments. The Council will need to consider Shetland's response in this area.

- **Corrective Action** – Proposals regarding a potential “Zero Carbon Shetland – Partnership and Strategy” are being reported to Council this committee cycle for consideration and decision.

4.6.3 While updated **management structure and arrangements** have been implemented, they will require time to become fully resilient

- **Corrective Action** – A review of the effectiveness of the updated structure and any proposals for further adjustments required will be brought to the next committee cycle.

Infrastructure Financial Performance - 2019/20 Projected Outturn

4.7 The Directorate is expecting to spend £26.308m on revenue during 2019/20; an overspend of £932k compared to the approved budget of £25.376m. This overspend mainly relates to:

- reduced income resulting from the delay in the introduction of commercial recycling due to the delay in completion of the new Recycling Shed (£135k);

- additional ferry vessel maintenance costs across the fleet for breakdown and unanticipated deterioration (£622k); and
- additional roads surfacing plant hire costs awaiting new plant arrival and reduced demand for Scord Quarry product from the private sector (£210k).

4.8 The Directorate is also expecting to spend £7.563mm of its capital budget of £8.792m. This underspend relates mainly to:

- slippage on the ferry life extension work with the focus on revenue repairs £543k; and
- postponement of the Stonganess Bridge replacement awaiting the outcome of the proposed Cullivoe Road project £500k.

2020/21 Look Ahead

4.9 A number of Infrastructure Services key projects and actions will continue into future years as they require sustained activity to deliver their objectives. Most significantly among those are;

- Zero Waste & Zero Carbon Shetland partnerships including the Energy Recovery Plant and it's relationship with SHEAP and the Lerwick District Heating Scheme.
- Ferry terminal redevelopment within the Ferry Service Review.
- Ferry linkspan life extension programme and Ferry terminal waiting room / toilet programme including Foula, Skerries and Ulsta facilities.
- Roads network strategy.
- Scottish Transport Infrastructure Review and any connections to future Fixed Links considerations.

4.10 These projects will continue to report to relevant Council Committees for decisions as required and feature in the upcoming financial planning and budgeting activity for 2020/21 which the Council is currently undertaking.

4.11 Key financial issues for the Infrastructure Services Directorate going into 2020/21 will be the position on Fair Ferry Funding and Ferry replacement projects and the Zero Waste Shetland and Zero Carbon Shetland initiatives. Further discussion and reporting on these matters will be part of the Councils 2020/21 budget planning activity.

5.0 Exempt and/or confidential information:

5.1 None

6.0 Implications :

<p>6.1 Service Users, Patients and Communities:</p>	<p>Effective performance management and continuous improvement are important duties for all statutory and voluntary sector partners in maintaining appropriate services for the public. The Directorate uses customer feedback and complaint analysis to drive service change and service improvement.</p>
<p>6.2</p>	<p>There are a number of actions in this service plan with potential staffing implications. Care is taken to ensure that staff are</p>

Human Resources and Organisational Development:	involved and informed about changes that might affect them, that HR are closely involved and that relevant Council policies are followed. Ensuring staff feel valued and supported especially through periods of challenge and change is a key consideration for the Directorate Management team.
6.3 Equality, Diversity and Human Rights:	The Directorate uses Equalities Impact Assessment (EIA) to ensure its services are supporting those most in need and not making inequalities worse. This report relates to performance monitoring and so does not, in itself, require an EIA.
6.4 Legal:	The Directorate delivers statutory services, monitoring performance provides assurance that statutory requirements are met and the Council complies with its duties in delivering Services.
6.5 Finance:	The projected outturn position for 2019/20 up to 30 November 2019 is an overspend of £932k on revenue, and an underspend of £1.2m on capital as detailed in paragraph 4.3 and 4.4 above. This means that the projected overall revenue and capital outturn position for Infrastructure Services is projected to be a net underspend of £297k against budget for 2019/20.
6.6 Assets and Property:	A number of the actions in the Directorate Plan relate to maintenance and replacement of Infrastructure and Council assets to maintain delivery of services to the people of Shetland. The aging infrastructure, skills shortage and pressure on capacity in the private sector are creating challenges to maintain service delivery within budget.
6.7 ICT and new technologies:	Telematics are a key enabler for fleet management and remote sensing and control equipment will be key for energy efficiency and carbon management.
6.8 Environmental:	The Directorate leads the delivery of the Council's Carbon Management Plan and delivers a programme of works to reduce energy usage across the Council's assets including Harbours.
6.9 Risk Management:	<p>Embedding a culture of continuous improvement and customer focus are key aspects of the Council's improvement activity. Effective performance management is an important component of that which requires the production and consideration of these reports. Failure to deliver and embed this increases the risk of the Council working inefficiently, failing to focus on customer needs and being subject to negative external scrutiny.</p> <p>Risk management is a key component of the performance cycle and the Directorate Plan actions are determined to be priorities to manage the Directorate risks.</p>
6.10 Policy and Delegated Authority:	The Council's Constitution – Part C - Scheme of Administration and Delegations provides in its terms of reference for Functional Committees (2.3.1 (2)) that they;

	<p>“Monitor and review achievement of key outcomes in the Service Plans within their functional area by ensuring –</p> <p>(a) Appropriate performance measures are in place, and to monitor the relevant Planning and Performance Management Framework.</p> <p>(b) Best value in the use of resources to achieve these key outcomes is met within a performance culture of continuous improvement and customer focus.”</p>
6.11 Previously considered by:	<p><i>None</i></p>

Contact Details:

John Smith, Director of Infrastructure Services, director.infrastructure@shetland.gov.uk

Appendices:

None

Background Documents:

Our Plan 2016-2020

Council Medium Term Financial Strategy

Infrastructure Directorate Plan 2019/20



Meeting(s):	Environment & Transport Committee Policy and Resources Committee Shetland Islands Council	21 January 2020 21 January 2020 22 January 2020
Report Title:	Grounds Maintenance Provision Burial Grounds & Amenity Areas	
Reference Number:	EO-01-20-F	
Author / Job Title:	Carl Symons, Executive Manager - Environmental Services & Estate Operations	

1.0 Decisions / Action required:

That the Environment and Transport Committee RESOLVES to approve:

- 1.1 That the cutting frequency of Burial Grounds grassed areas is harmonised with Amenity Areas and classified as Category 2 across all yards. This means that grass shall be mown to maintain a mean height between a maximum growth height of 15 cm and a minimum mower setting of 7.5 cm. Any shortfall in resource will be contracted out on a flexible basis;
- 1.2 That the current area based contracts for grounds maintenance to Amenity Areas is merged into one Shetland-wide contract to maximise the economies of scale, thus easing contract management and administration; and
- 1.3 That the collection of mown grass be reviewed by Committee after this year's growing season for both Burial Grounds and Amenity Areas. This will allow evaluation on the impact of more frequent cuts across Burial Grounds on the basis that it will result in better and less visually obtrusive mulching, thus offsetting the need to collect grass at considerable expense.
- 1.4 That the Environment and Transport Committee RECOMMENDS that the Policy and Resources Committee and Shetland Islands Council approves the budget increase, to implement the measures described in 1.1, of approximately £41,453.

2.0 High Level Summary:

- 2.1 The purpose of this report is for Committee to consider the current provision and standards of grounds maintenance across Shetland's burial grounds and amenity grass areas.
- 2.2 This follows several complaints regarding the untidiness of Council maintained burial grounds and amenity areas. Subsequent reviews have revealed that most of the burial grounds complaints were for the yards that received no grass cuts this year, while Amenity Areas suffered because of this year's ideal growing conditions.

2.3 Committee is therefore asked to reconsider the collection of mown grass from 2021/22, a practice previously ceased in 2012 because the cost of waste grass disposal was increasing while budgets were decreasing.

3.0 Corporate Priorities and Joint Working:

3.1 The priorities listed in the Council's "Our Plan" include:

Our approach to managing the risks we face will have resulted in a more risk-aware organisation that avoids high-risk activities

4.0 Key Issues:

Background - Burial Grounds

4.1 Grass cutting across Shetland's 70 burial grounds is predominantly carried out by the Council's in-house workforce, with the total area of grass within the burial grounds being 132,400m². Background papers are provided in the Members' room for ease of reference.

Tabulated below is a summary comparison between 2018 and 2019, bearing in mind that the number of cuts for the yards in 2019 is still ongoing at this time.

	2018	2019
Total Yards	70	70
Total Area m ²	132,400	132,400
Total number yards not cut	3	15*
Total Cut m ²	129,770	120,331
Total Number of Cuts	711	611
Total m ² Cut	1,503,716	1,284,856

*these yards subsequently received one cut this year.

4.2 Over the last year the safety of the Council's burial grounds has been our primary concern, and the service has been prioritising the issue of memorial safety following a fatal accident in Glasgow in 2015 and subsequent changes to Scottish Government guidance to local authorities.

4.3 In addition, following HSE Enforcement action, the Council has had no choice but to adopt a more robust Hand and Arm Vibration Syndrome (HAVS) procedure. This means that the Burial Grounds Team have fewer hours available to operate vibrating equipment i.e. strimmer's and mowers, to reduce their hours of exposure so the Council can remain in compliance with legislation.

4.4 These contributory factors has meant that there are fewer productive hours available to deliver an increased range of burial grounds maintenance activities, including grass cutting and some of our standards and practices have had to alter as a result.

4.5 Several complaints highlighted that for some visitors these changes in practice have been detrimental to the visual amenity of the yards. As such, officers undertook to present the facts so that Committee can reconsider the applicable standard for grass cutting in terms of cutting frequency, and the recommencement

of mown grass collection. The latter practice was previously ceased in 2012 on cost grounds and because of the detrimental impact it has on the functionality of the Energy Recovery Plant. This is due to the incineration of mown grass increasing the cost of maintenance which increases downtime.

Background - Amenity Areas

4.6 The cutting of grass to amenity areas is entirely contracted out. Overall, there are 1,316 plots cut each year with a total area of 379,733m².

4.7 These contracts are split into several batches as follows:

1. Contract A: South Mainland
2. Contract B: Central Mainland
3. Contract C: West Mainland
4. Contract D: North Mainland
5. Contract E: Isles

4.8 Following a drive for efficiency savings prior to 2015, the way that the amenity areas contract was tendered changed from a prescriptive specification "you will cut the grass 14 times a year" to a performance based specification "you will keep the grass at Xmm length over the year", dependent upon priority.

This change saves money as, in many cases, a given area of grass may not need the maximum number of cuts to remain tidy. Thus, needless cuts were removed. The current priorities, defined as categories in the contract, are as follows:

Category 1 - Recreational turf areas are defined as lawn, fine turf areas and grass areas around flower and shrub beds forming visual garden amenities. Shall be mown to maintain a height between a maximum growth height of 7.5 cm and a minimum mower setting of 2.5 cm.

Category 2 - Maintained turf and estate grassland is defined as that which is adjacent to or surrounding housing and other buildings which is likely to include pedestrian and vehicular access ways within the curtilage of the grass area. Shall be mown to maintain a height between a maximum growth height of 15 cm and a minimum mower setting of 7.5 cm.

Category 3 - Rough turf and public open space is defined as that which open to general use is likely to include pedestrian, horse and some bicycle and vehicular access across and onto the grass area. Roadside verges are defined as strips of grass land abutting road and footpath thoroughfares. Shall be mown to maintain a height between a maximum growth height of 25 cm and a minimum mower setting of 10 cm.

Category 4 - Hard surface areas include paving, brickwork, blockwork, tarmacadam, concrete, stone chipping and loose gravel. They are required to be kept clean and weed-free.

Category 5 - Shrub beds and borders shall be maintained in a way that presents an attractive amenity and allows development of plants to be in keeping with the type, shape, size and aspect of the bed. All work is to be carried out in accordance with the requirements of BS 4428:1989 Code of Practice for General Landscape Operations (excluding hard surfaces).

- 4.9 The Contractor is required to maintain the grounds to specification throughout the period of the contract. The Contractor is to provide all plant, labour and materials including marking out and fuel to carry out the operations detailed in the tender specification. In carrying out such work the Contractor will ensure that his staff conduct themselves in an appropriate manner.
- 4.10 A subsequent analysis of complaints regarding the sufficiency of cutting to amenity areas again reveals that the current practice of not collecting mown grass is the likely root cause of many complaints that areas look unkempt or untidy.

Proposed Arrangements – Burial Grounds

- 4.11 There remains an ongoing need to carry out a memorial safety programme while adhering to the revised arrangements relating to HAVS compliance. These will impact upon the Team's ability to cut grass to the desired standard.
- 4.12 To overcome this, and to accommodate a potential requirement for either increased cutting frequencies or the collection of mown grass, it is proposed to supplement the in-house workforce with a flexible contract arrangement to cover any shortfalls in coverage.
- 4.13 To make best use of the economies of scale and to streamline contract administration, this arrangement would be tendered as part of the Shetland-wide amenity grass areas contracts due for renewal on 1st April 2020.
- 4.14 To ensure that the Council adopts a fair and equitable approach, and to make best use of resources, it is proposed that the Burial Grounds cutting programme be harmonised to match the Amenity Areas category 2 classification. It is anticipated that more frequent cuts, with grass maintained at this height, will negate the need to recommence mown grass collections, on the basis that it will result in better and less visually obtrusive mulching, thus offsetting the need to collect grass at considerable expense.

We estimate that between 12 and 14 cuts per growing season will be required across all yards as indicated below:

	2018	2019	2020
Total Yards	70	70	70
Total Area of Yards Cut (m ²)	129,770	120,331	132,400
Total Number of Cuts (per year)	711	611	910
Total m ² Cut (per growing year)	1,503,716	1,284,856	1,721,200

- 4.15 The estimated increase in additional cutting over currently achievable outputs will be 436,344m² which equates to an additional cost of approximately £41,453 per annum.
- 4.16 To cut and collect grass in the burial grounds would require investment in new machinery that is fitted with collection hoppers. The existing fleet of trailers could be used for the disposal of grass cuttings with some modifications, namely the retro-fitting of mesh sides and the supply of fit for purpose ramps.

4.17 The additional time taken to transport the grass to disposal should be mitigated by the approximately fortnightly cutting schedule, although the isles may be an issue that requires further consideration. It is likely that additional contracted resource would be required in some of the more remote burial grounds.

The following plant would be needed to transition to mown grass collection:

1. 7Nr Ride-On Mowers (£44,625)
2. 3Nr Mesh Side Kits & Ramps (£4,000)

The change to grass collection would also impact upon vehicle mileage and labour resources, with the following additional costs:

3. Additional mileage for vans (fuel) at approximately 60 miles per day, for the transport of collections to Gremista at a cost of £2,500 per growing year.
4. Additional staff hours to fill and empty trailer at approximately 1.5hrs per day per person, estimated at £7,500 per growing year.

Conclusions - Burial Grounds

4.18 In summary should members elect to review and recommence the collection of mown grass after this year's season for Burial Grounds, there would be a one off additional cost of £48,625 for collecting all mown grass with an annual recurring cost of £10,000 (in-house) and £13,679 (external contractor).

Proposed Arrangements – Amenity Areas

4.19 It is proposed to merge the current area based contractual split into one Shetland wide contract. This will include the addition of a provisional section relating to Burial Grounds as set out in 4.14, 4.15, 4.16 & 4.17 above.

4.20 This approach reduces preliminary overheads, simplifies contract administration, maximises the economies of scale and would reduce the duplication of effort that operating five different service providers would entail.

Conclusions - Amenity Areas

4.21 No changes are proposed to the current performance specification or scope of coverage. However, should members elect to review and recommence the collection of mown grass after this year's season for Amenity Areas the estimated additional cost would be £58,740 per annum, subject to tender.

5.0 Exempt and/or confidential information:

5.1 None

6.0 Implications :

<p>6.1 Service Users, Patients and Communities:</p>	<p>Several complaints from Community Councils and individuals have highlighted that for some visitors the standard of grass cutting has been detrimental to the visual amenity of both the yards and community areas in general. The changes proposed in this report will alleviate many of these concerns.</p>
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6.2 Human Resources and Organisational Development:	None.
6.3 Equality, Diversity and Human Rights:	None.
6.4 Legal:	<p>The Council is responsible for their cemeteries and amenity areas and the safety of those working, visiting or operating within them. In terms of:-</p> <ul style="list-style-type: none"> a) Local Government (Scotland) Act b) Health and Safety at Work Act 1974 c) The Management of Health and Safety at Work Regulations 1999 d) The Occupiers Liability Act 1960] e) The Burial and Cremation (Scotland) Act 2016
6.5 Finance:	<p>The cost of providing these service charges cannot be found from within existing budgets, this will be an increase in budget requirement and result in the following financial implications:</p> <p>The harmonisation of burial grounds grass cutting to a Category 2 standard will increase the cost of provision for this service by £41,453 per annum from the 2020/21 budget onwards.</p> <p>That the collection of mown grass be reviewed by Committee after this year's growing season and if approved result in a one off cost for burial grounds of £48,625 with an additional recurring cost of £23,679 per annum. The collection of mown grass to Amenity Areas would cost an estimated £58,740 per annum, resulting in a combined recurring cost of £82,419 per annum.</p>
6.6 Assets and Property:	The proposals described in this report are intended to enhance the visual amenity of the Council's Burial Grounds and Amenity Areas.
6.7 ICT and new technologies:	None.
6.8 Environmental:	The collection and disposal of cut grass will increase travel time and fuel use, both of which will have a negative impact upon our carbon footprint.
6.9 Risk Management:	The operations and machinery necessary to carry out the works contained in this report fall under PUWER and HAVs legislation, and minimising trigger times and time on machines is a key determinant to ensuring the Council's ongoing compliance.

<p>6.10 Policy and Delegated Authority:</p>	<p><u>Environment and Transport Committee</u> In accordance with Section 2.3.1 of the Council’s Scheme of Delegations the Environment and Transport Committee has responsibility for Burial Services and Amenity Grass Areas.</p> <p><u>Policy and Resources Committee</u> As set out in paragraph 2.2.1(7) the Policy and Resources Committee has responsibility secure the co-ordination, control and proper management of the financial affairs of the Council.</p> <p><u>Shetland Islands Council</u> Matters reserved to the Council include any expenditure not provided for in the Annual Estimates of Revenue and Capital Expenditure as described in section 2.1.3(4)</p>	
<p>6.11 Previously considered by:</p>	<p>None.</p>	

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 17 Dec 2019

Appendices:

None

Background Papers:

1. Burial Grounds Data & Locations
2. Amenity Areas Data
3. Amenity Area - Plot Locations



Meeting(s):	Environment & Transport Committee Policy & Resources Committee Shetland Islands Council	21 January 2020 21 January 2020 22 January 2020
Report Title:	Winter Service Review 2020	
Reference Number:	RD-01-20-F	
Author / Job Title:	Neil Hutcheson/ Team Leader – Asset and Network	

1.0 Decisions / Action required:

That the Environment and Transport Committee APPROVES:

1.1 the measures detailed in section 4.1.3 of this report that are intended to address concerns raised in previous winter service seasons and to improve the efficiency of winter service operations;

1.2 the measures detailed in section 4.4 intended to incorporate the relevant aspects of the new national guidance into the Council's winter service; and

RECOMMENDS that the Policy and Resources Committee and the Council approves:

1.3 the allocation of an additional £103,000 to the "Winter Service" revenue budget to meet the estimated cost of implementing these measures, as set out in paragraph 6.5 of this report.

2.0 High Level Summary:

2.1 The interim measures approved in October 2018, to address a number of concerns raised during the previous winter, are presented for approval on a permanent basis.

2.2 A number of aspects of the new national guidance have been considered but discounted for a number of reasons including cost or because they use new technologies that are still being developed.

2.3 A number of aspects of the new guidance are recommended for approval. These relate to spreader calibration, spread rates for pre-treatment and spread rates for post treatment.

3.0 Corporate Priorities and Joint Working:

3.1 The local outcomes from Shetland's Single outcome agreement include "Shetland stays a safe place to live, and we have strong, resilient and supportive communities." Winter service provision has direct implications for road safety.

3.2 A further local outcome that is particularly relevant to the winter service is “Shetland has sustainable economic growth with good employment opportunities and our people have the skills to match, good places to stay and the transport people and businesses need.” Maintaining availability and reliability of the road network and public transport is a key objective for Winter Service. Roads that are impassable due to winter conditions are costly to the local economy due to lost working time and disruption to the delivery of goods.

3.3 Development of a sustainable public road network contributes to the “Stronger” section of the Community Plan and also the Corporate aim to use resources sustainably. Low temperatures and ice can cause serious damage to carriageways. An effective winter service can contribute to a reduction in whole life costs

3.4 Shetland Islands Council Improvement Plan 12/13

Area 6.5 – To deliver the agreed savings reviews within the timescales agreed by Council.

Area 11.3 – The development of long term maintenance strategies based on sustainable use of physical resources and whole life costing.

4.0 Key Issues:

4.1 Current Policy

4.1.1 The current winter service arrangements have developed over many years to meet the needs of road users, primarily as they go to and from their place of work.

4.1.2 The “2018/19 Budget and Charging Proposals” were reported to the Environment & Transport Committee on 6 February 2018. The recommendations included a savings proposal for £50,000 that was to be achieved by “a roads gritting review to consider options that include the reduction of routes and the number of gritters provided as well as operational efficiencies that could be generated by the use of new technology.” However, Committee approved an amendment such that “a review of the Gritting Service be undertaken with no financial target set” (min ref 1/18).

4.1.3 In October 2018 this Committee approved interim measures intended to address a number of concerns raised regarding the 2017/18 winter service (min ref 26/18). These were implemented prior to this formal review during the 2018/19 season.

These concerns and interim measures were as follows:

- Concern – No treatment after 5pm; Measure – Formalise the procedure for responding to “blue light” emergencies and Police “call-outs” with a gritter crew on standby in each area for the entire winter season to respond then treat Priority 1 roads in that area;
- Concern – Reduced level of service at weekends and public holidays; Measure – Extend weekday level of service to weekends;
- Concern – No treatment on Christmas and New Year’s days; Measure – A gritter crew in each area to be on standby to respond to “blue light” emergencies and Police “call-outs” after which Priority 1 roads in that area may be treated.

It is now recommended that these interim measures be permanently approved in order to address concerns raised in previous winter service seasons and to improve the efficiency of winter service operations.

4.2 Winter Service Code of Practice

4.2.1 The National Winter Service Research Group (NWSRG) published new national guidance for winter service practitioners in March 2019. This guidance contains separate sections on a number of issues including salt storage, treatment methods, spread rates and extreme temperatures. This review has considered each of the sections and how they can be applied locally to improve the service provided.

4.3 Discounted Guidance

4.3.1 The consideration of these sections has resulted in the discounting of guidance as listed below:

- Construct Salt Barn for Storage - proper storage is essential to maintain road salt in good condition and to prevent the loss of salt that occurs when it is dissolved in rainfall. In Shetland 310 tonnes of road salt could be lost per year at a value of £11,765. However, given that a salt barn of this capacity would cost in excess of £500,000, with a return on the investment taking over 42 years, the provision of a barn for the main stockpile has been DISCOUNTED;
- Utilise New Treatment Methods - there are now four main methods of treating frost and ice including Pre-wetted Treatment, Treated Salting and Direct Liquid Application. Shetland Islands Council uses the long established “Dry Treatment” which is the spreading of salt in its dry state. A considerable investment in batching plant, new gritters or materials would be required before introducing any of the alternatives so the guidance recommends that they are only considered when fleet renewals are needed and the whole life costing of the winter service is being considered. We are not in that position having recently invested in newer gritters so this option has been DISCOUNTED; and
- Utilise New Technologies - there are a number of new or emerging technologies that may be of benefit to the winter service. For example variable message signs that alert drivers to the presence of ice on the road and low cost road surface temperature sensors that can be installed remotely. However, these are still being developed or use internet technologies that are not yet available in Shetland so for now their use has been DISCOUNTED.

Further detail on these discounted measures is given in Appendix 1.

4.4 Recommended Guidance

4.4.1 Consideration of the sections from the new guidance has resulted in the recommendation of the measures listed below:

- Spread Rates for Pre-Treatment - pre-treatment is the advance salting of roads to prevent the formation of ice, or to prevent the bond of snow to roads when wintry conditions are forecast. Appropriate salt spread rates are crucial for the effective, efficient and sustainable delivery of these operations. The

NWSRG guidance is not prescriptive and allows authorities to take account of local knowledge and conditions, such as traffic volumes, to set spread rates that are appropriate for their road network. It is RECOMMENDED that this guidance be adopted such that conditions experienced on our roads are considered, resulting in pre-treatment spread rates remaining at the current 15g/m² but increasing to 20 or 30 g/m² when the road is forecast to be wet; and

- Treatments for Snow and Ice (Post Treatment) - post treatment is the treatment of ice and snow after it has formed. The Council's current treatments and those specified in the new guidance are listed in Table 3, in Appendix 1. It shows that the Council's current spread rates, while more than the current guidance, are lighter than those given in the new guidance. Therefore, it is RECOMMENDED that the higher NWSRG spread rates are adopted and that the proportion of salt in our salt:grit mix is increased from 50:50 to 66:33 (see Section 1.9.7 of Appendix 1).

Further detail on these recommended measures is given in Appendix 1.

5.0 Exempt and/or confidential information:

5.1 None.

6.0 Implications :

<p>6.1 Service Users, Patients and Communities:</p>	<p>The level of winter service provision will affect the availability of the public road network which in turn will impact on stakeholders and the community.</p> <p>The contribution of the road network to communities is recognised by the Audit Commission in their report Going the Distance, 2011. The report states "Councils must use their road maintenance to support the economic competitiveness of their area. Roads play a critical role in public service delivery and economic growth – both through the increased mobility of citizens, goods and services, and through building and maintaining infrastructure."</p>
<p>6.2 Human Resources and Organisational Development:</p>	<p>In order to facilitate additional gritting/ploughing employees would be required to work additional hours out with the normal working day. Employees have been consulted on these alterations and are satisfied with the arrangements in place to deal with the impact on their working patterns and times.</p>
<p>6.3 Equality, Diversity and Human Rights:</p>	<p>No implications.</p>
<p>6.4 Legal:</p>	<p>The Council in its role as roads authority has a statutory duty, under Section 34 of the Roads (Scotland) Act, <i>"to take such steps as it sees reasonable to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads."</i></p>

<p>6.5 Finance:</p>	<p>The estimated cost of each of the proposed additional treatments and amendments to the “Winter Service” are listed below:</p> <p>The permanent adoption of the interim measures approved in October 2018, as detailed in section 4.1.3 above, cost a total of less than £25,000 in 2018/19. The maximum cost of these recommendations, as estimated for the 2018 interim review, would be in the region of £52,000. This figure is dependent on the severity of the winter.</p> <p>The use of telematics to monitor salt use, as described in section 1.7.5 of Appendix 1, and any subsequent calibration of the gritters that may be required would result in minimal additional staff costs. This is an operational matter with costs met from the existing “Winter Service” revenue budget.</p> <p>The cost of the additional salt required to allow increased spread rates for pre-treatment, as described in section 4.4.1, would be £7,750. This figure is based on the number of pre-salts that have been done over the past two seasons and the incidence of wet roads and temperatures below minus 3.0°C on these occasions.</p> <p>The cost of the additional salt required to allow an increased proportion of salt in the salt/grit mix and an increased spread rate on our “side roads,” as detailed in section 1.9.7 of Appendix 1, would be £30,100. This is based on the average number of gritting days per year, the surface area of our priority 2 plus 3 roads and the incidence of priority 3 treatments. There would be additional costs for the preparation of the greater volume of salt/grit mix. However, this is expected to be largely offset by the reduction in the occasions when roads have to be retreated due to the initial treatment being insufficient.</p> <p>The cost of the additional salt required to allow the limited increase in the post-treatment spread rate recommended by the guidance, as detailed in section 1.9.8 of Appendix 1, would be minimal. The spread rate for by far the most common treatment, the treatment of frost, would remain the same so an additional 10 grams per square metre over the entire network on the average 8 days of snow treatment in a season. This would amount to an additional cost of £12,980.</p> <p>Therefore, the total estimated cost to implement all of the recommendations would be approximately £103,000. This figure is, of course, dependent on the severity of the winter.</p> <p>This figure cannot be sourced from existing budgets so should all the recommendations be approved there would be a requirement for an additional £103,000 to be allocated to the “Winter Service” revenue budget.</p>
<p>6.7 ICT and new technologies:</p>	<p>None.</p>
<p>6.8 Environmental:</p>	<p>No implications.</p>

6.9 Risk Management:	<p>Failure to manage and maintain the road network and the net ongoing running costs of the Council carries a significant risk of the Council's financial policies not being adhered to and will require a further draw on Reserves.</p> <p>J. E. Thornes, University of Birmingham (2000) showed that for every £1 spent on winter maintenance in the UK approximately £8 of costs to "society" are saved in the reduction of winter related traffic accidents and delays.</p>
6.10 Policy and Delegated Authority:	<p><u>Environment and Transport Committee</u> In accordance with Section 2.3.1 of the Council's Scheme of Delegations the Environment and Transport Committee has responsibility for the Roads Service.</p> <p><u>Policy and Resources Committee</u> <u>As set out in paragraph 2.2.1(7) the Policy and Resources Committee has responsibility secure the co-ordination, control and proper management of the financial affairs of the Council.</u></p> <p>Shetland Islands Council Matters reserved to the Council include any expenditure not provided for in the Annual Estimates of Revenue and Capital Expenditure as described in section 2.1.3(4)</p>
6.11 Previously considered by:	<p>None.</p>

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18 December 2019

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Appendices:

Appendix 1: Detail on Discounted Guidance and Recommendations

Background Documents:

1. Winter Service Review 2018/19: Interim Measures (Min Ref E&T 26/18)

APPENDIX 1: Detail on Discounted Guidance and Recommendations

1.1 Current Policy

1.1.1 The Council's Winter Service was reviewed in 2012 resulting in the number of gritting routes, and the number of gritting vehicles, being reduced by six. There are now 19 routes with three gritters in each of the West, North and Central Mainland. There are 2 gritters in the South Mainland and Yell with 1 in Unst, Fetlar, Bressay, Whalsay, Lerwick and Burra-Scalloway. These resources are sufficient to treat 65% of Shetland's road network (priority 1 and 2 routes) for any incidence of frost. This increases to the entire network for severe conditions when priority 3 routes are also treated following completion of priority 1 and 2 routes.

1.1.2 The need for further review of the winter service became evident through the course of the 2017/18 winter. The arrangements had developed over many years to meet the needs of road users, including hauliers and other businesses, as they go to and from their place of work. This was reflected in the reduced service provided at weekends and the fact that there is no service on Christmas and New Year's days. The hours of operation were originally between 6am and 6pm, now curtailed to 4:45pm at the end of the day due to drivers hours regulations, so again an indication that the main consideration when developing the service was the economy and the working day.

1.2 Approved Interim Measures

1.2.1 The relatively harsh winter of 2017/18 resulted in concerns being expressed regarding the increasing number of road users who choose to travel in the evening and on public holidays out with the gritting hours specified in policy. An interim review was undertaken resulting in a number of recommendations being made to this Committee in October 2018.

1.2.2 These recommendations were in part informed by the results of a customer satisfaction survey that had asked specific questions regarding these concerns.

1.2.3 The relevant concerns, approved interim measure and the cost of its implementation during the 2018/19 winter season are shown in the following table. For comparison the total costs for the 2018/19 winter service was £1,115,000. This includes £590,000 for labour, £190,000 on materials/salt and £335,000 on plant/equipment.

Table 1: Approved Interim Measures and Costs 2018/19

Concern	Approved Measure	Cost (£)
No treatment in the evenings after 5pm	Formalise the procedure for responding to “blue light” emergencies and Police “call-outs” with a gritter crew on standby in each area for the entire winter season to respond then treat Priority 1 roads in that area	11,260
Reduced level of service at weekends and public holidays	Extend weekday level of service to weekends	13,297
No treatment on Christmas and New Year’s days	A gritter crew in each area to be on standby to respond to “blue light” emergencies and Police “call-outs” after which Priority 1 roads in that area may be treated.	0, not called out on either holiday
TOTAL		

1.2.4 The crews on standby were not required during the 2018/19 season as there were no incidents that needed a “call-out.” Therefore, the costs in the table consist entirely of standby payments without any overtime that would have been paid if the crews were required.

1.2.5 Given the relatively low additional costs incurred by these interim measures, and the reassurance they provide to road users, it is **recommended** that they are introduced permanently as part of an updated winter service policy.

1.3 Winter Service Code of Practice

1.3.1 The national code of practice for roads was updated in 2016 with roads authorities expected to implement the new recommendations by October 2018. However, the new code did not contain new guidance on the delivery of winter service operations. Instead the National Winter Service Research Group (NWSRG) was tasked with taking over responsibility for this guidance. In March 2019 the group published the update in its Practical Guide. The guide consists of separate sections on a range of issues each of which has been considered for this latest review of the winter service. The guidance, its relevance to Shetland’s roads and the resulting recommendations are detailed in the following paragraphs.

1.4 Salt Storage

1.4.1 Moisture Content - Proper storage is essential to maintain road salt in optimum condition. The most economical treatment rates are available when salt is maintained within the correct moisture content range and the production of fine particles through handling is minimised. The moisture content affects how the salt flows and the size of the salt grains. These both affect spread rate and how salt is distributed across the road surface, with some areas even remaining untreated if the moisture content is too high. When the salt is too dry finer particles can be

blown from the carriageway during or after spreading. In these situations spread rates must be increased to account for the poor distribution or loss of salt. It is also important that the moisture content of the salt is maintained as closely as possible to that of the salt used when calibrating the spreaders (see section 1.7 below).

1.4.2 Salt Loss - Rainfall on unprotected stockpiles results in a loss of material due to “dissolved” salt in the run-off. Research has shown that the loss per annum is in the order of 0.125 per cent of the initial weight of the pile for each inch of rainfall.

1.4.3 Pollution - There is also a risk of stockpiles causing increased, unnecessary pollution and environmental damage through run-off, leaching or windblown salt particles.

1.4.4 Salt Storage Considerations

Storing salt in a barn or dome would allow optimum salt condition to be maintained most easily, requiring less stock management and enabling the use of lower spread rates. However, the provision of a salt barn for the main stockpile has been **discounted** after the following considerations:

- there have been occasions when the moisture content of our road salt has been too high and there has been clogging of the salt in the gritter hopper as a result. However, this has generally been when the salt pile has been quite low at the beginning of a season, and due to the dissolution of salt, it contains a higher percentage of insoluble clay particles. This makes the salt less free flowing. To address this issue we are now ensuring that our main order of salt is placed in good time so that it is delivered before the onset of winter. This allows for the mixing of the old and new salt in order to keep the moisture and clay content down;
- in Shetland where there has been as much as 5,000 tonnes in stock at the end of a winter the loss would be a maximum of 310 tonnes over a year. The cost of purchasing this quantity and hauling it from the Scalloway harbour to the main stockpile at the Scord Quarry would be £11,765 at current rates. The construction of a salt barn with a capacity of 5,000 tonnes would be expected to cost in the region of £500,000 meaning a return period of over 42 years. This is not considered economically viable. The current strategy is to run down the salt stock through the winter so that there is little tonnage to be lost from rainfall during the remainder of the year. Where there is a significant tonnage we have employed a contractor to cover the stockpile with sheeting. The annual cost for its installation and maintenance, when required, is approximately £18,000; and
- pollution or environmental damage are not an issue at our main stockpile. The stockpile is located on an upper level of the quarry floor in a relatively dry area where there is no significant run-off. The stockpile is situated on an asphalt base that has been laid over the solid rock floor of the quarry so leaching of salt into groundwater is not a concern. The height of the quarry walls also ensure that any windblown salt is contained within the quarry.

1.5 Treatment Methods

1.5.1 Recent developments in technology mean that there are now four main methods of treating frost and ice used in this country. The most popular method used by the majority of roads authorities, including Shetland Islands Council, is “dry treatment” or the spreading of salt in its “dry” state. The alternatives now available are as follows:

- Pre-wetted Treatment using road salt mixed with brine at the point of spreading which is used on most of the trunk roads throughout the UK primarily because it allows a reduced spread rate;
- Treated Salting again using road salt but with an additive, generally an agricultural by product, resulting in a number of benefits including reduced spread rates, better salt retention on the carriageway, increased effectiveness at lower temperatures and a reduction in the corrosive effects of the salt; and
- Direct Liquid Application where a de-icer is sprayed directly onto the road surface has been used for many years at locations such as bridges where salt cannot be used and is now being trialled on larger sections of the trunk road network.

1.5.2 Treatment Methods Consideration

Capital investment and maintenance costs for Pre-wetted Treatment and Direct Liquid Application are higher than dry treatment as a result of the need for more sophisticated spreading equipment, brine production, brine storage and increased maintenance requirements. The guidance recommends that these two options are only considered when fleet renewals are needed due to the level of investment required. We are not in that position having recently invested in second hand but much newer and more reliable gritters. Treated salting does not require the production and storage of brine, and can utilise “standard” gritters. However, the cost per tonne of treated salt is higher than that for standard road salt by approximately 30% while the reduction in spread rate that it allows is only 25% according to the new guidance. The treated salt option has significant benefits but it would appear that these are outweighed by the additional cost. Therefore, a move away from the traditional dry treatment to these new methods has been **discounted**.

1.6 Technologies

1.6.1 The technologies referred to in the guidance are those required for the newer treatment methods discussed in section 4.5 above. However, there are a number of other new or emerging technologies that may be of benefit to road safety and the efficiency of the winter service. For example low cost road surface temperature sensors that can be installed remotely are currently being developed and tested. These have their own power source and are “wi-fi” linked to base. A similar low cost sensor could also be useful for linking to variable message signs that would alert drivers to the possibility of ice on the road surface. There is also potential for electronic road studs (cat’s eyes) that are solar powered with built in humidity and temperature sensors and LED’s that will flash blue to warn drivers that there may be ice on the carriageway.

1.6.2 Technologies Consideration

These new technologies are very much still in the early stages of their development and are yet to be widely used and tested. The temperature sensors also use internet technology that is not yet available in Shetland and may not be for some time. Therefore, for now the use of these new technologies has been **discounted**. We will of course continue to monitor the situation and when these ideas are fully tested and reliable we will consider their use at known hazardous locations such as the B9073 Black Gaet and the A970 at the Loch of Voe.

1.7 Spreader Calibration

- 1.7.1 Calibration is important to demonstrate that the correct amount of salt is being discharged and that it is being evenly spread on the road. Therefore, every gritter should be individually calibrated and tested. Carrying out a check of the spreader settings only is not considered to be sufficient. The amount of salt discharged should be measured and its distribution on the road surface assessed.
- 1.7.2 It is also important that the gritter chassis, engine etc., and not just its spreading apparatus, are checked for maintenance and correct operation and that they are in a serviceable condition. This may require “regular” replacement of gritters that have deteriorated to the point where it is not economically viable to undertake the required repairs.
- 1.7.3 Records should be kept and available for future reference and use. A Calibration / Conformity Certificate should be completed for each gritter that meets the requirements of the guidance. Those meeting the requirements of the discharge test and distribution check detailed in the guidance should also be issued with a distribution record.
- 1.7.4 It is important that once a vehicle is calibrated there is monitoring during the winter season to determine if a recalibration is required. Reports of potential inconsistencies received from drivers or other sources should also be considered. Targets for the total amount of salt that should be used on each route should be determined and used for comparison against actual amounts used. Vehicle tracking (GPS) with their data monitoring systems and/or routine vehicle checks can be used to assist in this process. When the gritters performance is unsatisfactory a procedure should be in place to make checks and take remedial action. These checks, actions and any recalibration should be recorded.

1.7.5 Spreader Calibration Considerations

The calibration of the Council’s gritters is currently provided by specialist contractor Econ Ltd who also manufactured and supplied all the gritters in our fleet. The calibration procedures used are as specified in the new guidance with the required certificates, documents and records being produced. The continuous monitoring of gritter performance throughout the season has not been monitored to date. However, the target for the total amount of salt spread on each route was calculated some time ago to enable comparison of the theoretical salt use versus actual used as determined by measurements of the main stockpile. The Council’s gritters are also now fitted with telematics or GPS that allows the monitoring of their location, speed and spread rate. The telematics software records this data allowing the preparation of a number of reports including one on the tonnage of salt used on each route. Therefore, going forward telematics will be used to monitor the salt use of each gritter on a monthly basis. Should an issue be identified the gritter will be checked and when necessary recalibrated. This is an operational matter with costs met from existing budgets.

1.8 Spread Rates for Pre-treatment

- 1.8.1 Delivering accurate and appropriate salt spread rates is crucial for effective, efficient and sustainable operations. In order to optimise salt usage, improve stock resilience and reduce the impact of salt on vehicles, infrastructure and the environment, it is important that salt spread rates are no higher than necessary.

- 1.8.2 The new guidance is intended to assist road authorities in complying with their legal obligations and duties with respect to winter maintenance. However, in line with the approach advocated in the national Code of Practice for the management and maintenance of roads the new guidance is not prescriptive and allows authorities to take a risk based approach to the determination of appropriate spread rates. The guidance states “risk assessments undertaken at a local level, as well as other considerations, may result in some authorities adopting spread rates that differ from those provided here. In such instances, authorities should document their risk assessment process and their reasons for adopting different rates.”
- 1.8.3 The amount of salt required to prevent ice forming on a road surface is dependent upon the temperature of the surface and the amount of water present. When insufficient moisture is available to freeze, no salt is required to prevent ice from forming regardless of the road surface temperature. However, the amount of salt required to prevent ice from forming increases rapidly with the amount of surface water present. Precipitation after a treatment takes place will increase the rate of salt dispersal and reduce the brine concentration. Depending upon the amount of precipitation and its timing, higher treatment rates or additional treatments may be required.
- 1.8.4 Traffic levels on the network are also an important factor influencing spread rates. Traffic effects can increase or reduce the amount of salt required to prevent frost or ice from forming. These effects include crushing of salt particles aiding faster dissolution of the salt. It is important that the timing of spreading operations allows sufficient time for the salt to enter solution before these temperatures are reached. This may be unrealistically early if spread rates are insufficient to allow for low traffic volumes. Therefore, for ‘Light Traffic’ volumes, the guidance suggest that spread rates are increased by 25%.
- 1.8.5 High wind speeds can affect the salt distribution at the time of spreading and, in dry conditions, lead to increased salt losses after spreading as a result of the salt particles being blown from the road surface. This will affect some authorities more than others but given our weather conditions is particularly relevant for Shetland. The guidance goes on to state that “authorities may also wish to increase spread rates when carrying out salting operations during periods when forecast mean wind speeds are 20mph or higher.”
- 1.8.6 The new guidance recommends that authorities use the NWSRG’s matrix to determine pre-treatment spread rates. Pre-treatment being the spreading of salt on road surfaces before snowfall or freezing temperatures to provide a layer that prevents snow and ice bonding to carriageways, thereby aiding subsequent treatments. This matrix splits the temperatures from 0 to minus 7°C into six bands, one for each degree. Each band has a different rate for dry/damp roads and wet roads. The rate increases as the temperature decreases and is greater for wet roads than for dry roads (see Table 2 below). This means that the duty officer interpreting the forecast and determining the appropriate treatment would have to choose from 12 spread rates. We consider this impractical not least because of the difficulty in forecasting to within one degree centigrade of accuracy. There is also the possibility that on occasion it may rain between the pre-treatment, which is done in mid-afternoon, and later in the evening when the road surface temperature is forecast to fall below zero. When possible, treatments should be carried out after any preceding rainfall has ceased and sufficient time and traffic has removed excess water on the road surface. However, there may be insufficient time during

the intervening period to undertake a full pre-treatment. These situations are some of the most difficult of all to deal with and, whenever winter conditions are forecast the duty officer will need to carefully consider the most appropriate treatment. In some circumstances, treatments have to be undertaken during rainfall or on very wet road surfaces. The rainfall dissolves the salt and washes a portion of it from the road. We consider the use of the lower spread rates specified in the new guidance to be too much of a risk due to this issue.

1.8.7 Spread Rates Recommendations

The records from our weather forecasting stations show that over the past five years it has been relatively rare for our road surface temperatures to drop below minus 3.0°C. There were a total of 274 days when the temperature fell below zero but only 40 occasions when it fell below minus 3°C. This equates to only 15% of all the days where there were freezing conditions. Temperatures less than 5°C only occurred seven times equating to less than 3% of the days when freezing conditions were recorded. Therefore, to simplify the selection of pre-treatment spread rates we propose a move away from the six temperature bands described above to only two bands ranging from 0°C to minus 3°C and from minus 3°C to minus 7°C. The following table shows the NWSRG recommended spread rates for their various bands and the proposed pre-treatment spread rates for our gritters. Please note that the proposed rates have used the NWSRG rates but with the low traffic volumes on many of Shetland's roads and the high incidence of wind speeds over 20 mph (on 50% of days with RST below zero) taken into account. The rates have been increased by 25% to address the former, as recommended in the new guidance, and by a further 20% to address the latter. The rates have also been rounded up to suit the settings available on the gritter controls. Therefore, it is **RECOMMENDED** that for a dry/damp road surface our current spread rate of 15 g/m² would be retained across both temperature bands. However, when the road surface is wet, or forecast to be wet, the rate would be increased to 20 or 30 g/m² depending on temperature. This increases the treatment options available to the duty officer while maintaining a factor of safety.

Table 2: Comparison of NWSRG Rates and Proposed Shetland Pre-Treatment Rates

Road Surface Temperatures (°C)	Incidence in Shetland 2016/17 to 2018/19		NWSRG Spread Rate (g/m ²)		Proposed Shetland Spread Rate* (g/m ²)	
	Days	Percentage	Dry/Damp Road	Wet Road	Dry/Damp Road	Wet Road
0 to -1°	84	30.7%	8	8	15	20
-1.1 to -2.0°	71	25.9%	8	8		
-2.1 to -3.0°	58	21.2%	8	13		
-3.1 to -4.0°	32	11.7%	9	17	15	30
-4.1 to -5.0°	22	8.0%	11	21		
-5.1 to -7.0°	7	2.6%	15	30		

Notes: * Shetland spread rate increased by 25% and 20% to account for low traffic volumes, the high incidence of wind speeds over 20 mph then rounded up.

1.9 Treatments for Snow & Ice (Post Treatment)

1.9.1 The guidance provides advice on effective treatments for snow, ice and freezing rain based on the operational experience of practitioners in combination with a review of the available research and literature.

1.9.2 It states that it is impractical to spread sufficient salt to melt anything other than very thin layers of snow and ice, and that ploughing is the only effective way to deal with more than a few millimetres of snow. Effective ploughing will:

- remove as much snow as is practical for the given conditions, preferably down to the road surface;
- reduce the likelihood of snow becoming compacted and bonded to the road surface; and
- reduce the amount of de-icer needed for subsequent treatments.

1.9.3 The most effective ploughing technique is to plough down to the road surface (“ploughing to black”), as this removes almost all of the lying snow and minimises the amount of salt required for subsequent treatments. The guidance recognises this and recommends that authorities acquire the specialist equipment that allows “ploughing to black” on one pass. The Council has one plough fitted with ceramic blades that can be set down directly on the road surface without damaging the blade itself or “cat’s eyes.” This plough is for the use on the A970 Lerwick to Firth route via “Da Kames” and Voe. Unfortunately, these blades are not suitable for all road types and cannot be used on our single-track roads with their crowned profiles.

1.9.4 The guidance also covers freezing rain which is still a relatively unusual hazard for Shetland’s road users. The formal meteorological definition of freezing rain relates to situations when rain falls through a layer of very cold air in the atmosphere and becomes super-cooled, remaining as a liquid below the usual freezing temperature. When the rain strikes a surface, it freezes to form glaze ice almost immediately on contact. Rain that is not super-cooled but falling onto a surface that is itself significantly below zero centigrade will also freeze rapidly and is also generally referred to as freezing rain.

1.9.5 The guidance goes on to state that in situations, where the risk of ice formation remains high despite the best attempts of authorities to reduce it, advance warnings to road users can be particularly valuable. Authorities should liaise with local media services and/or use social media outlets etc. to publicise the possibility of these events when forecast. The Roads Service with the assistance of the Council’s Communications Section have been doing this for a number of years.

1.9.6 Pure salt should not be spread on layered ice or compacted snow as this can produce dangerously slippery conditions due to the formation of a weak brine film on top of the ice/snow layer. The guidance recommends that a salt/grit mix is used in these situations to give some grip and to assist the action of traffic in breaking the layer. When further snow is expected, on already compacted snow or ice, then salt/grit mix should be used as a de-bonding layer between the existing layer and any future snow to assist future ploughing operations.

1.9.7 Salt/Grit Mix Proportion and Spread Rate Recommendations

It should be noted that the current policy specifies the use of salt/grit mix on a number of our lower priority roads. The reason being that the “activation” of the salt takes longer on these low traffic volume roads and the grit gives some grip in the initial period after spreading. The guidance does not recommend the use of salt/grit mix in anything other than specific situations where the use of pure salt would be

hazardous (see paragraph 1.9.6 above). The guidance also recommends increased spread rates of pure salt for lightly trafficked roads. This means that the current policy is contrary to the new guidance as our specified spread rate for salt/grit mix is the same as for pure salt. Therefore, with the 50:50 salt:grit mix we are spreading only half the amount of salt required by the guidance. To remedy this it is **RECOMMENDED** that the proportions of the salt:grit mix is changed to 66:33 to give twice as much salt in the mix as there is grit. Where previously the spread rate was 20 g/m² this would be increased to 30 g/m² meaning that we would be spreading 20 g/m² of pure salt, in compliance with the guidance, plus 10 g/m² of grit to give the required grip on these side roads.

1.9.8 Treatments for Snow & Ice (Post Treatment) Recommendations

The following table shows that the Council's current spread rates for post treatment are generally lighter than those stated in the new guidance. Therefore, it is **RECOMMENDED** that the higher NWSRG spread rates are adopted. Please note that for frost the application of salt/grit mix per square metre would be 10 grams greater than for pure salt. However, to avoid the need for frequent visits to the depot to refill the gritter's hopper the higher application rates for the treatment of ice and snow will be 40 g/m² for both materials.

Table 3: Comparison of NWSRG Rates and Current Shetland Post Treatment Rates

Road Surface Conditions	Current SIC Treatment	NWSRG Guidance	Proposed SIC Treatment
Frost; light ice formed	*20 g/m²	20 g/m² ; 40 g/m² of pure salt	20 g/m² for frost; 30 g/m² for frost; where mix used 40 g/m² for light ice
Moderate to thick ice	*30 g/m² , thick ice may require repeated treatments.	40 g/m² of pure salt	40 g/m² of pure salt or salt/grit mix depending on road
Hard packed snow, layered ice and freezing rain	*30 g/m² , may require the use of salt/git mix and repeated treatments.	40 g/m² of salt/grit mix to give grip and assist traffic in breaking up the layer.	40 g/m² of salt/grit mix to give grip and assist traffic in breaking up the layer.
Snow exceeding 30mm	Either ploughing only, or ploughing plus *30 g/m² , depending on conditions. May require the use of salt/git mix and repeated treatments.	Ploughing to remove snow and slush plus 20-40 g/m² when it will assist the break-up of the layer or when freezing conditions are expected.	Ploughing to remove snow and slush plus *40 g/m² when it will assist the break-up of the layer or when freezing conditions are expected.
Notes: * Material used is either pure salt or salt/grit mix depending on location of road.			

1.10 Extreme Temperatures

1.10.1 The guidance considers that spreading salt alone at temperatures below minus 7°C is not effective or practical due to the repeated applications and high spread rates that would be required. Even then salt may not enter solution quickly enough to prevent freezing or to melt ice or compacted snow.

1.10.2 The guidance recommends a number of alternative de-icers, such as ethylene glycol and magnesium chloride, which can be used in extreme temperatures.

However, these are all to be applied to the road surface as a liquid or brine. This would require an entirely new gritter fleet that is capable of applying liquids to the road surface. In addition a batching plant would be required as well as storage facilities at each of our gritting depots.

1.10.3 Extreme Temperature Considerations

The Council's gritting fleet has recently been updated so its replacement with gritters capable of liquid application is not considered to be economically viable. This is supported by our weather station data which shows that in the past 5 years there have been only two days when the road surface temperature dropped as low as minus 7 °C, the point at which the guidance recommends that alternative de-icers are used. Given the infrequency of these low temperatures in Shetland it would clearly be more economical to increase the spread rate and application frequency as required rather than invest in seldom used liquid application equipment. Should that prove to be ineffective then we would revert to salt/grit mix to treat any ice that formed. Therefore, the use of alternative de-icers for extreme measures has been **discounted**.

1.11 Issues Outwith Scope of the New Guidance

1.11.1 The NWSRG guidance has not addressed all the issues that would be considered under a full winter service review. The following sections discuss these "missing" issues, review our current policy in relation to them and details any recommended amendments to policy.

1.11.2 Treatment Hierarchy

The current hierarchy of treatments was introduced following the review of the winter service in 2012. It was based on the Roads Maintenance Hierarchy for general road works which allocates a score based on factors such as traffic flow, bus usage and the presence of commercial premises, schools or transport terminals. The score determines the maintenance band (M1 to M5) appropriate for the length of road which in turn determines the winter service priority. A table showing the treatment regime is attached below. The regime was arrived at following consideration of the effect on school buses and "care at home" customers resulting from the significant change in policy requiring that priority 3 roads were "not normally to be treated for frost." This winter concerns have been expressed by the public and members that on certain routes some roads are not being treated prior to the arrival of the school bus. These concerns are generally only expressed in severe conditions when priority 3 roads are being treated. We have been able to address this issue on a number of routes in the North Mainland by increasing the number of roads treated by "Da Kames" gritter. This has reduced the size of the neighbouring two routes meaning that these gritters can get to their priority 3 roads sooner. However, there are a number of roads throughout Shetland that are still not being treated in time. The main reason being the larger routes that need to be treated in severe conditions when the priority 3 roads are added. Early pick up times for some feeder buses are also a factor. The total length of roads not treated prior to the arrival of a school bus is 48.9 km compared to the 520 km of school bus routes that are treated. Therefore, less than 9.5% of school bus routes are currently untreated. This will, of course, change from year to year depending on the addresses of the pupils so will be monitored to ensure that the best possible coverage is achieved. We are currently in the process of assessing minor route amendments that would potentially allow a further 14 km or 2.5% of the bus routes to be treated in time.

Table 4: Winter Maintenance Treatment Regime

WINTER SERVICE PRIORITY	ROAD DESCRIPTION	TREATMENT REGIME
1	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.	Times: Treated Monday to Sunday between 6.00am and 6.00 pm extending to 9pm in exceptionally bad conditions. No service Christmas Day and New Year's Day. These roads will be pre-salted when necessary.
2	Other principal roads not included in the above linking smaller centres of population to the priority 1 network. Major loop roads. Main town streets in Lerwick and Scalloway. Accesses to any schools not on Priority 1 routes.	Times: Treated Monday to Friday between 6.00am and 6.00 pm. Reduced service on Saturdays, Sundays and Bank Holidays with less gritters so it will take longer to clear some roads. No service on Christmas Day and New Year's Day. These roads will not be pre-salted .
3	Side roads linking isolated communities to the priority 1 and 2 network. Minor roads in housing schemes in Lerwick and Scalloway.	Not normally to be treated for frost unless in severe conditions when we will grit the priority 3 routes following treatment of the Priority 1 and 2 routes. <u>Grit piles will be provided for road users to assist themselves.</u> Snow clearance will be as for the Priority 2 roads.
4	All roads on Foula, Fair Isle and Papa Stour.	Grit piles will be provided for road users to assist themselves.

1.11.3 Gritting Times

Concerns have also been expressed that a number of road users are travelling prior to the start of the gritting day at 6am. A typical gritting day for the Roads Service begins at 4am when our Roads Inspectors and Foremen set out on their inspection routes to determine road conditions. When they have assessed that gritting is required they will call the drivers and crew at 5am. This gives them time for breakfast, the clearing of ice and snow from their gritters and then the usual vehicle checks (tyres, water, lights, wipers, etc.) before commencing their routes at 6am at the latest. The GB Drivers Hours Regulations restrict a driver to only 10 hours of driving per day during which time a driver has to take a 45 minute break. There can be exceptions for the ploughing of snow but none for the gritting of frost and ice. Therefore, the latest that drivers can operate a gritter is 4:45pm if they have been driving all day. This also gives the gritters sufficient time to pre-salt the road which is done when freezing conditions or snow are forecast for the evening or following morning. This helps to prevent ice forming or snow bonding to the road surface. We only have one shift of gritter drivers available. We have insufficient Roadworkers for two shifts and only a few private contractors are interested in the work. Therefore, if we start the gritting earlier we would leave an unacceptable gap between the last gritting of our roads and the peak traffic numbers at the end of the working day. The timing of the start of the gritting day is a balance that has been developed over a number of years. The aim has been to maximise the number of road journeys where effective gritting has been provided. (For example our traffic counters show that on the A970 at Boddam only 1.2% of the total traffic for the day is on the road between midnight and 6am). The start of the day and getting road users to their work is important but getting people home

at the end of their working day is equally important. Therefore, there would be a considerable risk to moving the gritters starting time forward. Unfortunately, this means that some road users are travelling on our roads before the gritters are out. However, in the majority of weather conditions the pre-salt addresses the evening and very early morning. The new salt spreading rates recommended in Table 2 above would improve the effectiveness of the pre-salting in all but the worst weather conditions. Therefore, any amendment to the starting time of our gritters on their routes has been **discounted**.

1.11.4 Treatment/Gritter Routes

The routes have been optimised as much as possible in accordance with earlier national guidance. The aim being that gritters are spreading for as much of their travelling time as possible. However, this is difficult in Shetland given that a lot of our road network has “dead end” roads which are gritted on the way in but not on the way out resulting in an efficiency of only 50%. The efficiency would be improved by a move away from using salt/grit mix on our lower priority roads as it would avoid the need for the gritter to stop spreading and return to the depot to change its load from pure salt to mix. However, this efficiency improvement does not outweigh the benefit of retaining the use of salt/grit mix as explained previously in section 1.9.7 above.

1.11.5 Procedures

The “planned” Winter Service period lasts 23 weeks commencing late October and ending late March or early April. There is a core period of 12 weeks between mid-December and early March during which operatives are guaranteed standby payments. Outside of this core period any requirement for standby is triggered by the Met Office’s forecasts. The Winter Service period can be extended as necessary to suit conditions. Routine treatment and snow clearing must be delivered throughout the winter season with the exception of Christmas Day and New Year’s Day when no service is provided but a gritter crew would be on standby in each area if the permanent adoption of the interim recommendations from October 2018 are permanently approved. These arrangements are similar if not identical to the other island authorities and smaller rural local authorities with similar resources.

1.11.6 Weather Forecasting

StormGeo, a forecasting consultant based in Aberdeen, supply weather forecasts on a daily basis for the winter period, October to April. These comprise of a forecast of road surface temperature (RST) and surface state at our four weather station sites together with text based forecasts. The text comprises 24-hour forecasts for the Shetland area, a morning update and a two to five day outlook forecast. The duty officer also has internet access to StormGeo weather radar displays and, if required, access to the StormGeo duty forecaster to discuss more complex weather scenarios. Vaisala Ltd provides the ice prediction systems. Their computer software gives access to the weather forecasts and our weather stations. The use of the ice prediction system enables the Council’s winter service officers to monitor actual and predicted conditions at the sensor sites and to update any planned actions as needed. This is supplemented by a thermal map that enables extrapolation of the forecast RST to the thermally mapped network of roads. The weather stations are fully instrumented and provide data such as road surface temperature, road surface state, air temperature, precipitation, wind intensity and wind direction. These arrangements comply with earlier guidance so there is no need to make any amendments to our weather forecasting provision at this time.

1.11.7 Personnel

The NWRSG guidance states “particular care should be taken to manage the risks to personnel carrying out winter service operations in snow and freezing rain conditions.” Nearly a quarter of all deaths involving vehicles at work occur during reversing. The Health and Safety Executive (HSE) in their “Workplace Transport Site Safety Information Sheet” state that planned or clearly marked turning areas should be provided and a signaller (second man) should be employed to supervise reversing and turning movements. Therefore, it is our standard practice to crew our gritters with a driver and assistant. Shetland’s gritting routes have a high proportion of narrow roads meaning there is limited scope to introduce single manning. However, single manning is undertaken where we can comply with the guidance. For example, gritters on precautionary routes are only crewed by drivers because there is no ice on the road at the time and only primary routes and main loops are being treated so no reversing is required. In addition to the safety requirements the role of the driver’s assistant also includes:

- assisting the driver when negotiating parked vehicles in narrow streets, when operating on narrow roads and when the nature of a road requires the gritter to reverse along it to apply treatment;
- assisting the driver with the fitting of snow plough blades and snow chains;
- clearing any blockages that occur in the gritting apparatus;
- monitoring the condition of the driver for signs of fatigue; and
- completing a gritting record sheet that details weather conditions and the times that the gritter arrives at each junction along its route.

1.11.8 Facilities, Plant & Equipment

The road network is serviced from depots at Gremista (Lerwick and South Mainland), Murrister (West Mainland), Sella Ness (North Mainland) and Mid Yell (North Isles). These depots are augmented by a further 10 minor depots with salt piles and the main stockpile located at the Scord Quarry, Scalloway. The Council’s Fleet Management Unit have now completed the updating of our gritting fleet with second hand but modern gritters. These newer vehicles have led to significant reduction in maintenance costs and the associated downtime when a gritter is unavailable. Therefore, we are complying with the earlier guidance that “the need to ensure vehicles are well maintained and repaired quickly is essential to the delivery of the service.”

1.11.9 Salt Stock Levels & Salt Purchasing

Minimum stock levels are key to providing a good level of resilience throughout the winter and we aim to maintain a minimum stock level of 3,000 tonnes. It has been calculated that this amount is sufficient for 18 days of snow clearance using the Scottish Government’s guidance that a day consists of two treatments of priority 1 and 2 routes, and one treatment of priority 3 roads. Generally stock levels are much higher with a figure of around 7,500 tonnes in stock at the start of the winter season. The salt is currently bought from “Irish Salt Sales Ltd” via a collaborative contract managed by Scotland Excel. This allows participant Council’s to pool their buying potential to secure competitive prices. The salt is shipped to Scalloway Harbour and bulk stored at the Scord Quarry from where it is distributed to the salt piles at the rural depots either as pure salt or salt/grit mix.



Meeting(s):	Environment & Transport Committee Policy & Resources Committee Shetland Islands Council	21 January 2020 21 January 2020 22 January 2020
Report Title:	Climate Change – Strategic Outline Programme	
Reference Number:	ISD-01-20-F	
Author / Job Title:	John R Smith Director Infrastructure Services	

1.0 Decisions / Action required:

That the Environment and Transport Committee and the Policy and Resources Committee recommend that Shetland Islands Council:

- 1.1 **NOTES** the actions taken to date in respect of Shetland Islands Council's response to Climate Change, through the existing Carbon Management Plan, and associated activity.
- 1.2 **CONSIDERS** the information provided in the Climate Change, Strategic Outline Programme (Appendix 1) and the Climate Change Programme Initiation Documentation (Appendix 2) and **COMMENT** on any aspects of these documents.
- 1.3 **ENDORSES** the objectives and Critical Success Factors set out in the Strategic Outline Programme (Appendix 1) and Programme Initiation Documentation (Appendix 2), and in particular confirm:
 - 1.3.1 The need for shared action across all levels of government, businesses, communities and individuals to address the risks presented by Climate Change;
 - 1.3.2 That Shetland Islands Council will adopt a proactive and collaborative approach to Climate Change, emphasising planned partnership action, with the Council providing leadership on behalf of the Shetland community;
 - 1.3.3 The critical need for all plans and actions to recognise current inequalities, which result in Shetland residents experiencing some of the highest levels of fuel poverty and transport costs in the United Kingdom; and to ensure Just Transition solutions address these energy affordability problems, as well as reducing emissions;
 - 1.3.4 The significant number of jobs in Shetland involved in the energy sector; and the importance that Just Transition solutions also recognise the need for employment transition in communities such as ours, as well as reducing emissions;

- 1.4 **ENDORSES** the initial governance arrangements set out in that Strategic Outline Programme (Appendix 1) and Programme Initiation Document (Appendix 2); through the Chief Executive, the Council's Corporate Management Team and the Council's senior political office bearers.
- 1.5 **ENDORSES** that the continuing work of the Carbon Management Plan should be built upon through:
- 1.5.1 the continuation, and where possible, the acceleration of current energy efficiency, energy conversion, waste reduction and waste reuse initiatives, internally within the Council, and across the Shetland community;
 - 1.5.2 the review and analysis of key Council and Partnership Plans and strategies for recommended critical path Climate Change actions;
 - 1.5.3 the further development of an integrated Shetland Climate Change Action Plan which co-ordinates activity; and
 - 1.5.4 the reporting of recommendations from the Shetland Climate Change Action Plan to Shetland Islands Council in line with the Scottish Government's Climate Change Plan which is anticipated in March / April 2020, and periodically thereafter.
- 1.6 **ENDORSES** a review of guidance for the Environmental Implications section of committee reports to clarify the need to report Climate Change implications clearly.
- 1.7 **APPROVES** the funding requirement at paragraph 6.5 from the Council's Change Fund and **ENDORSES** a review of the arrangements for the Council's Change Fund to understand how the Change Fund can best be utilised to support this matter.
- 1.8 **THANKS** Shetland Climate Action for their petition lodged with the Council on 3 October 2019 (pages 1 – 4 attached as Appendix 3 - full petition listing all signatories is available to Members upon request.). The Council has also had informal representations on this issue, particularly from young people and environmental groups, but also from individual constituents and community councils. The content of the petition, and other representations, align with much of the Climate Change work that the Council has embarked on, and the further actions recommended in this Strategic Outline Programme (Appendix 1). Further information on that alignment is set out in 4.12 – 4.17 of this report.
- 1.10 **NOTES** that local emission reduction targets, for the Council estate and services, and for Shetland as a whole, will be evaluated as an early activity within the Programme, and be reported to Shetland Islands Council. This review and establishment of local targets will fully involve agency, commercial and community partners.

2.0 High Level Summary:

- 2.1 The Climate Change Strategic Outline Programme (Appendix 1) is intended to provide an overview of the strategy, governance arrangements, target development and action planning required to address, adapt to, and mitigate,

Climate Change in Shetland and contribute to an effective Scotland, United Kingdom and international response.

2.2 The Climate Change Strategic Outline Programme (Appendix 1) will help inform the identification of issues and options and it will assist evidence based planning and decision-making. This will enable environmental, economic and social needs are recognised, balanced and met efficiently, effectively and economically to support key outcomes for Shetland and its residents.

2.3 The slides, Key Carbon Reduction Actions (Appendix 4) also provides a summary of the issues, themes and key actions described within this report.

3.0 Corporate Priorities and Joint Working:

3.1 Priorities relevant to Climate Change in Shetland Islands Council's Corporate Plan 2016-2020 are:

Community Strength

- Communities will be supported to find local solutions to issues they face.
- People in Shetland will be feeling more empowered, listened to and supported to take decisions on things that affect them, and to make positive changes in their lives and their communities.

Our 20 by 20

- We will have reduced the effect we have on the local environment, particularly reducing carbon emissions from our work and buildings.

3.2 Priorities relevant to Climate Change in Shetland's Partnership Plan 2018-2028 are:

Place

- All areas of Shetland will be benefitting from a more resilient low carbon economy underpinned by a culture of innovation, inclusion and skills development.
- Communities will be actively involved in shaping their own future resilience, creating positive places that are economically, socially and environmentally sustainable.

3.3 Climate Change and recent related legislation, creates very challenging adaption and mitigation duties which require the Council and its partners to provide comprehensive and rigorous responses. All priorities, key outcomes and objectives of the Council and partners are potentially affected by its implications. Shetland experiences particular risks both due to its vulnerability to climatic conditions as a remote oceanic island, a scattered rural and maritime community and by being at the far end of long infrastructure and service supply chain.

3.4 Undoubtedly adaption and mitigation will require significant investment over a prolonged period to achieve the changes required. Protecting community, business and individual needs, particularly those earning their living from energy jobs and those already struggling with fuel poverty, and high transport costs, will be critically important. Therefore, an effective response will only be secured through active partnership.

4.0 Key Issues:

- 4.1 Climate is a fundamental determinant of all aspects of wellbeing all across the world. In Shetland we are keenly aware of our environment and the day to day effects our climate has on our activities, social and economic opportunities, safety and lifestyles.
- 4.2 It is internationally accepted that we are now experiencing significant climate change and that significant steps need to be taken to prepare and deliver adaption and mitigation plans and actions to respond to those changes.
- 4.3 There is a growing evidence base available on what climate impacts will be. Fifteen Key Consequences were highlighted in the Scottish Climate Change Adaptation Programme (2014):
- The productivity of our agriculture and forests
 - The occurrence of pests and diseases
 - The quality of our soils
 - The health of our natural environment
 - The security of our food supply
 - The availability and quality of water
 - The increased risk of flooding
 - The health of our marine environment
 - The resilience of our businesses
 - The health and wellbeing of our people
 - Our cultural heritage and identity
 - The security and efficiency of our energy supply
 - The performance of our buildings
 - Infrastructure – network connectivity and interdependencies
- These consequences will be highly significant across a wide spectrum of the Shetland environment, economy and society.
- 4.4 All public bodies have duties and obligations under legislation to produce adaption plans to help cope with these changes, and to produce mitigation plans to reduce climate emissions against very challenging targets. These actions will require very significant resources and focus to deliver. They will require review and potential restructure of many aspects of social and economic organisation and service delivery. This planning and activity has to take place in Shetland as critically as anywhere.
- 4.6 Shetland Islands Council is obliged to act as part of its duties as a public body, as are all other Government agencies. Shetland Islands Council also understands its leadership role in the Shetland community. The Council has no doubt that there is a clear understanding and strong commitment across our community to play our part in addressing this global issue.
- 4.7 Shetland Islands Council also recognises that the fundamental actions which will be required to achieve such substantive change will require widespread partnership; they will be impossible for the Council to deliver in isolation. That partnership will be needed right across Shetland, and with the wider national and international community.
- 4.8 It will be very important to understand and communicate critical “Island Proofing” dimensions around particular issues and possible changes. This will be essential if

areas like Shetland are to avoid being left behind as general and national solutions are implemented outwards from the centre. We will have to work proactively to find solutions that address our local needs and issues. “One size” answers may generally work in most places, but they do not always work well here.

- 4.9 We have demonstrated our ability to find innovative approaches that match our circumstances and needs in the past. For example the Energy Recovery Plant/Shetland Heat Energy and Power, Lerwick District Heating Scheme delivers significant affordable, low emissions heating to many homes and public buildings in Lerwick. Given the abundance of renewable energy sources surrounding Shetland, it should be more than possible to generate other solutions that deliver affordable low carbon transport fuel and heating.
- 4.10 The scope of the challenge is however very wide. It means that all key service strategies and plans across the Council, and with our partners, need to be reviewed to ensure “Climate Change” implications are being considered. That must be an early and recurring activity in any overall response.
- 4.11 The Strategic Outline Programme (Appendix 1) is not trying to determine what specific changes might be required in those strategies or accompanying arrangements at this point, that detailed work needs to be carried out area by area.

However it does make initial suggestions:

- a core “Climate Change Programme” team should be established in addition to existing resources. That team would act to co-ordinate, facilitate and catalyse accelerated internal Council actions and support strategy and key plan review. It would also act to identify partnership activity and leverage additional external resources which would support wider Shetland activity;
 - consideration should be given to a review of the Council’s Change Fund to understand whether that is an appropriate route to contribute to any further funding implications arising from strategy and key plan review;
 - the guidance for the “Environmental Implications” section of committee reports should be reviewed to clarify the need to consider and report “Climate Change” implications clearly.
- 4.12 The Council has recently received a “Climate Change Petition” (Appendix 3). The Council has also had previous representations on this issue, particularly from young people and environmental groups, but also from individual constituents and community councils.
- 4.13 The main issues raised in the petition are set out below. They closely align with the Climate Change,- Strategic Outline Programme (Appendix 1) proposals and recommendations:

- 4.13.1 *“Develop a Climate Emergency Action Plan”* – The Strategic Outline Programme (Appendix 1) recommends that a “Shetland Climate Change Plan” should to be developed in collaboration with partners and the community and reported to Council in alignment with the Scottish Government “Climate Change Plan”, anticipated March / April 2020;

- 4.13.2 “Set up a Climate Emergency Working Group” – The Strategic Outline Programme (Appendix 1) recommends that the Chief Executive, supported by the Corporate Management team should function as the Council’s “Climate Change Programme Board”. This Programme Board should liaise regularly with Council Leader supported by Committee Chairs and the Policy and Resources Committee to provide programme governance and report plans and progress regularly to Council.
- 4.13.3 “Set local emissions reductions targets to net zero / carbon neutral by 2030” – The Strategic Outline Programme (Appendix 1) notes that the Council will have an obligation to set local emission reduction targets, bearing in mind the statutory targets legislated by the Scottish Government are for a 75% reduction in carbon emissions by 2030 and net-zero by 2045. The Strategic Outline Programme (Appendix 1) recommends that overall and sectoral local targets should be examined for early achievability, as part of the development of the “Shetland Climate Change Action Plan”, with recommendations reported to Council when those targets can be more securely analysed for deliverability.
- 4.14 Meaningful and realistic local target setting will depend heavily on partnership working and shared commitments across agencies, governments, businesses and the community. Key issues that will require further clarity include:
- 4.14.1 green electricity availability, capacity and affordability depend critically on national policies, the actions of utility providers and decisions of regulators. Currently more than 80% of Shetland electricity generation is based on hydrocarbon sources. Until there is a clear understanding of when, how and what a “green” / “smart” / “resilient” / “robust” / “affordable” Shetland electricity distribution grid will look like then it is difficult to plan substantial electrification actions with confidence;
- 4.14.2 inter-island ferry fleet replacement with greener vessels is dependent on actions that can only be taken forward after full ferry funding agreement with the Scottish Government. Over 50% of current Council CO₂ emissions come from internal ferry operations, and;
- 4.14.3 timescales for availability and affordability of any competitive replacement fuels for “Gas Oil” / “Red Diesel”, which is used very heavily in Shetland by shipping, fisheries, aquaculture, commercial transport and construction, are currently very unclear. It is estimated that over 80% of overall Shetland CO₂ emissions from business arise from the use of these fuels.
- 4.15 The overall request in the “Climate Change Petition” (Appendix 3) is that Shetland Islands Council should declare a “Climate Emergency” to promote the development and delivery of a sufficiently ambitious plan.
- 4.16 This report, and the accompanying Strategic Outline Programme (Appendix 1), seeks to recommend the overall arrangements to deliver an effective Shetland response to Climate Change based on objective “Business Case” analysis. It goes on to propose a proactive approach designed to systematically and realistically

tackle the issues alongside our partners, then and identify and deliver shared solutions together.

4.17 It is apparent that everyone across the world is likely to face significant environmental challenges arising from climate change. There is also a clear risk that systematic and structural problems, such as widespread fuel poverty and the very high transport costs, already experienced in Shetland, could be made worse as changes in energy sources and systems happen. Solutions that clearly recognise these existing inequalities, are actively designed to reduce them, and aim to deliver a “Just Transition” will be our most effective climate change response.

5.0 Exempt and/or confidential information:

5.1 None.

6.0 Implications:

6.1 Service Users, Patients and Communities: Climate change will impact on everybody in Shetland and we will need to prepare to make adaptations. Significant changes will also have to be made affecting everybody in Shetland to mitigate future Climate change through the reduction of use of energy sources which emit greenhouse gases. These changes are likely to be substantial and need to be considered, planned and delivered with wide and effective engagement across the islands.

6.2 Human Resources and Organisational Development: Climate Change adaption and mitigation is a very significant organisational development issue due to its wide-ranging impacts. Possible adjustments to staffing arrangements may well emerge over time from adaption and mitigation plans and actions. It will be very important to ensure staff are given a full opportunity in developing and implementing responses.

At this stage, the Programme Initiation Document proposes the following additional support for the Programme:

- two graduate project officers be sourced via the Council’s Graduate established Project Officer Scheme;
- and the use of secondments, which will be recruited to using the Council’s Internal Secondment Policy.

6.3 Equality, Diversity and Human Rights: Climate justice, Just Transition principles, human rights and Equalities obligations all feature significantly in the Climate Change (Scotland) bills. Great care will need to be taken to ensure that these rights, and the interests of those least able to cope with change, are protected through all activity. Inequalities around fuel poverty and high transport costs are already a serious issue in Shetland, plans and actions need to recognise this and build in improvements rather than make things worse. It is likely that specific considerations of how Climate Change, and the actions in response to it, could affect Equalities and vulnerable groups will need to be prioritised.

<p>6.4 Legal:</p>	<p>The Council is the Local Authority for Shetland and has a duty as a public body to reduce greenhouse gas emissions and support Scotland’s adaptation to a changing climate. Scottish Ministers, in turn, are legally required to provide guidance to Public Sector Bodies to help them with this.</p> <p>Public Sector Bodies, including the Council, are also legally required to report annually on their greenhouse gas emissions and what they are doing to help adapt to a changing climate.</p> <p>The Scottish Ministers must ensure that the net Scottish emissions account for the year—</p> <ul style="list-style-type: none"> (a) 2020 is at least 56% lower than the 1990 baseline, (b) 2030 is at least 75% lower than the baseline, and (c) 2040 is at least 90% lower than the baseline. (d) 2045 is net zero <p>It is understood that all sectors, as listed above, are expected to meet these targets. The 2045 scenario for net-zero has all sectors at zero, or virtually zero, emissions except for agriculture, some parts of industry, and international aviation.</p> <p>It is accepted by the Scottish Government that a lot of what individual Public Sector Bodies will be able to achieve in terms of reducing their emissions will be dependent on what progress is made in the rest of society.</p> <p>Within six months of the Climate Change (Emissions Reduction Targets) (Scotland) Bill receiving Royal Assent the Government will update the Climate Change Plan, setting out the pathway to decarbonisation for Scotland as a whole.</p> <p>We also expect that further clarity will emerge on a similar time frame about other obligations and duties in particular sectors, such as road vehicles, shipping and aviation, which inform around other targets or regulations.</p> <p>Following the update to the Climate Change Plan, the Scottish Government proposes that in their future annual reports, all Public Sector Bodies will report the date by which they intend to achieve zero direct emissions – those are the emissions that the bodies are directly responsible for.</p> <p>Local Authorities may not be required to “ensure” that targets for their overall geographical area are met, but it is anticipated they will be expected to lead the process of setting these targets, influence their delivery and play a significant role in annually reporting progress.</p>
<p>6.5 Finance:</p>	<p>It is anticipated that adaption and mitigation of Climate Change will have very significant financial implications, both direct and indirect. Council financial plans and strategies will have to understand the scale and timing of the costs which may have to be considered and factor those into future budget planning activity.</p>

	<p>There will be a wide range of Climate Change actions with varying financial implications proposed to address issues. It will be important to understand these financial questions, capital and revenue, the availability of external or partnership support, how far investments leverage community or private sector action and the timing of all investments. One of the recommendations of this report is that consideration should be given to a review of the arrangements for Council's Change Fund to understand how that can best support this critical matter.</p> <p>At this stage proposals for direct costs associated with the "Climate Change Programme" are estimated in the accompanying Programme Initiation Document (Appendix 2) totalling £250k over a three year period.</p> <p>These costs are proposed to be funded from the Council's Change Fund and relate to further research and analysis, project management and project support. These resources would provide core Council input to the wide range of actions proposed within the programme and would be expected to form part of a collaborative and proactive multi-agency, public / private / community response drawing in considerable additional resources.</p> <p>Costs directly associated with additional specific actions will be subject to normal budget setting and financial processes.</p>
<p>6.6 Assets and Property:</p>	<p>Future planning for Council assets and property will be a very important component of both adaption and mitigation planning. All asset plans and strategies will require review and update. It is likely that specific Climate Change targets and timescales will be developed for the management, maintenance and replacement of all Council assets and property. These targets will have to be explicitly factored into all asset and property decisions.</p>
<p>6.7 ICT and new technologies:</p>	<p>ICT will continue to provide opportunities to provide alternatives to some current behaviours, especially avoidable travel, which can help to mitigate Climate Change. It will be important to consider and develop these alternatives as part of planning activity. Any resource usage directly associated with ICT will also need to be evaluated carefully in that planning.</p>
<p>6.8 Environmental:</p>	<p>Climate Change is fundamentally an environmental matter and all adaption and mitigation activity will ultimately be intended to address environmental issues as effectively as possible. There will undoubtedly be a wide range of possible actions with differences in their specific environmental benefits. These choices will need to be well understood and managed effectively. It is one of the recommendations of this report that the guidance for the "Environmental Implications" section of committee reports should be reviewed to clarify the need to consider and report "Climate Change" implications clearly.</p>

<p>6.9 Risk Management:</p>	<p>A significant part of the initiation of the Climate Change programme will be the establishment of key risks register. Clearly, there are very material risks inherent in Climate Change itself, there will also be many financial and operational risks for the Council and partners in implementing adaption and mitigation measures. There are also likely to be risks for communities, individuals and businesses around national and local responses as actions or changes may have unintended problematic consequences. For example, previously key energy sources may become unavailable due to changes in legislation or their replacements could be hard to access in the islands, cannot perform as well or are very expensive. Identifying the risks, developing control measures and monitoring will all be very important.</p> <p>An initial risk register for the Programme is included in the Programme Initiation Document (Appendix 2).</p>	
<p>6.10 Policy and Delegated Authority:</p>	<p>In accordance with Section 2.3.1 of the Council's Scheme of Administration and Delegations the Council's Environment and Transport Committee has functional responsibility for the natural environment, transport and ferry services, planning, building services and environmental services.</p> <p>In accordance with Section 2.3.1 of the Council's Scheme of Administration and Delegations, functional committees have responsibilities to advise Policy and Resources Committee and the Council in the development of service objectives, policies and plans concerned with service delivery within its remit.</p> <p>Policy and Resources Committee 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. This report relates to the overall goals and strategic objectives of the Council.</p>	
<p>6.11 Previously considered by:</p>	<p>Council Committees have previously considered individual aspects of Climate Change, carbon management and associated issues over a number of years.</p> <p>There has not previously been a co-ordinated consideration of this issue.</p> <p>Information briefing to members was conducted during August and September 2019.</p> <p>Further information briefing to members was held during November 2019.</p>	

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Appendices:

Appendix 1 – Climate Change – Strategic Outline Programme
Appendix 2 – Climate Change – Programme Initiation Documentation
Appendix 3 – Climate Change Petition
Appendix 4 - Key Carbon Reduction Actions

Background Documents:

Shetland Partnership Plan
Climate Change Scotland Emissions Targets Bill 2019
Scottish Climate Change Adaption Programme

STRATEGIC OUTLINE PROGRAMME (SOP)

Project Title:
Climate Change

Version No: 1.1

Issue Date: 13th January 2020

Purpose of this document

This document provides a template for the Strategic Outline Programme (SOP), which should be used where there is a likelihood that the proposal will result in a number of related projects.

SOPs support the development and agreement of programmes in support of an agreed strategy/ strategies. The functional content of the programme may be scoped on either a national, regional or organisational basis.

Following agreement to the SOP, the projects comprising the programme must be subject to individual business cases.

Importantly, programmes are subject to choice in terms of their key components and critical paths – hence the need to address the available ‘macro’ options at the outset, thus minimising analysis at subsequent stages.

Please note that this template is for guidance only. Where the template does not allow you to adequately explain the case for change, or the impacts, additional sections should be included.

Best practice guidance on the management of programmes is available on the Office of Government Commerce’s (OGC) website.

VERSION HISTORY

Version	Date Issued	Brief Summary of Change	Owner's Name
0.1	09.10.19	First Draft	John Smith
0.2	16.10.19	Workshop edit	John Smith
0.3	28.10.19	Pre-agenda management draft	John Smith
0.4	05.11.19	November Agenda Management Draft	John Smith
0.5	25.11.19	Members Sustainability Seminar Draft	John Smith
1.0	19.12.19	January Agenda Management Draft	John Smith
1.1	13.01.20	Cleared Committee Version	John Smith

OVERVIEW OF THE SOP PRODUCTION PROCESS

The table below shows the systematic approach to the preparation of the SOP development phase of the business case:

Stages	Development Process	Deliverables
Phase 0 –	Determining strategic context	
Step 1/ action1	Ascertain strategic fit	Strategic context
Output	Strategic Outline Programme (SOP)	
Outcome	Strategic fit	
Review point	Gateway 0 – strategic fit	

CONTENTS – STRATEGIC OUTLINE PROGRAMME**TEMPLATE AND SUPPORTING GUIDANCE**

1. Executive summary
2. Purpose
3. Strategic case
4. Economic case
5. Commercial case
6. Financial case
7. Management case

1. Executive summary

Please provide a concise and comprehensive overview of the SOP's content, key conclusions and principal recommendations.

The Climate Change Strategic Outline Programme is intended to provide an overview of the strategy, governance arrangements, target development and action planning required to address, adapt to, and mitigate, Climate Change in Shetland and contribute to an effective Scotland, United Kingdom and international response.

The Climate Change Strategic Outline Programme will help inform the identification of issues and options and it will assist evidence based planning and decision-making. This will enable environmental, economic and social needs are recognised, balanced and met efficiently, effectively and economically to support key outcomes for Shetland and its residents

Climate is a fundamental determinant of all aspects of wellbeing all across the world. In Shetland we are keenly aware of our environment and the day to day effects our climate has on our activities, social and economic opportunities, safety and lifestyles.

It is internationally accepted that we are now experiencing significant climate change and that significant steps need to be taken to prepare and deliver adaption and mitigation plans and actions to respond to those changes

There is a growing evidence base available on what climate impacts will be. Fifteen Key Consequences were highlighted in the Scottish Climate Change Adaptation Programme (2014):

- The productivity of our agriculture and forests
- The occurrence of pests and diseases
- The quality of our soils
- The health of our natural environment
- The security of our food supply
- The availability and quality of water
- The increased risk of flooding
- The health of our marine environment
- The resilience of our businesses
- The health and wellbeing of our people
- Our cultural heritage and identity
- The security and efficiency of our energy supply
- The performance of our buildings
- Infrastructure – network connectivity and interdependencies

These consequences will be highly significant across a wide spectrum of the Shetland environment, economy and society.

All public bodies have duties and obligations under legislation to produce adaptation plans to help cope with these changes, and to produce mitigation plans to reduce climate emissions against very challenging targets. These actions will require very significant resources and focus to deliver. They will require review and potential restructure of many aspects of social and economic organisation and service delivery. This planning and activity has to take place in Shetland as critically as anywhere.

Shetland Islands Council is obliged to act as part of its duties as a public body, as are all other Government agencies. Shetland Islands Council also understands its leadership role in the Shetland community. The Council has no doubt that there is a clear understanding and strong commitment across our community to play our part in addressing this global issue.

Shetland Islands Council also recognises that the fundamental actions which will be required to achieve such substantive change will require widespread partnership; they will be impossible for the Council to deliver in isolation. That partnership will be needed right across Shetland, and with the wider national and international community.

It will be very important to understand and communicate critical “Island Proofing” dimensions around particular issues and possible changes. This will be essential if areas like Shetland are to avoid being left behind as general and national solutions are implemented outwards from the centre. We will have to work proactively to find solutions that address our local needs and issues. “One size” answers may generally work in most places, but they do not always work well here.

We have demonstrated our ability to find innovative approaches that match our circumstances and needs in the past. For example the Energy Recovery Plant/Shetland Heat Energy and Power, Lerwick District Heating Scheme delivers significant affordable, low emissions heating to many homes and public buildings in Lerwick. Given the abundance of renewable energy sources surrounding Shetland, it should be more than possible to generate other solutions that deliver affordable low carbon transport fuel and heating.

The scope of the challenge is however very wide. It means that all key service strategies and plans across the Council, and with our partners, need to be reviewed to ensure “Climate Change” implications are being considered. That must be an early and recurring activity in any overall response.

The Strategic Outline Programme is not trying to determine what specific changes might be required in those strategies or accompanying arrangements at this point, that detailed work needs to be carried out area by area.

However it does make initial recommendations:

- a core “Climate Change Programme” team should be established in addition to existing resources. That team would act to co-ordinate, facilitate and catalyse accelerated internal Council actions and support strategy and key plan review. It would also act to identify partnership activity and leverage additional external resources which would support wider Shetland activity;

- consideration should be given to a review of the Council’s Change Fund to understand whether that is an appropriate route to contribute to any further funding implications arising from strategy and key plan review;
- the guidance for the “Environmental Implications” section of committee reports should be reviewed to clarify the need to consider and report “Climate Change” implications clearly.

This Strategic Outline Programme, seeks to recommend the overall arrangements to deliver an effective Shetland response to Climate Change based on objective “Business Case” analysis. It goes on to propose a proactive approach designed to systematically and realistically tackle the issues alongside our partners, then and identify and deliver shared solutions together.

It is apparent that everyone across the world is likely to face significant environmental challenges arising from climate change. There is also a clear risk that systematic and structural problems, such as widespread fuel poverty and the very high transport costs, already experienced in Shetland, could be made worse as changes in energy sources and systems happen. Solutions that clearly recognise these existing inequalities, are actively designed to reduce them, and aim to deliver a “Just Transition” will be our most effective climate change response.

2. Purpose

Please state the programme, for which approval to proceed is being sought.

Please note that the primary purpose of the SOP is to:

- *facilitate strategic ('macro') and collaborative planning and the setting of associated budgets*
- *identify and cost key components of the strategy (programmes) and enabling deliverables (projects)*
- *provide the strategic context for subsequent investments*
- *facilitate the speedy production of subsequent business cases for related investment.*

The Climate Change Programme is intended to provide an overview of the strategy, governance arrangements, target development and action planning required to address the internationally recognised issues and responses required to adapt to, and mitigate, climate change in Shetland and contribute to an effective Scotland, UK and international response.

It will help inform the identification of issues and options and assist in evidence based planning and decision making so that environmental, economic and social needs are recognised, balanced and met efficiently, effectively and economically to support key outcomes for Shetland and its residents.

3. Strategic case

Please describe the strategic drivers for this investment and associated strategies, programmes and plans.

State clearly how your application assists in the progression of Corporate Priorities and Business Transformation, including how it improves long-term outcomes.

Climate is a fundamental determinant of all aspects of well-being all across the world. In Shetland we are keenly aware of our environment and the day to day effects climate has on our activities, social and economic opportunities, safety and lifestyles.

It is internationally accepted that we are now experiencing significant climate change and that substantive steps need to be taken to prepare and deliver adaption and mitigation plans and actions.

This planning and activity has to take place in Shetland as critically as anywhere else. Shetland Islands Council is obliged to act as part of it's duties as a public body, as are all other Government agencies. Shetland Islands Council also understands its leadership role in the Shetland community and has no doubt that there is a clear understanding and strong commitment across our community to play our part in addressing this global issue.

Shetland Islands Council also recognises that the range of actions which will be required to achieve such a fundamental change will require widespread partnership. That will be needed right across Shetland and with the wider national and international community.

We also recognise that it will be very important to understand the Shetland dimensions around particular issues and possible changes to avoid being left behind as general and national solutions are implemented outwards from the centre.

We also understand that we will have to work actively to find solutions that meet Shetland needs and issues rather than just rely on centrally generated and sometimes inappropriate "one size" answers which may work elsewhere but not in Shetland.

The scope of this challenge is so wide that all key service strategies and plans across the Council, and those of our partners, will need to be revised to ensure that appropriate consideration of "Climate Change" implications is fully reflected in each as an early activity in our overall response.

Climate change is directly relevant to all local strategies and plans, including;

- The Shetland Partnership Plan,
- the Councils "Our Plan",
- the Shetland Transport Strategy,
- the Local Housing Strategy,

- the Local Development Plan and
- the 10 Year Plan.

Within each of these plans, and many others, the implications of Climate Change and the requirements for adaptation and mitigation will have significant relevance and implications.

For example the shared vision and shared priorities articulated in the Shetland Partnership Plan are;

The Shetland Partnership Plan - Our shared vision

“Shetland is a place where everyone is able to thrive; living well in strong, resilient communities; and where people and communities are able to help plan and deliver solutions to future challenges”

Shetland Partnership Plan - Our shared priorities

- Participation – People participate and influence decisions on services and use of resources
- People – Individuals and families thrive and reach their full potential
- Place – Shetland is an attractive place to live, work, study and invest
- Money – All Households can afford to have a good standard of living

Each of these will have to be evaluated carefully as the actions required to address climate change in Shetland are considered.

The challenge is considerable, but it should also be recognised that a challenge of this magnitude can create opportunities to address some of the structural issues associated with these priorities and outcomes in a transformational fashion, perhaps not otherwise achievable.

Fundamentally Shetland is a very energy rich community, we are still in the middle of the UK’s substantial oil and gas production activity and surrounded by most of the UK’s remaining hydrocarbon reserves.

While climate change mitigation plans are about phasing these out as emission sources, hydrocarbons will undoubtedly have a role to play in energy transition during that process.

There will also be emerging opportunities around decarbonisation, carbon capture and storage and other developments which could continue to utilise oil and gas infrastructure and skills.

Even if Hydrocarbons are ultimately phased out Shetland will still be in the middle of the UK’s most productive wind, wave and tidal regimes and these rich renewable resources will have a critical role to play in every low carbon future. The renewables industry will also need much of the marine infrastructure, engineering skills and technical expertise which Shetland already possesses.

We must seek to combine the inevitable change that energy transition requires, with the opportunity that our underlying energy rich positioning continues to offer, to resolve a perplexing conundrum.

Despite the fact that Shetland provides energy supplies that power big cities and key industries, we endure the highest energy prices and some of the highest levels of fuel poverty in the whole of the UK.

The structural and systematic burdens of high energy costs for all transport, heating and business processes creates a constant downward drag on the economic and social sustainability of communities, families and individuals in Shetland.

These very high energy costs are most likely part of the explanation why Shetland’s population is now persistently declining while the rest of Scotland and the UK is growing.

This decline in the midst of plenty does not have to be an inevitable predicament, but we will need to understand the issues, understand the ways to progress and spread that understanding across partners if we are to turn things around and find just solutions.

We will not, and cannot, develop and implement those solutions in isolation. This is a global problem and our neighbours and partners will also be working hard to find answers.

We will also be working within national and international frameworks which require us to develop our responses with due regard to sustainable development, climate justice, just transition principles, human rights and equalities obligations.

If we embed these essential principles in our solutions then we can develop an effective climate change response, and we can make substantial gains in areas of fuel poverty, rural isolation and exclusion, transport poverty and potentially other structural issues.

Finding the best approaches for Shetland, and remote and rural communities and islands generally, will be a challenge. It will be very important to ensure that national initiatives are “island proofed” when considering climate change responses and plans and strategies like the “National Islands Act” and the proposed “Islands Deal” also recognise and help address issues.

3.1 Organisation overview

Please provide a snapshot of the organisation or geographical area to which the proposed programme applies.

This programme has two associated and overlapping scopes;

- Firstly, issues and actions directly related with our own estate and operations, and;
- Secondly, issues and actions for the whole of Shetland, our Local Authority area.

At this stage it is not fully established what precise duties or obligations in terms of planning, target setting or delivery will be the formal duty of the Council.

These are the subject of the consultation on “The role of Public Sector Bodies in tackling climate change”.

However, the requirements on the Council are likely to be unavoidably “direct” in respect of the first scope and we will be expected to at least “lead and influence” with respect to the second.

It is also inevitable that achievement in the first scope, the Council estate and services, will be heavily determined by progress on the wider front, e.g. development of locally available and affordable alternative fuel sources, distribution infrastructure and commercial availability of new propulsion and heating technologies.

Therefore, this overall programme is being designed to consider and address both scopes.

3.2 Strategy and programme investment aims

Please provide an overview of the strategy and its component programmes, together with the specific investment aims for the programme for which approval is being sought.

The investment objectives of the Climate Change programme are to ensure that the Council, and Shetland as far as we can influence that, meets its Climate Change targets and protects and where possible enhances outcomes for Shetland’s people and places.

It is intended to ensure that significant actions or developments are considered in a planned fashion and that the information is identified and presented in a fashion that helps structured management and effective decision making.

Key investment objectives proposed for the Climate Change programme are;

- The Council has appropriate and robust;
 - Climate Change Adaption plans (sea level change, extreme weather events, global warming etc.) and
 - Climate Change Mitigation plans (Carbon and other greenhouse gas reduction)

for its own estate and services; and provides leadership and positive influence in this area for the whole of Shetland. **(adaption and mitigation delivery actions)**

These plans need to sustain, and where possible advance, key Shetland priorities and outcomes; **(integration with Shetland priority outcomes)**

- Participation – People participate and influence decisions on services and use of resources

- People – Individuals and families thrive and reach their full potential
- Place – Shetland is an attractive place to live, work, study and invest
- Money – All Households can afford to have a good standard of living

These plans need to consider and address Climate Change across all sectors, the sector list below is the one used by the Scottish Government in the Climate Bill; **(whole system coverage)**

- (a) energy supply,
 - (b) transport (including aviation and shipping),
 - (c) business and industrial process,
 - (d) residential and public buildings,
 - (e) waste management,
 - (f) land use, land use change and forestry,
 - (g) agriculture.
- There is wide understanding and awareness, inside organisations and across the whole of Shetland, about issues and opportunities to best promote a collaborative and sustainable solution. **(awareness and capacity building)**
 - The Council has appropriate and robust support processes across administrative schemes, financial regulations, procurement and commissioning regulations, asset investment strategies, HR policies, ICT policies etc. and encourages other agencies and organisations to develop similar arrangements. **(organisational support arrangements)**

3.3 Existing arrangements

Please state what the existing arrangements are in relation to the programme for which approval is being sought.

Climate Change and carbon reduction has been recognised as an issue for a number of years and significant mitigations have been delivered locally and nationally over that period, however much remains to be done.

Reporting on Council energy use and emissions is provided periodically through the Carbon Management Plan. The 2018-19 update report is included as Appendix A. The Council also submits a statutory annual Climate Change Duties Report to the Scottish Government as required by the The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015 (secondary legislation to the Climate Change (Scotland) Act 2009).

The recent Climate Change (Emissions Reduction Targets) (Scotland) Bill has brought forward the obligation on public bodies to achieve “net Zero” carbon emissions and developed the responsibilities of local authorities in target setting, reporting and facilitating local arrangements.

The Council has a “Carbon Reduction” strategy for its own built estate and vehicle fleet with associated action plans. There are also substantive strategies and plans for waste management.

Other sectors, such as transport and land use have well developed strategies that include objectives around climate change and carbon reduction, the issue is also recognised in corporate strategies including procurement, finance and HR.

It is less clear how far some other sectors such as fisheries, aquaculture and agriculture have developed responses and plans at this point in time.

While much work has been done, individual workstreams are not fully co-ordinated to address the explicit duties, targets and timelines for Climate Change adaption and carbon reduction, which we will now be required to meet.

This Strategic Outline Programme is intended to collate the information that could help to address that integration issue and allow structured forward planning.

The format for future reporting will have to be integrated with public bodies reporting requirements currently being consulted on. That update will also be required to review targets, bearing in mind the emissions targets recently adopted by the Scottish Government.

That new reporting format will be implemented in the Shetland Climate Change Plan proposed as a key action from this programme. It is anticipated that the first revision of that plan will be reported in parallel with the publication of the updated Scottish Climate Change Plan, due March/ April 2020.

3.4 Business needs

Please state what the current and future business needs are in relation to the existing position within the proposed programme.

The Council is the Local Authority for Shetland and has a duty as a public body to reduce greenhouse gas emissions and support Scotland’s adaptation to a changing climate. Scottish Ministers, in turn, are legally required to provide guidance to Public Sector Bodies to help them with this.

Public Sector Bodies, including the Council, are also legally required to report annually on their greenhouse gas emissions and what they are doing to help adapt to a changing climate.

The Scottish Ministers must ensure that the net Scottish emissions account for the year—

- (a) 2020 is at least 56% lower than the 1990 baseline,

(b) 2030 is at least 75% lower than the baseline, and

(c) 2040 is at least 90% lower than the baseline.

(d) 2045 is net zero

It is understood that all sectors, as listed above, are expected to meet these targets. The 2045 scenario for net-zero has all sectors at zero, or virtually zero, emissions except for agriculture, some parts of industry, and international aviation.

Remaining emissions from these sectors will need to be balanced, or outweighed, by negative emissions solutions such as tree planting and bioenergy with carbon capture and storage across the whole economy.

Currently there is no requirement for Public Sector Bodies to report on the year by which they intend to achieve zero greenhouse gas emissions, either from their own estate and operations (their direct emissions) or, in the case of Local Authorities, for their Local Authority area.

It is accepted by the Scottish Government that a lot of what individual Public Sector Bodies will be able to achieve in terms of reducing their emissions will be dependent on what progress is made in the rest of society.

Within 6 months of the Climate Change (Emissions Reduction Targets) (Scotland) Bill receiving Royal Assent the Government will update the Climate Change Plan, setting out the pathway to decarbonisation for Scotland as a whole.

We also expect that further clarity will emerge on a similar time frame about other obligations and duties in particular sectors, such as road vehicles, shipping and aviation, which inform around other targets or regulations.

Following the update to the Climate Change Plan, the Scottish Government propose that in their future annual reports, all Public Sector Bodies will report the date by which they intend to achieve zero direct emissions – those are the emissions that the bodies are directly responsible for.

While the specifics of how Public Bodies set their individual targets is being consulted on, it is expected that any discretion will be within the overall limits legislated for Scotland as a whole.

Local Authorities may not be required to “ensure” that targets for their overall geographical area are met, but it is anticipated they will be expected to lead the process of setting these targets, influence their delivery and play a significant role in annually reporting progress.

The targets that Public Sector Bodies set themselves are not expected to be legislative, and it is anticipated that targets set in the first year of reporting may need to be amended in subsequent years reporting when further information becomes available, as progress in other parts of society become apparent, or to align with future Climate Change Plans.

3.5 Potential scope and service requirements

In relation to the above needs, please outline the potential scope for the proposed programme and associated service needs.

This programme has two associated but overlapping scopes;

- Firstly, adaptations and mitigations of greenhouse gas emissions from our own estate and operations, and;
- Secondly, adaptations and mitigations for the whole of Shetland, our Local Authority area.

At this stage it is not fully established what precise duties or obligations in terms of planning, target setting or delivery will be the formal duty of the Council.

These are the subject of the current consultation on “The role of Public Sector Bodies in tackling climate change”.

However it is likely to quite “direct” in respect of the first scope and we will be expected to at least “lead and influence” with respect to the second.

It is also inevitable that achievement in the narrow scope will be heavily determined by progress on the wider front, therefore the overall programme is being designed to address both.

3.6 Benefits, risks, dependencies and constraints

Please provide a résumé of the main benefits and risks associated with the delivery of the programme, together with any dependencies (between this programme and other components of the strategy) and constraints.

Benefits

Potential programme benefits have been considered in terms of beneficiaries

Direct public sector benefits (Council)

- Meet statutory obligations with respect to Climate Change
- Integrate organisational response to achieve best efficiency and protect services
- Better planning of spend, capital and revenue to manage financial implications
- Potential improvements to service organisation or efficiency

Indirect public sector benefits (Other public sector organisations)

- Support partners to meet statutory obligations with respect to Climate Change
- Integrate cross-organisational response to achieve best efficiency and protect services

- Better planning of potentially shared spend, capital and revenue to manage financial implications
- Potential Improvements to service organisation or efficiency

Wider benefits to communities, individuals and businesses

- Leadership and influence in planning and delivering an effective response to Climate Change that protects, and if possible enhances, key priorities and outcomes.

Risk Analysis and SWOT Analysis

The global risks associated with climate change have been widely discussed, however it is important to ensure that these are understood in a Shetland context as well as describing their wider significance.

The tables below are the output from workshops considerations these issues in general. These type of risk / SWOT exercises would be repeated during sectoral analysis as the Shetland Climate Change Plan is developed.

Strengths / Weaknesses / Opportunities / Threats (SWOT) Analysis

Shetland as a whole – (the Wide Scope)

Strengths

- Abundance of largely untapped renewable energy sources (wind, wave and tidal)
- Measurable progress in energy efficiency in buildings, vehicles and marine transport
- Successful SME participation in renewables (2 small scale windfarms, 1 tidal research project and 1 H2 specialist trading + 1 biofuel provider + other minor developments)
- One potential large scale windfarm at consented status
- Three medium to large scale windfarms at various stages of development
- Successful District Heating Scheme in Lerwick
- Private and social enterprise businesses eager to develop renewable energy projects if viable opportunities identified
- Public bodies eager to act on identifying climate change solutions
- Elected Members appearing keen to incorporate climate issues in debate
- Active engineering supply chain for renewable energy with capacity for development
- Public opinion favouring action to introduce climate change measures
- Some success and expertise in leveraging in external and Government funding for energy efficiency and carbon reduction works
- Good level of good practice success cases available to use as encouragement for others to follow suite in energy efficiency upgrades in the domestic sector
- Good practice and local knowledge cases available for food growing locally to expand that sector

- More Electric vehicle brands now available locally with back up service expertise to support uptake
- Expanding public EV Charge network available through Government grant funding and grants available for home chargers
- Award winning expertise available locally for expansion of peat restoration work
- New Government funded facilities available locally to support waste changes
- Reliable baseline and data available locally on bird mortality, sea level and flooding impacts on which to build plans
- Young people and a growing group of adults actively engaged in the matter

Weaknesses

- A very remote location unconnected to national grid, depending heavily on diesel generated power with no immediate operational alternative options
- Dependency on diesel generated fuel for majority of energy requirements including electric vehicle charging
- Limited range of domestic and commercial fuels, e.g. no mains gas limits choice and increases costs.
- Shetland grid at maximum capacity for renewable sourced energy
- Energy companies slow at grid strengthening to ease this problem
- Indecision on interconnector delays planning and development of next generation solutions
- Dependence on remote external decision making processes.
- No currently scalable sources of renewable energy other than wind generated electricity and green H2 derived from wind generated electricity
- Lack of an up to date Shetland wide baseline for energy consumption and carbon emission
- Too many energy inefficient buildings - domestic, public and commercial -resulting in much higher usage of energy than need be
- Public sector resource constraints unless actively leveraging in external funding to deliver works
- Proliferation of micro SME's unwilling to take on paper heavy accreditations needed for work in certain areas detracts from volume of work which could be carried out under grant funding
- High cost of local construction projects compared with mainland prices for similar works limit measures developable within given grant funding
- Little uptake of small scale renewables and limited self generation measures as confused with debate round large scale renewable projects
- Geographical position of Shetland lays it more open to transport disruption from increased storm events
- Geographical characteristics of Shetland lead to heavy reliance on motorised transport with car ownership significantly above the national average.
- Financially challenging to improve green performance of public transport when operators already reliant on public subsidy.
- Increased problems will occur for import and export of food, aquaculture/livestock fuel stocks and materials
- Good number of important facilities directly adjacent to the sea so likely to be affected by storms and surge eg Tesco, Sumburgh airport, fire station , care homes

- Council internal ferry fleet in need of replacement
- No bridges or tunnels to use as alternative routes if ferry inoperable
- Layout and quantity of roads network which if blocked due to storms, flooding, landslide etc would cut areas off
- Likelihood of increased power outages due to increased storm events
- Little development of tree planting and agri green developments – possibly due to dispersed, small scale and part time nature of local crofting
- Limited experience of and appetite for trialling new ideas instead of following usual methods
- No joined up forum for considering Climate Change Shetland wide and its impacts
- Poor quality peatland not maximising carbon storage

Opportunities

- National Grid Interconnector to ensure security of supply
- One potential large scale windfarm at consented stage
- Abundant wind, wave and tidal resources for renewable electricity generation
- Opportunities for development of small and medium scale projects relating to specific localised demand
- Opportunities for mini local district heating networks at better energy cost to local property owners than current national network reliance supports local families and businesses and improves available income spend through reduced energy costs
- Growing availability of renewable technology solutions eg. Electric cars
- Projects emerging from increasing levels of community resilience
- Development of hydrogen economy from constrained wind
- Development of carbon capture and storage using Sullom Voe as a base with ease of access to exhausted oil/gas fields for storage facilities
- Development of tree planting
- Increased peatland restoration for biological carbon capture
- Development of local food growing networks – perhaps using polycrubs to increase local food resilience
- Improved domestic sector energy efficiency / energy affordability could improve health and well being
- Improved domestic energy efficiency leading to better homes and smaller bills makes moving to Shetland a more attractive package – especially when linked to green environment opportunities
- Longer warmer growing season enables agricultural diversification
- Longer warmer summers enable development of tourist businesses such as Outdoor Activity Centres offering canoeing/kayaking, wind surfing, orienteering similar to such centre in Lake District currently
- Longer warmer summers support more tourists and give greater access to outdoors for all – again business opportunities
- Longer warmer summers mean locals become more active and health improves saving on NHS budgets

- As summers improve staycation holidays in Shetland increase – business opportunity
- Change in ranges of animals makes holiday diversification opportunities eg more whale watching
- Energy Improvements particularly to lighting make Shetland able to become a Dark Sky Park with increased tourism in winter and longer tourist season
- Opportunities to take advantage of increased government funding and initiatives in support of active travel

Threats

- An increase in fuel poverty or transport costs leads to Shetland becoming much less attractive as a place to live, work, study etc.
- More expensive energy solutions divert limited public and private funds away from services
- Increased energy costs increase the cost of travel and make imports, exports and lifeline services more expensive and less available.
- Lack of effective alternative energy sources make some marginal businesses uncompetitive, perhaps fisheries and crofting.
- Not meeting climate change targets leaves Shetland with a reputation as an unclean place with severe consequences for exporting industries such as fisheries, attracting visitors and retaining oil industry business
- Failure to comply with Climate Change legislation leads to fines and inability to sell or let properties effecting commercial viability
- Failure to deliver on Public Bodies Duties leads to reduced Government funding as climate change viewed by Government as matter of public wellbeing – not just an environmental issue
- Increase in ill health due to cold wet homes adds a burden onto already pressured health service and care systems
- Food and energy security threatened as no plans in place for major and increased level of storm disruption affecting island communities
- Increased flooding risk due to more storms and sea level rise
- Increased landslip risk affecting roads and cutting off areas for periods affecting import and export of local goods
- Coastal erosion effects cultural assets eg graveyards, historical assets
- Increased disease risk for animals and humans
- Increased maintenance costs for property (houses, businesses premises, piers) due to climate effects
- Limited FE College courses to upskill locals for works needed
- Change in range of fish due to sea temperature rise (already noticed by fishermen) makes it more difficult to catch usual stock as fish move to cooler waters north
- Sea acidification impacts on productivity of shellfish market as acid sea damages shells and reduces quality and quantity of shellfish available
- Rise in sea temperature reduces productivity of salmon industry (salmon are a cold water fish) This is already noticed off Alaska
- Changes in sea water quality creates more diseases in fish stocks
- Floods and droughts in our external to Shetland food growing areas reduces availability of food for humans and animals requiring a greater level of self sufficiency on food production
- Storms take down electricity grid locally for prolonged period.

Shetland Islands Council - Estate and Services – (the Narrow Scope)**Strengths**

- An established collaborative approach for providing public services
- Council staff with experience in implementing successful energy efficiency measures
- Proficient in achieving bespoke island solutions
- Ability to invest moderate sums in service renewable solutions
- Some plans already in place as basis for updating under Climate Change strategy eg Flood Prevention, Carbon Management
- Some Government funded trials already carried out on energy efficiency problems locally eg SEEP 1, SEEP 2, LHEES, Transition (Domestic and Commercial/SME) and good Government links
- Public bodies eager to act on identifying climate change solutions
- Success in co-ordinating and facilitating large scale energy public / private partnerships

Weaknesses

- Dependency on diesel generated fuel for majority of energy requirements
- Limited range of domestic and commercial fuels, e.g. no mains gas limits choice and increases costs.
- No whole life costing consideration before purchasing goods means buy cheap and pay more for use continues
- Failure to lever in existing external funding to assist in implementing better solutions means seed funding disappears, legislation hits and we are faced with full costs to comply with law
- Lack of a systematic approach to researching climate change measures and then sharing the information
- Lack of in-house body/board to discuss and share information on climate change
- Increased burden on Social Care/ Care in community budgets by increasing volume of needy clients due to health issues from living in cold homes
- Considerably increased maintenance cost across the board due to storm etc effects to buildings, plant and piers
- Increased costs for road repair due to erosion, flooding, landslides
- Failure of supply due to power outages effecting critical services
- Failure of goods/materials needed being available due to freight boat issues
- Lack of adequate stocks being maintained for goods
- Lack of fixed links means critical support services unable to access clients if ferry problems continue
- Many critical buildings/assets at risk of flood, inundation and damage eg beside sea, at near sea level just now
- Increased fuel oil energy costs following national legislation against use of fossil fuel will lead to oil industry contraction of supply and increasing costs to run within Council estate#
- Failure to maximise use of small scale renewables to self- generate on every available Council building

- Failure of Spend to Save criteria to understand that a payback of at least 10 years (instead of the very limited 7) is needed to ensure technology can be introduced. A ten year payback on a 30+ year asset is still a very good bargain.

Opportunities

- Make full use of existing and future Scottish and UK Government funding schemes to develop specific service outcome projects
- Use National Islands Plan to support cases for additional funding where required on grounds of 'island proofing'
- Identify and plan all those energy efficiency projects that can be implemented for use in the council based on current technology
- Rewrite/write all required service strategies/plans to take cognisance of climate change
- Include section in every Council report on carbon considerations to assist in appropriate decisions being taken
- Re-introduce programmes such as ECO Schools to assist families and pupils gain knowledge
- Implement measures of best practice developed in other places
- Growing availability of renewable technology solutions eg. Electric cars
- Revisit fixed link debate and possible end up with a mixed solution of some tunnels and fewer ferries to support area resilience
- Use Council owned land to build turbines and use sell the output to the advantage of the estate eg private wires
- Development of hydrogen economy using Council heating systems as base market
- Capacity to influence community to action by including carbon metrics in all tenders and grants/loans
- Capacity to use Council land for local food growing to support community resilience
- Ability to use small scale renewables in rural areas on public buildings will encourage other property owners in the area to make the change and help to reduce the overall Shetland footprint.
- Ability to reduce costs on rural schools/care homes by use of small scale self generation of energy (solar and small scale wind) increases resilience of rural community assets

Threats

- Failure to comply with national legislation leads to fines
- Replacement programmes (ferries, vehicles etc) become unmanageable due to delays caused by information on renewable technical developments
- Danger of putting in already redundant solutions (oil boilers into schools instead of heat pumps) and thus locking in energy inefficiency to the estate for a further 30+ years
- Silo mentality leads to important information not being shared and essential collaborative work being restricted
- Council reserves become depleted by preparing and developing Climate Change measures
- Reduced ability to recruit staff for providing essential services if living costs in Shetland continue to rise in comparison to the rest of the Country

- High cost of implementing Climate Change measures impacts on service delivery
- Speed of renewable energy development making capital investment in early solutions obsolete
- Loss of public support due to perception of Council inactivity
- Lack of public and wider stakeholder support on contentious issues such as large scale renewables and fixed links
- Reputational damage with Government and public alike
- Legislative requirement for action after all the available seed funding national pots are exhausted, leading to service reductions to meet these unavoidable costs

Programme Risk Analysis

It also important to identify the key risks that might stop this programme from achieving its objectives. These are likely to include risks associated with uncertain technical factors, the scale of resources which will have to be applied or redirected, legislative, regulatory and fiscal obstacles in developing locally appropriate solutions, the complexity and interdependency of actions, political disagreements on the right way forward etc.

General Risks	Description	Mitigating Actions
Operational and Performance	Increase in the cost of providing services and reduction in the volumes of service provided	Early planning for introduction of Climate Change measures across all services
Technology	Implementing sub-optimal technical solutions that are overtaken by transformational changes	Understanding the work being done in climate change technology and making a commitment to be an early adopter of proven technology
Funding	Constrained funding leads to delay/ reduction in scope of Climate Change measures	A planned programme of professionally scoped measures combined with full knowledge of external funding to augment Council budgets
Legal and Fiscal	Law changes mean that certain sources of energy become illegal or are subject to high taxation e.g. diesel	Need to be sighted on the legal and fiscal developments combined with an early understanding of what changes are likely
Policy	Government policy targets for reducing carbon emissions towards zero are accelerated in response to heightened public opinion and/ or new scientific evidence	Adoption of a full-scale approach for bringing in practical Climate Change measures as soon as resources permit

Specific Risks		
Ignorance	Lack of knowledge on the Council's use of energy, how energy efficient operations are, funding opportunities and global best practice in Climate Change measures	Coordinate staff and resources to provide the best up to date information possible so that project planning can be done based on a sound basis
Geographical	Dependence on mains electricity from diesel generated source with only localised project based alternatives available	Make representation to UK and Scottish Governments, Ofgem, SSE etc to stress that Shetland cannot meet Climate Change targets without a base renewable energy supply. We should also plan to be as energy self-sufficient as practicable.
Political	Shetland is at the end of the line as governments roll out Climate Change solutions from the main population centres	Making representation to Governments combined with identifying all the practical Climate Change measures that can be achieved internally
Population Loss	Shetland becomes a less attractive place to live and work as energy costs rise faster than in the rest of the UK. Demand for Council services fall and staff are more difficult to recruit	As above
Complacency	Not responding adequately and early to the challenges posed by Climate Change leads to severe future pressure to introduce rapid measures with very high costs	The Council needs to understand the scale of the task ahead and to plan measures early and well to avoid future operational and financial difficulties
Fuel Poverty	Increased energy costs causes fuel poverty levels to rise further with a greater demand on support services	Impacts on the less well-off members of the community need to be built into all Climate Change measures
Public Opinion	A perceived inadequate Council response to the Climate Change issue results in negative publicity and undermines the Council's role as a Community leader on the	Adopting the Climate Change Strategic Outline Programme and progressing with early achievable outcomes on an evidence led basis

	subject	
Option Confusion	Finding the more practical and deliverable solutions is made difficult by many different external and in-house approaches pushing particular interest focused options. Thus leading to delayed decision taking.	The Council has to be guided by established evidence based methods for option appraisal based on sound baseline information on energy use, emissions and Climate Change measures

Dependencies and Constraints

A programme of this complexity has many dependencies; these will include technology development, national and local decision making, choices between alternative approaches and uncertainty.

Competing priorities, available technology, financial and human resources, commercial developments and legal obligations and limitations are all likely to be significant constraints across this programme.

Understanding the relationships between potential adaption and mitigation actions and the constraints and dependencies which will affect them will be a very important part of the development of sectoral plans.

It will be crucial to understand how the sequence of activity can be best progressed in light of some very fundamental constraints around alternative energy sources and very material dependencies around the development of alternatives such as an interconnector or a substantive hydrogen infrastructure.

The information which emerges from these sectoral plans will then allow a better identification of the critical paths that will have to be followed to reach solutions that work for Climate Change, and work for and in Shetland. Perhaps the most critical component of this overarching programme will be the identification and management of these dependencies and constraints.

At this time the most significant constraint and dependency is how and when an alternative electricity grid supply solution is going to be implemented.

Resolution of the uncertainty around that would then allow a wide range of other activity to be planned with some confidence and address the wide range of very important but dependent matters.

4. Economic case

4.1 Critical success factors

Please list the criteria (critical success factors – CSFs) against which you will assess the successful delivery of the programme and the evaluation of options.

The critical success factors (CSFs) for this programme, and the individual projects which will be considered within it, are closely linked to the Shetland Partnership Agreement and Our Plan Key outcomes which also underwrite the key investment objectives;

- CSF1: business needs – how well the option satisfies the existing and future business needs of the organisation.
 - Will it help to deliver the Councils statutory duties and obligations?
 - Will it help with long term financial sustainability of the Council and for communities, families and individuals in Shetland?
- CSF2: strategic fit – how well the option provides holistic fit and synergy with other key elements of national, regional and local strategies e.g. :-
 - Alignment with national Climate Change strategies
 - Alignment with “Shetland Partnership Plan” outcome objectives
 - Alignment with Regional Transport Strategy
 - Alignment with National Transport Strategy
 - Alignment with Carbon Management Strategy
 - Alignment with Local Development Plan
 - Alignment with Housing Strategy
 - Etc.
- CSF3: benefits optimisation – how well the option optimises the potential return on expenditure – business outcomes and benefits (qualitative and quantitative, direct and indirect to the organisation) – and assists in improving overall VFM (economy, efficiency and effectiveness).
 - Best delivery on Climate Change progress, reduction in emissions etc, for the financial cost of that investment or action.
 - Sustains and/or promotes key Shetland Outcomes
 - Promotes long term sustainability

- CSF4: potential achievability – the organisation’s ability to innovate, adapt, introduce, support and manage the required level of change, including the management of associated risks and the need for supporting skills (capacity and capability). Also the organisation’s ability to engender acceptance by staff.
 - Technical feasibility, is the option or action technically achievable?
 - Organisational resource feasibility, could we / Shetland practically deliver that kind of change?
 - Cultural achievability, could the Council / Shetland enable the change?
- CSF5: supply side capacity and capability – the ability of the market place and potential suppliers to deliver the required services and deliverables.
 - Is there a technical solution available and is there a partner who would deliver?
 - Could we do a deal in the market for that service or energy supply at an acceptable price?
- CSF6: potential affordability – the organisation’s ability to fund the required level of expenditure – namely, the capital and revenue consequences associated with the proposed investment.
 - Is the change affordable to the Council / Shetland?
 - Could we find partnership funding to allow it to be affordable?

4.2 Main options

Within the potential scope for the programme, please list and evaluate the main choices (or options) for the successful delivery of the potential scope and/or required services.

This should be done by:

- *describing the options for the programme*

And then in relation to the investment aims and CSFs:

- *assessing its main advantages*
- *assessing its main weaknesses*
- *outlining the potential projects (or investments) within the defined scope for the programme.*

Please note that:

these options may differ in relation to potential configuration and services, service solution, service delivery, implementation timescale and funding

the minimum level of activity (or ‘do minimum’) should be identified as a baseline option.

The Options Framework

The Options Framework recommended by the Green Book 2018 provides a structured approach to identifying and filtering a broad range of options for delivering policies, strategies, programmes and projects.

This tool and technique has been used on a wide range of public sector schemes. It has proven useful in getting senior management, stakeholders and customers signed up to a preferred way forward early on in the scoping and planning stage in the development of schemes.

The Options Framework identifies and filters these choices for the operational scope, service solutions, service delivery vehicles, implementation timeframes and funding mechanism for the programme.

Key dimensions	Description
Scope	<p>The ‘what’, in terms of the potential coverage of the programme.</p> <p>Potential scopes are driven by business needs, service requirements and the scale of organisational change required to improve service capabilities.</p> <p>Examples include coverage in terms of: business functions, levels of service, geography, population, user base and other parts of the business.</p>
Service solution	<p>The ‘how’ in terms of delivering the ‘preferred’ scope for the programme.</p> <p>Potential service solutions are driven by available technologies, recognised best practice, and what the market place can deliver.</p> <p>These solutions provide the potential ‘outputs’ and key activities for the programme, and as such the <u>portfolio of enabling projects and activities</u> required.</p>
Service delivery	<p>The ‘who’ in terms of delivering the ‘preferred’ scope and service solution for the programme.</p> <p>Potential options for service delivery are driven by available resources, competencies and capabilities – both internal and external to the organisation.</p> <p>Examples include: in-house provision, outsourcing, alliances and strategic partners.</p>

Service implementation	<p>The ‘when’ in terms of delivering the ‘preferred’ scope, solution and service delivery arrangements for the programme.</p> <p>Potential implementation options are driven by deadlines, milestones, dependencies (between outputs), economies of scale, benefit realisation, and risk management.</p> <p>The optimal option provides the <u>critical path for delivery of the agreed projects and activities</u> and the basis for the programme plan. Options for implementation include: piloting, modular delivery, big bang and phasing (tranches).</p>
Funding	<p>The ‘funding’ required for delivering the ‘preferred’ scope, solution, service delivery and implementation path for the programme.</p> <p>Potential funding options are driven by the availability and opportunity cost of public funding, Value for Money and the characteristics of the programme.</p> <p>Potential funding options include the public or private capital, the generation of alternative revenue streams, operating and financial leases, and mixed market arrangements.</p>

Using the Options Framework to identify the long-list

The Options Framework should be used as follows:

- 1. **Convene at least one workshop** comprising of senior managers (business), customers and stakeholders (users) and experts in relevant fields (technical) to be facilitated by an experienced and trained practitioner.*
- 2. **Confirm the spending objectives and potential scope for the programme**, as set out in the strategic case section.*
- 3. **Agree the critical success factors** for the programme.*
- 4. **Identify potential ‘scopes’** for the coverage of the programme, ranging from the BAU, through to the ‘do minimum’ and ‘do maximum’ and intermediate options.*

***These options focus on the scale of potential change required.** To avoid ‘scope creep’, they must not exceed the potential scope for the programme as defined within the strategic case section: if they do, the ‘case for change’ requires revisiting and updating.*

The ‘do minimum’ scope must be a realistic option that meets the ‘core’ scope and essential business needs of the programme. The ‘do maximum’ is predicated on meeting the full scope of the programme and all needs. The intermediate options focus on key differences in relation to the desirable and optional scopes for the programme.

Be pragmatic: scoping options discounted for delivery in the short to medium terms may be retained in the strategic portfolio for delivery in the longer term.

- i. Subject each option to SWOT analysis – noting advantages and disadvantages and how well it meets the agreed spending objectives and CSF’s.*

ii. Discount unrealistic options. Carry forward (C/F) possible options, including the BAU and ‘do minimum’ scopes.

iii. Identify the preferred way forward (PWF) – the ‘scope’ which is considered most likely to optimise social value.

Scopes identified for the programme that are more ambitious than the ‘do minimum’ must be justified on their potential for optimising benefits in relation to costs.

Consider numbering the options and colour coding the results.

Options Framework for the Climate Change Programme

Dimension	Business as usual – Do nothing else	Do minimum – Reactive	Do more - Pro-active	Do maximum
Scope	Continue with existing efficiency and best value initiatives	Develop strategies, plans and projects to meet Council estate and service obligations for emissions reductions as opportunities arise to seek to meet government targets with current infrastructure and arrangements Support community and other agency initiatives reactively	Develop strategies, plans and projects both to achieve emissions reduction targets and promote the underlying structural, infrastructure and regulatory/fiscal arrangements that would most enable those reductions Support community and other agency initiatives proactively	Develop strategies, plans and projects that create conditions that enable targets to be exceeded and/or reached early Assume responsibilities to enable and deliver whole Shetland solutions
Service solution portfolio of enabling projects and activities (see following sec-	Continue Carbon management Plan Leave additional actions to be decided	Review key strategies and plans and seek opportunities within their existing priori-	Require review of all strategies and plans systematically including alignment with Cli-	Restructure and manage all projects and activities centrally under Climate Change direction

tion)	within other projects at their discretion	ties	Climate Change key outcomes	
Service delivery <ul style="list-style-type: none"> • in-house provision, • outsourcing, • alliances • strategic partners. 	Continue as is unless change is prompted by efficiency or best value	Reactively assess opportunities for alternative service delivery should any arise	Proactively consider service delivery alternatives in critical areas for climate change to identify more effective models	Create a new corporate body to plan and deliver all activity affecting climate change
Service implementation <ul style="list-style-type: none"> • piloting, • modular delivery, • big bang • phasing (tranches). 	Continue to pilot limited scale alternative approaches	Consider individual sectors and/or service areas individually for implementation of alternative methods	Develop a tranche based approach to considering ranges of interdependent sectors and service areas for phased improvement	Identify all currently possible adaptations and mitigations and implement all as quickly as possible. Repeat this exercise every 5 years as technologies and options develop.
Funding <ul style="list-style-type: none"> • Council funding • Other public funding • private capital, • generation of alternative revenue streams, • operating and financial leases, • mixed market arrangements. 	Fund from existing Council budgets if efficiencies and alternatives are cost neutral. Seek external funding if opportunities arise	Fund from existing Council budgets through cost neutral changes and fund changes which demonstrate spend to save.	Review main budgets associated with areas of greatest climate change impact to ensure climate change objectives are being fully considered in budget allocation. Actively investigate opportunities for external and other funding mechanisms	Redirect budgets centrally based on climate change adaptation and mitigation impacts

4.3 Preferred way forward

Please state the preferred way forward in relation to the options identified for the successful implementation of the programme.

This should outline:

- *the key investments within the programme*
- *those that will lead to separate procurements in their own right (and thus be subject to individual business cases – SOCs, OBCs, FBCs)*
- *related timescales*
- *the indicative economic cost (in £s), taking into account any attributable costs (including those falling to other organisations); quantifiable benefits (in £s) and risks (in £s). The use of optimism bias should be considered here.*

Do nothing beyond Business as Usual

This approach is **not recommended**. It would not appear to offer a feasible path to meeting the Councils statutory obligations and duties to meet the climate change targets adopted by the Scottish Government.

Do Minimum – Reactive

This approach is **not recommended**. While minimum Council action might deliver technical compliance with its public duties to meet statutory duties and obligation relating to the Councils estate and services it would not be likely to address structural and systematic Shetland energy infrastructure, availability and cost issues.

Do More - Proactive

This approach is **recommended**. Proactively assessing key issues systematically through a wide partnership and in tranches, both sectorally and over time is most likely to achieve best outcomes. It offers the possibility of identifying further “quick wins” accessible through existing technology and within available shared resources while also identifying underlying issues which can only be effectively addressed through legislative or regulatory change, substantial investment, complex collaboration and new technology development. This whole system approach can then plan the delivery of these more complex and longer term actions with greater likelihood of successful outcomes.

Do Maximum

This approach is **not recommended**. Implementing all possible adaption and mitigation actions available currently risks a disproportionate re-direction of resources to limited effect when a number of the core issues are systematic and structural. This approach would also require a very directive

approach which may well disengage many partners, communities and individuals. It is also likely that it would be necessary to repeat successive “big bang” change programmes as changes to technology and culture developed over time.

Service solutions - portfolio of enabling projects and activities

Overarching Shetland Plan - The Shetland Partnership Plan

- Participation Delivery Plan
- People Delivery Plan
- Place Delivery Plan
- Money Delivery Plan

Shetland Islands Council – Our Plan

- Service Redesign Programme
- Business Transformation Programme
- Medium & Long Term Financial Plan
- Asset Investment Strategy and Plans
- Carbon Management Plan
- Procurement Plans
- Workforce Plans
- ICT Plans
- Community Development and Locality Plans

Sectoral Plans (each needs to cover adaption and mitigation)

(a) Energy Supply

- Electricity Generation, Infrastructure and Supply Plan(s)
- Hydrogen Generation, Infrastructure and Supply Plan(s)

- Other Energy Generation, Infrastructure and Supply Plan(s)
- Transitional Energy Generation, Infrastructure and Supply Plan(s)

(b) Transport (including aviation & shipping)

- Shetland Transport Strategy
 - Inter Island Ferry Plans
 - Bus Plans
 - Inter-Island Air Plans
 - Fixed Links
 - Private Car Plans
 - External Ferries
 - External Air-Services
- Shetland Active Travel Strategy
- National Transport Strategy
 - External Ferries
 - External Air-Services
 - Commercial shipping transport plans
 - Commercial aviation plansCommercial land transport, van and truck etc. plans

(c) Business and industrial process,

- Economic Development Strategy / 10 year Plan
- Fisheries Plans
- Aquaculture Plans
- Construction Plans
- Shetland Tourism Strategy

- Oil & Gas Plans
- Other Energy Sector Plans
- Other Business and Industrial Plans
- Council Fleet Management Plan
- Port of Sullom Voe Plans
- Small Ports Plans
- Lerwick Port Authority Plans

(d) residential and public buildings,

- Council Housing Strategy & Plans
- Housing Association Plans
- Private Households Plans
- Council Public Buildings Plans
- Other Public Buildings Plans

(e) waste management,

- Zero Waste Shetland Plans
- Domestic waste management & recycling plans
- Commercial waste management & recycling plans
- Landfill, ERP, other recycling / reuse plans

(f) land use, land use change and forestry,

- Shetland Local Development Plan
- Shetland Marine Spatial Plan

(g) agriculture.

- Agriculture Plans

This list is not intended to be exhaustive but starts to illustrate the range of areas and issues that need to be considered within this programme. Equally, the initial identification of a strategy / programme / plan in one sectoral area does not limit the relevance and influence of that plan, there will be many overlaps and dependencies.

None of these plans and programmes belong to the Council exclusively, indeed some will be “owned” by other agencies or bodies, all certainly have overlaps between organisations and include many interests.

There will also need to be a number of “community” based and led plans / strategies and programmes, both for geographical plans, perhaps relating to one specific island and for communities of interest, perhaps relating to young people, vulnerable or low income individuals and families.

The critical need for the responses to climate change to be considered from the perspective of multiple groups will be very important if we are to make sure they support sustainable development, climate justice, just transition principles, human rights and equalities objectives and obligations.

These programmes are currently at very different stages of development and have differing levels of direct Council control and/or influence. All strategies, programmes and plans will however need effective partnership working.

Further clarification of this mapping exercise and then designing arrangements that promote inclusion, collaboration, innovation and aligned decision-making across many partnerships will be one of the most considerable challenges in delivering an effective response.

Potential Next Steps across all key strategies and plans

Each programme or project identified in the list above will be required to ensure that it;

- develops effective understanding of the challenge in terms of Climate Change adaption and mitigation that it will be expected to meet,
- revisit it’s underpinning strategies and plans to see whether these challenges and obligations are sufficiently included,
- revisit and further develop actions plans for every area to ensure they include delivery of Climate Change objectives, targets and timelines,
- develop engagement, communication and reporting arrangements to ensure all parts of the overall Climate Change programme informs each other, and;

- ensure all this is done cross Council / cross Shetland and links into Scotland/UK/international assistance where that is available.

More understanding of the detailed actions and changes which will be required over a sustained period will emerge from this activity and will also need to be aligned with the detailed guidance which the Scottish Government have undertaken to produce within 6 months as a “Scotland Climate Change Plan”.

The timing of a number of actions in Shetland will undoubtedly depend on key decisions taken elsewhere, the emergence and/or commercialisation of new technologies and the deployment of new infrastructures and regulatory regimes.

The table below does not seek to be exhaustive but highlights some potential developments etc. across the sectors as identified by the Scottish Government.

	Council role / Others role	Key issues
(a) energy supply,	Limited direct Council, mostly Govt & private sector. Will critically require leadership, co-ordination and facilitation.	Shetland power station(s) and/or interconnector and local grid capacity Electricity renewable generation capacity and distribution Hydrogen generation and distribution
(b) transport (including road transport, aviation, shipping and active travel),	Direct for ferries, tugs, internal planes and Council vehicle fleet. Others include Govt agencies for external shipping and aviation, commercial for road haulage, fisheries and aquaculture and individuals for personal transport. Direct in terms of staffing and funding ZetTrans which has functional responsibility for public transport provision as well as a remit for active travel.	Availability of alternative energy sources and their distribution infrastructure Particular challenges for realistic alternative fuel sources for shipping and aviation Pricing and regulatory arrangements Encouraging behaviour change in terms of travel choices and use of private car
(c) business and industrial process,	Limited direct Council e.g. Waste to Energy plant and Scord Quarry. Others include very large Oil & Gas + very significant fisheries and aquaculture + other quarries	Availability of alternative energy sources and their distribution infrastructure Particular challenges for realistic alternative fuel sources for aquaculture

	and construction.	and fisheries Pricing and regulatory arrangements
(d) residential and public buildings	Direct for Council houses and public buildings, + agencies for Housing association and NHS etc. public buildings. Others include private housing and commercial premises	Availability of alternative energy sources and their distribution infrastructure Significant challenges around availability across Shetland Pricing and regulatory arrangements Transitional energy (LNG etc.) sources and distribution
(e) waste management,	Direct for collection, processing and disposal. Government, commercial and individuals for waste generation	Circular waste economy and reuse / recycling
(f) land use, land use change and forestry,	Direct as land owner, some directive with aspects of planning authority influencing with wider aspects of planning Others include farmers, crofters and other landowners.	Further determination of scale of changes required and potential in interventions
(g) agriculture.	Council limited Influence as land owner, planning authority and economic development agency Others include farmers, crofters and other landowners.	Further determination of scale of changes required and potential in interventions
Sectoral Climate Change Adaption Programmes	Significant Council responsibility for Council services and general community resilience leadership Shared responsibility and interest across agency partners, businesses and communities	Further determination of scale of changes required and potential in interventions
Supporting	Significant Council responsibility	Further determination of scale of changes

programmes and activity	for Council services and general community resilience leadership Shared responsibility and interest across agency partners, businesses and communities	required and potential in interventions
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Many of the choices that sectoral programmes have available to them, especially around moves to alternative fuel sources, will be determined by the energy market and supporting energy distribution infrastructures. This may well be the most complex local matter in determining the ability of the Council, and everyone else in Shetland’s, to respond as they would wish.

Ultimately it will only be possible to achieve “net-zero” greenhouse gas emissions in Shetland if alternative energy sources are available for public bodies, businesses and households to utilise and the infrastructure to support them is in place.

Our experience of the development and roll-out of infrastructure for any national service or infrastructure has consistently been that we are at the most remote and last in the queue. This was historically the islands experience with electricity, water, telephones and even television, it is the continuing experience with broadband. There is a real danger that changes in widespread usage of energy sources away from petrol, diesel, domestic heating oil and bottled gas to new alternatives will be equally fraught, slow and challenging.

However, these risks and challenges in energy transition may also create what is perhaps a unique opportunity to address some of the most intractable structural and systematic difficulties around key living costs in Shetland.

The most significant element of the inflated cost of living in Shetland is the excess costs we have to bear for energy to heat our homes and the energy costs of the transport to and from Shetland and within the islands. These costs ultimately affect the prices of all the goods and services we fundamentally depend on. If necessary energy transition from high carbon sources to alternative fuels result in still higher costs, then that will be even more problematic for island life, especially if these costs end up being passed on to the user.

It will therefore be critical to identify how transition avoids inflating the cost of energy, and indeed seek to identify approaches that allow access to more affordable arrangements, especially for life-line services and those in the community least able to afford high costs.

At this stage it would appear that there are basically three scalable future sources of zero emission energy which might be available in Shetland; renewable generated electricity, “green” hydrogen and non-motorised transport solutions.

While there may be a range of transitional fuel sources that have relevance during the transition period, perhaps including lower emission hydrocarbons such as LNG, they cannot be zero-emission solutions. However some of these transitional energy sources may be an inevitable requirement for years or decades until technical availability and cost effectiveness of zero emission alternatives becomes available.

That might be most likely in shipping, fisheries, aquaculture and agriculture where the demands placed on fuel sources are very particular. If that transpires then much of the holistic work described below for renewable electricity and hydrogen, i.e. identification of sources for generation, distribution arrangements for supply and regulatory and pricing arrangements will also have to be delivered for that fuel source.

Other zero-emission technologies may also have some role to play such as solar, air & ground source, anaerobic digestion or bio-mass with carbon capture but practically these would seem to have more limited capacities in the Shetland context in comparison to renewable generated electricity and “green” hydrogen.

Therefore it will be necessary to develop realistic and deliverable plans for the availability of renewable generated electricity and “green” hydrogen energy supplies across Shetland to enable full achievement of sectoral mitigation plans.

It would seem critical that renewable electricity and hydrogen generation, distribution and regulation arrangements are considered holistically to seek to manage their availability and cost issues effectively. Neither fuel source is available widely in Shetland at the moment; much work will be required to develop arrangements likely to improve availability and ensure affordability.

In addition to mitigation programmes, Climate Change Adaption arrangements will need to be revisited and/or developed to address the potential impacts of global warming, sea level changes, species migration and extreme weather events etc.

These direct mitigation and adaption programmes will also have to be supported by a review and update of support arrangements across finance, procurement, asset management, HR, ICT etc.

A range of education, awareness, training and engagement activity will also need to be planned and delivered both within the Council and partner agencies and more widely with individuals, communities’ young people, businesses etc. to develop and promote the widest understanding and engagement about issues and solutions.

5. Commercial case

5.1 Commercial strategy

Please outline the commercial strategy for the programme.

This may differ for individual investments and describes how the organisation(s) will endeavour to 'leverage' the best available deal for each investment, or combination of investments, from the supply-side and market place.

The Climate Change programme will require a wide range of commercial arrangements from a range of organisations to deliver this broad scope. This is likely to involve direct procurements, partnerships both with commercial, public sector and community partners.

A number of the commercial solutions are likely to be novel and innovative and may require regulatory realignment, particularly given our geographical context and scale.

Many projects will have to be evaluated and decided on individually and may require their own strategic, outline and full business cases before implementation.

5.2 Procurement strategy

Please outline the procurement strategy for the programme and how its components (projects) will be procured in accordance with the Government Procurement Agreement (WTO) and the EU Consolidated Public Sector Procurement Directive (2004).

This may differ for individual investments and range from the use of existing call-off contracts and catalogues, to new procurements.

Many projects will have to be evaluated and decided on individually within the responsibilities of other organisations and will require their own strategic, outline and full business cases before implementation. The key aim must be to ensure good alignment that optimises the opportunity for value for money solutions.

6. Financial Case

6.1 Indicative costs

Please indicate the total financial cost (in £s) of the programme, broken down by constituent investments and/or procurements.

This should be based on the additional cash cost of these investments to the organisation(s), taking into account any cash releasing benefits or off-setting costs.

Overall Council energy consumption was estimated to be c 100gwh in 2018/19. Council energy costs are current in excess of £6.5m per annum, c£2.5 on electricity, c£4m on marine, vehicle and heating fuel.

Whole Shetland energy consumption (excluding Oil & Gas terminals) was estimated to be c 1500gwh in 2008, this whole Shetland analysis is currently being updated. This would indicate an overall Shetland energy bill in the order of c£100m per annum.

Maintenance and replacement costs for the buildings, vessels, vehicles and other assets associated with that energy use are in excess of £100m for the Council estate over the next 5 years, perhaps £1b for the whole of Shetland when replacement vehicles, house builds, vessels and other plant is taken into account.

It will be a priority within the Shetland Climate Change Plan to review these cost estimates, however there is no doubt that very significant sums of public, commercial and household money is currently being spent on energy (transport, heating, lighting etc).

The costs of the interventions and actions required to respond to Climate Change effectively will require that spend to be restructured to alternative energy sources. The specific investments which will be required will be of a very significant scale.

Area	Financial implications
(a) energy supply,	Very large government and private sector investment Possible community participation. Regulatory / community benefit arrangements around pricing
(b) transport (including road transport, active travel, aviation and shipping),	Very large investment required in new vehicles, boats, planes, alternative infrastructure by all parties, agencies, businesses and individuals.

(c) business and industrial process,	Very large for Oil & gas, substantial for fisheries, aquaculture and other business and industrial sectors especially in terms of SME business investment capacity.
(d) residential and public buildings	Very large for all parties across heating systems. Significant Council actions required in terms of Council houses and public buildings. Perhaps even larger in terms of private households.
(e) waste management,	Significant for waste management and waste to energy.
(f) land use, land use change and forestry,	Further analysis required
(g) agriculture.	Further analysis required
Sectoral Climate Change Adaption Programmes	Further analysis required
Supporting programmes and activity	Further analysis required

6.2 Funding arrangements

Please indicate how it is intended that these investments will be funded.

Restructuring the capital investment and revenue spending on energy will require collaborative action between the Council, other public bodies, businesses, communities, families and individuals.

Existing funding sources, investment and spending arrangements will all have to be examined carefully to understand how they can be best redirected. Sources of additional funding, whether through external government support schemes, commercial partnerships or community action will also need examination.

Each sectoral programme will have to map out the potential funding implications for the activity required in its area. A key contribution of the Climate Change programme be to then seek to integrate these actions and investments together to best mutual benefit.

Meaningful climate change action will require long term adjustments to culture and spending activity. Current arrangements are already very costly and involve a significant proportion of public and private funds. Investing and spending that money differently will be the most significant way forward, however that will require careful planning and very effective collaboration if the most effective results are to be achieved.

6.3 Affordability

Please confirm the affordability of the overall programme, indicating any agreements or understandings in place with commissioning bodies and/or any affordability gaps.

Changes of the order required to transform our energy use away from the hydrocarbons on which we fundamentally depend at the moment will undoubtedly create affordability challenges.

These challenges will present themselves at a macro level, where the potential investment costs will compete with other priorities for access to limited overall funding both in terms of capital investment priorities and ongoing revenue funding.

There are also likely be significant affordability challenges at a local level for families, individuals and businesses around both one-off costs in changing energy sources and the ongoing implications that might create.

Sectoral analysis and planning will have to consider these issues specifically in each area and seek to develop mitigations as far as possible. Again the programme challenge will be to help integrate these plans and actions for overall benefit.

The changes required are long term, and affordability will have to be considered across that long term also. Much investment and ongoing spending is required around the arrangements and energy sources we use just now.

A key aspect of affordability will be finding ways to divert and enhance the effectiveness of that spend into activity and arrangements that support climate change objectives.

7. Management case

7.1 Programme management arrangements

Please outline the programme management arrangements, including your framework (roles and responsibilities), strategy for dealing with stakeholders and customers, and outline plans.

In accordance with best practice, the programme must have a Senior Responsible Owner (SRO), who takes ownership of the programme and is responsible for its direction.

Effective engagement, communication and governance arrangements for such a complex and wide reaching programme of activity will be unavoidably complex to design and manage.

This may require revision of arrangements at Council, Community Planning, Community and government levels.

Proposals for these arrangements will require some thought, discussion and time to develop but must recognise and be aligned with the key obligations and objectives of the programme as well as the key obligations and objectives of individual partners recognising these will be driven by individual statutory roles and requirements.

Given the wide reaching scope of this matter, it is proposed that initial programme managerial arrangements are through the Councils Corporate Management Team.

The Chief Executive who chairs that group will operate as the programme Chair / Senior Responsible Officer.

Overall strategic decisions relating to a matter of the significance of Climate Change lie with a range of bodies in Shetland. In relation to the Councils' duties there is a need to ensure a coherent approach and it will be essential that all committees work to build these issues into their strategy development, monitoring and decision making.

Initial political governance within the Council is proposed through consultation with Committee Chairs, who will convene as required as a Climate Change Sounding Board with reporting through the Environment and Transport Committee and the Policy and Resources Committee.

The Shetland Partnership will be expected to function as a "whole Shetland" co-ordinating group for Climate Change consideration and response, and development of further collaborative mechanisms will be required to ensure alignment in planning and delivery of solutions.

This programme and any resultant programmes and projects will be managed to Prince2 standards.

7.2 Programme milestones

Please outline the main milestones for the programme in the years ahead.

Programme milestones will be established in relation to individual project evaluation, decision making and implementation.

It is also necessary to establish overall anticipated milestones for this overarching programme including establishment of overall governance arrangements, target setting, monitoring and reporting arrangements, partnership engagement and community engagement.

The Climate Change Bill targets legislated by the Scottish Government are;

- (a) 2020 is at least 56% lower than the 1990 baseline,
- (b) 2030 is at least 75% lower than the 1990 baseline, and
- (c) 2040 is at least 90% lower than the 1990 baseline.
- (d) 2045 is net zero

The Council will have to respond effectively to these.

A further significant milestone should be around March / April 2020. This is the date when the Scottish Government has committed to update their Climate Change Plan, setting out the pathway to decarbonisation for Scotland as a whole.

Influencing the content of that updated plan, as well as reacting to it will be very important.

March / April 2022 is also the recommended target for the completing of initial development of sectoral plans and further reporting to Council.

7.3 Programme assurance

Please state what these arrangements are, including any provision for gateway reviews on an ongoing basis for strategic fit (Gate 0).

Programme assurance will be managed to Prince Project Management standards and in line with the Better Business Case planning guidance.

Appendix A – Carbon Management Plan - Energy / Emissions Report

1. Introduction

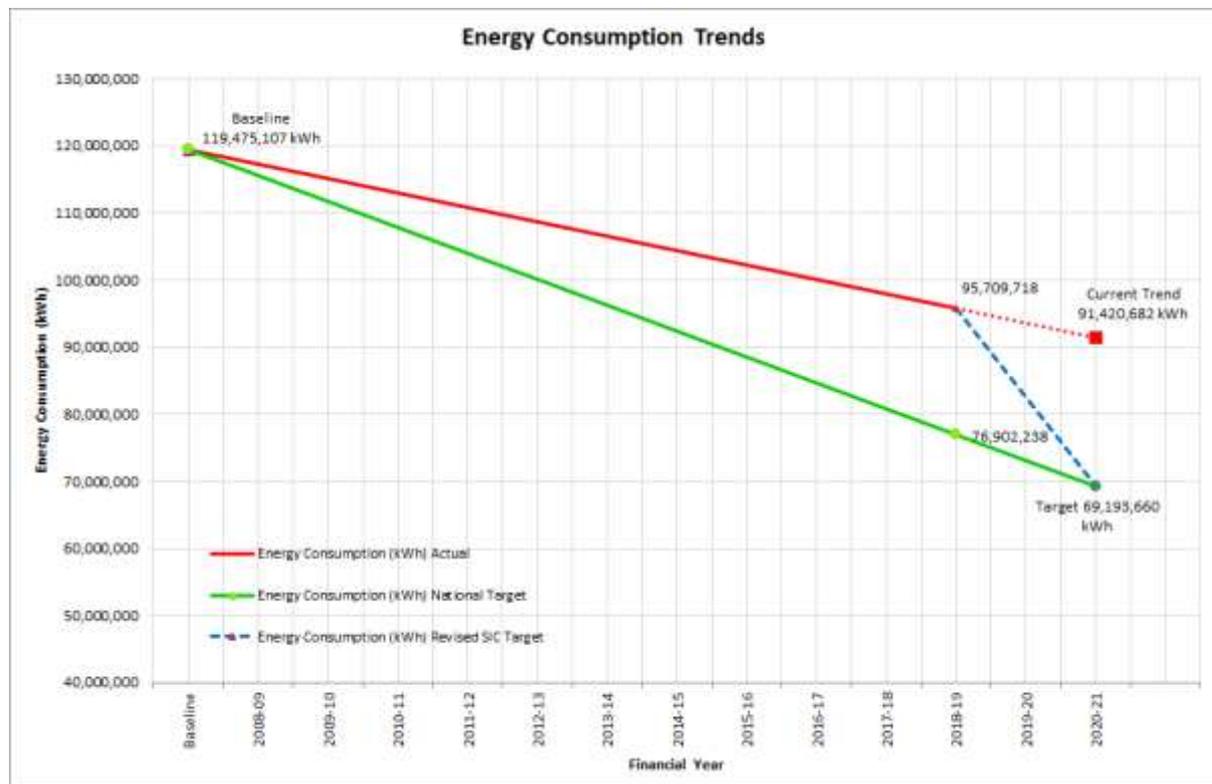
This report provides an update on the Council’s position in terms of energy and carbon reduction.

The report provides an update of the data presented in the Carbon Management Plan 2015-2020.

2. Trends

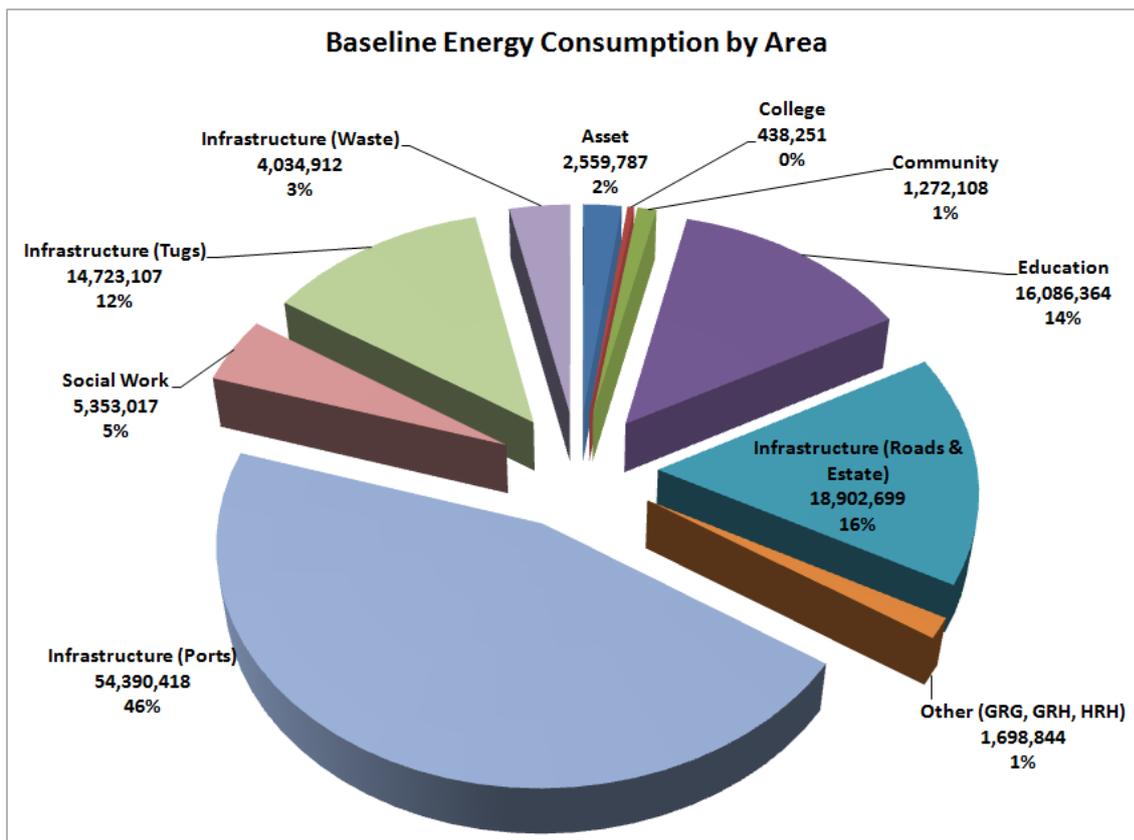
The following graph presents the consumption trend compared with the 42% reduction target (from the baseline) set for 2020/21.

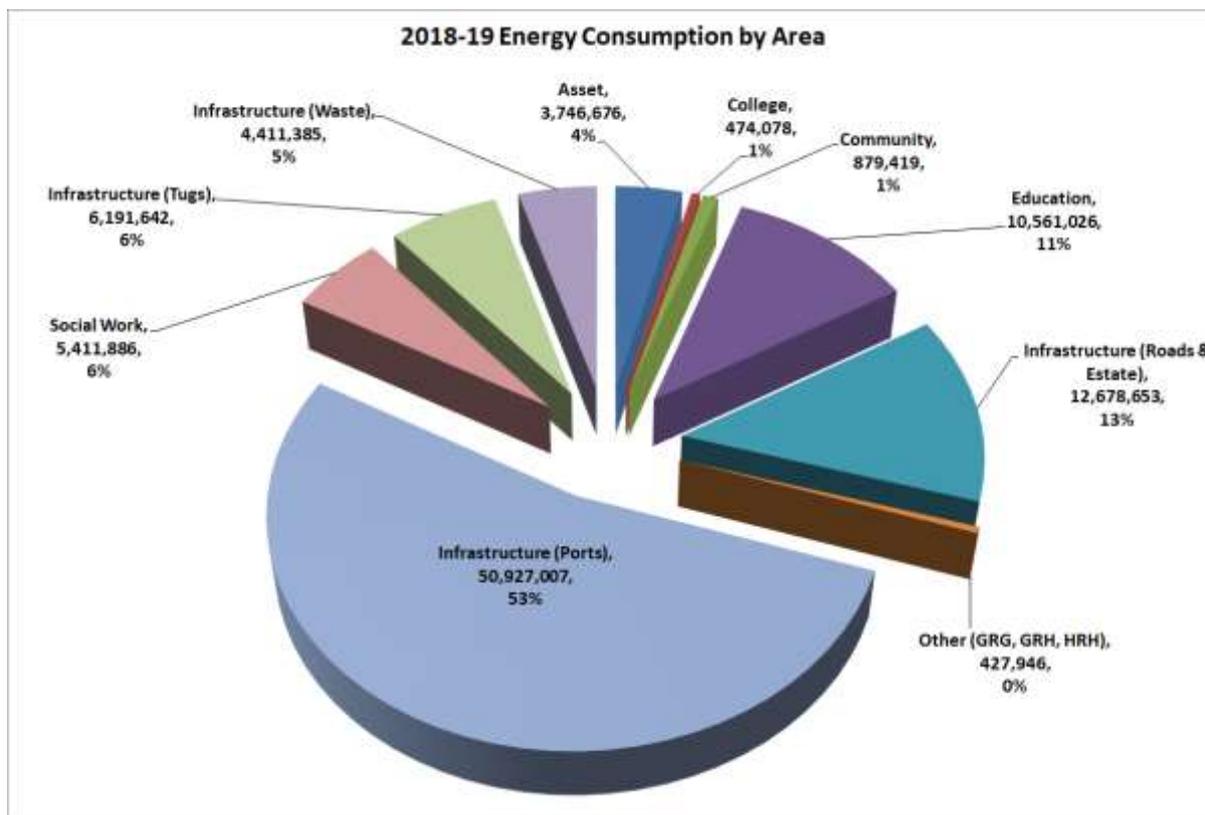
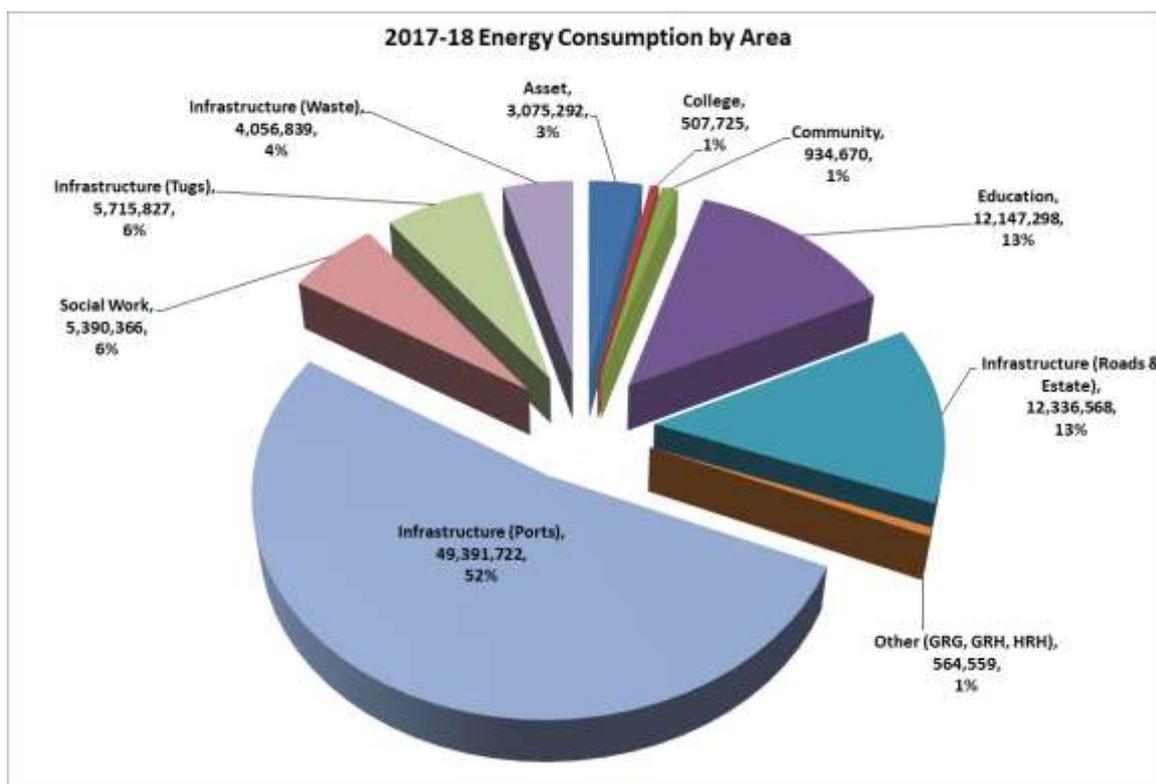
There is still a significant difference between target trend and current trend and the current trend has increased to a 2020/21 consumption of 91,420,682kWh at current projections from the 2017/18 figure of 86,514,594kWh.



3. Baseline, 2017/18 and 2018/19 Consumption Breakdown

The following graphs provide a comparison of the above three periods.

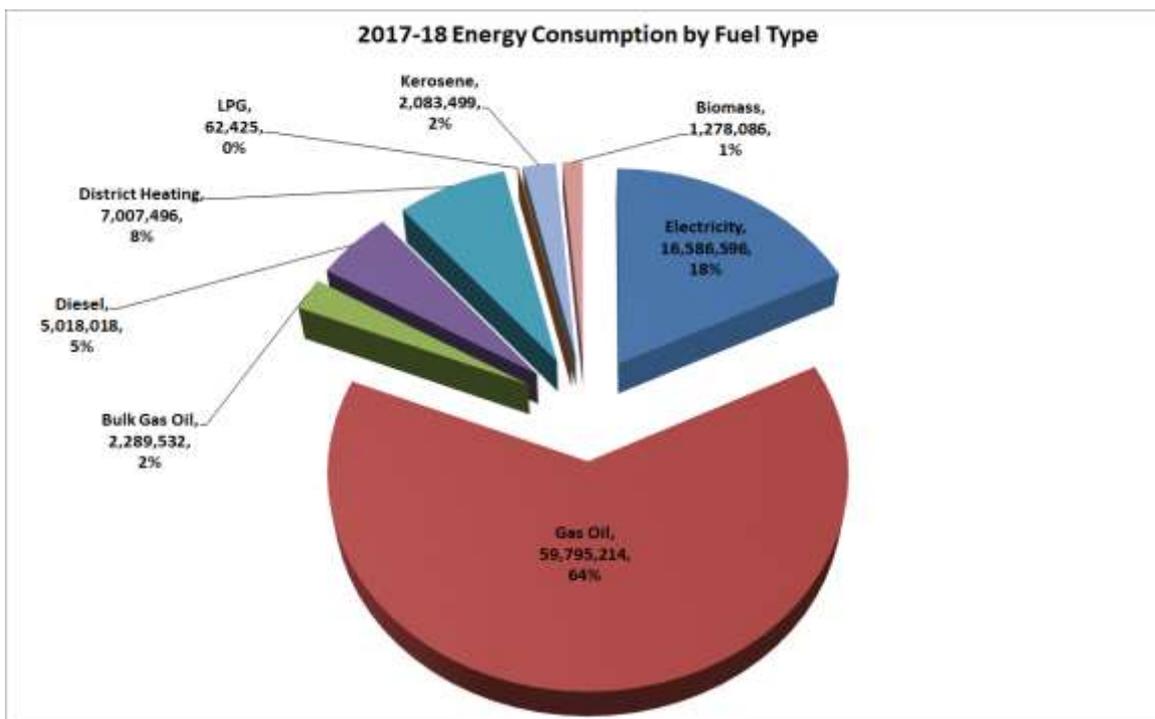
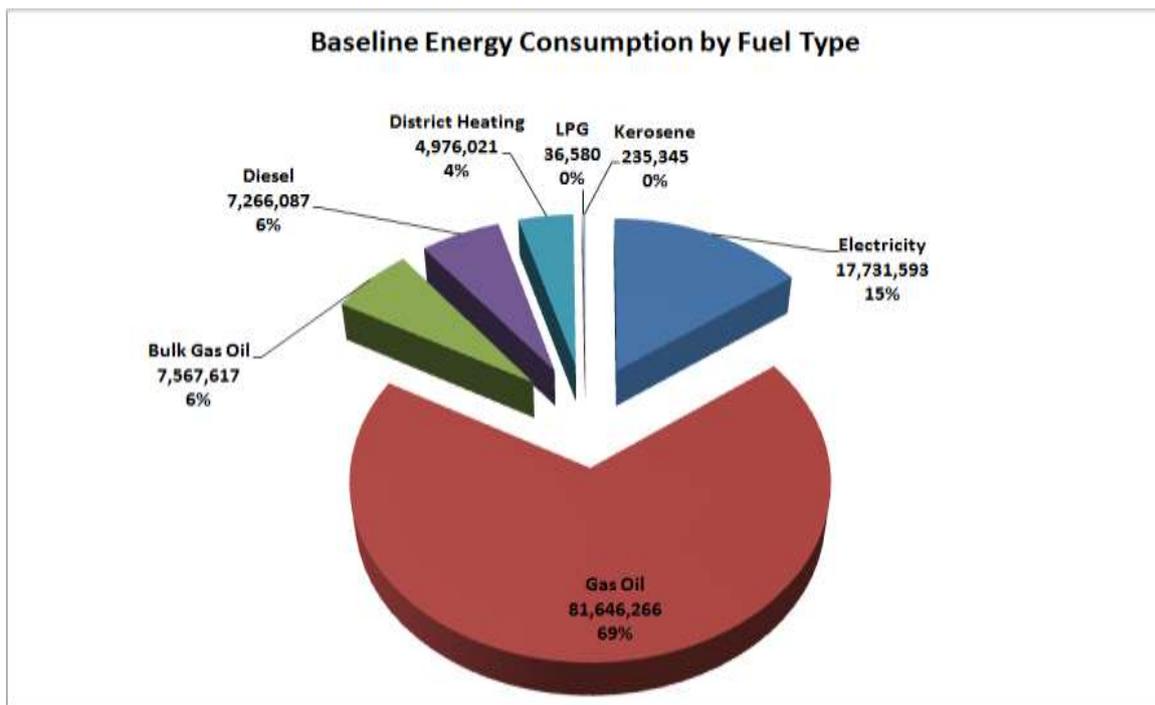


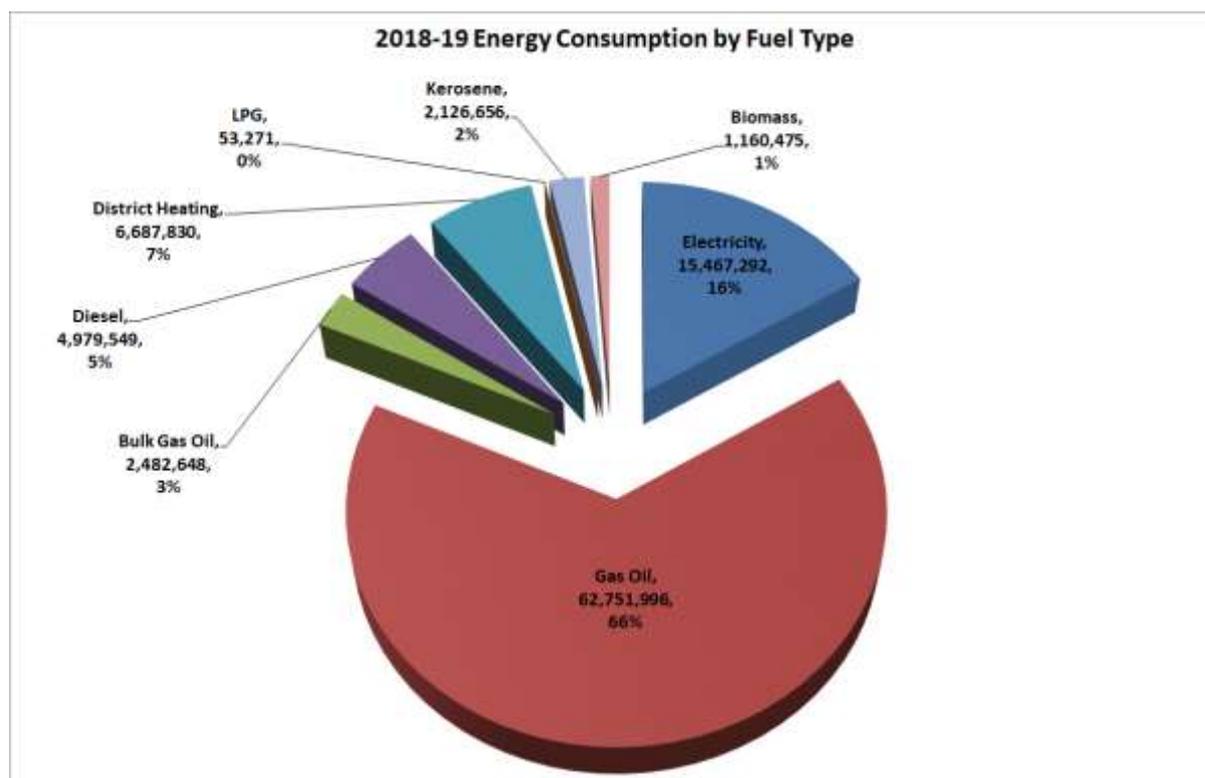


The following paragraphs outline the main usage in each area:

- 3.1 Infrastructure Ports** – this is the largest area of energy use (the majority of which is gas oil use on ferries). Other usage in this area includes piers/ferry terminals and navigation aids as well as the Sellaness site.
- 3.2 Social Work** – this is mainly energy consumption in care homes but also includes the Eric Gray Centre, Annsbrae, the Independent Living Centre and the smaller ILP offices.
- 3.3 Infrastructure Tugs** – covers both gas oil and electricity use (shore power) for the tugs.
- 3.4 Infrastructure Waste** – consists mainly of consumption at the Energy Recovery Plant but includes the Waste Handling Facility and Rova Head.
- 3.5 Asset** – this area covers mainly office buildings and also vacant or empty sites.
- 3.6 College** – this is purely consumption at the Shetland College
- 3.7 Community** – includes the Islesburgh complex, the pavilions and the St Sunniva Street store.
- 3.8 Education** – this covers all schools as well as the Library and the Bridges Project.
- 3.9 Infrastructure (Roads and Estate)** – this covers all bulk gas oil and diesel consumption (although fuel consumption is spread across a number of Services), street lighting, Scord Quarry as well as the various depots and workshops.
- 3.10 Other (GRG, GRH, HRH)** – this covers housing facilities, Laburnum and Windybrae and the nursery provision at King Harald Street

4. Baseline, 2017/18 and 2018/19 Fuel Type Breakdown





Reviewing the fuel types in turn:

4.1 Gas Oil

Baseline to 2017/18 - significant reduction through the following:

- Introduction of the tug shore power facility
- The sale of two of the tugs
- The reduction generally in buildings through efficiency programmes and conversions to alternative fuels
- Conversion of sheltered housing OPD blocks from centralised boiler plant to houses with individual heating systems
- Asset management.

2017/18 to 2018/19 – increase in consumption through the following:

- Ferry oil consumption
- Tug oil consumption
- To a lesser extent oil for heating.

4.2 Bulk Gas Oil

Baseline to 2017/18 - significant reduction through the following:

- The conversion of Scord boiler plant to kerosene
- General reduction in bulk oil use across the depots

2017/18 to 2018/19 – increase in consumption through the following:

- Scord, Mid Yell and Sellaness depots increase

4.3 Kerosene

Baseline to 2017/18 – increase in consumption through the following:

- The conversion of Scord boiler plant to kerosene
- Spot increases due to more productive years e.g. the high output period experienced in 2015/16 as a result of the construction work at Total.

2017/18 to 2018/19 – increase in consumption through the following:

- Increase in use at Scord Quarry
- Increased space heating use. Snagging issues with new boiler plant systems which have since been resolved

4.4 Diesel

Baseline to 2017/18 - use has steadily reduced over the period through the following:

- Reduced mileage and efficiency programmes
- The tracking system has led to further efficiency savings; and,
- The 6 new electric vehicles in use (1 vans and 5 cars) now in use.

2017/18 to 2018/19 – small decrease again through the continued impact of the above measures.

4.5 LPG

Baseline to 2017/18 - use has increased due to the gas boilers installed as part of refurbishment of the Shetland College catering facility.

2017/18 to 2018/19 – decrease in consumption through the following:

- Reduced use at the College

4.6 Biomass

Baseline to 2017/18 - increased use through:

- The operation of the Mid Yell scheme (supplying the school and leisure centre)
- The replacement of oil boilers at Sellaness; and
- The operation of the Scalloway scheme (supplying the school and leisure centre)

2017/18 to 2018/19 – increased use through:

- Slight decrease possibly due to milder weather.

4.7 District Heating

Baseline to 2017/18 - increased use through:

- Decentralisation of the AHS (displacing remaining oil consumption)
- Additional sites e.g. Support Services at Montfield
- Displacement of oil consumption with district heating e.g. Islesburgh House and the Old Library Centre

2017/18 to 2018/19 – decrease through the following:

- Currently both AHS sites are in use but old site to a lesser extent. The eventual demolition of part of the old site will see a significant drop in district heating consumption generally
- Increase at Bells Brae through displacement of storage heating in the ASN although this increase been relatively low through general improved efficiency of refurbished plant room
- Decreased space heating use due to warmer weather, see 4.7.

4.8 Electricity

Baseline to 2017/18 – reduction in consumption through the following:

- The reduction generally in buildings through efficiency programmes (lighting, heating etc)
- ICT server virtualisation project
- Renewable projects including small scale wind turbines and solar PV
- Asset management

- Street lighting upgrades to LED, the impact of this measure will increase through the ongoing street lighting upgrade

The rate of reduction has been impacted upon through:

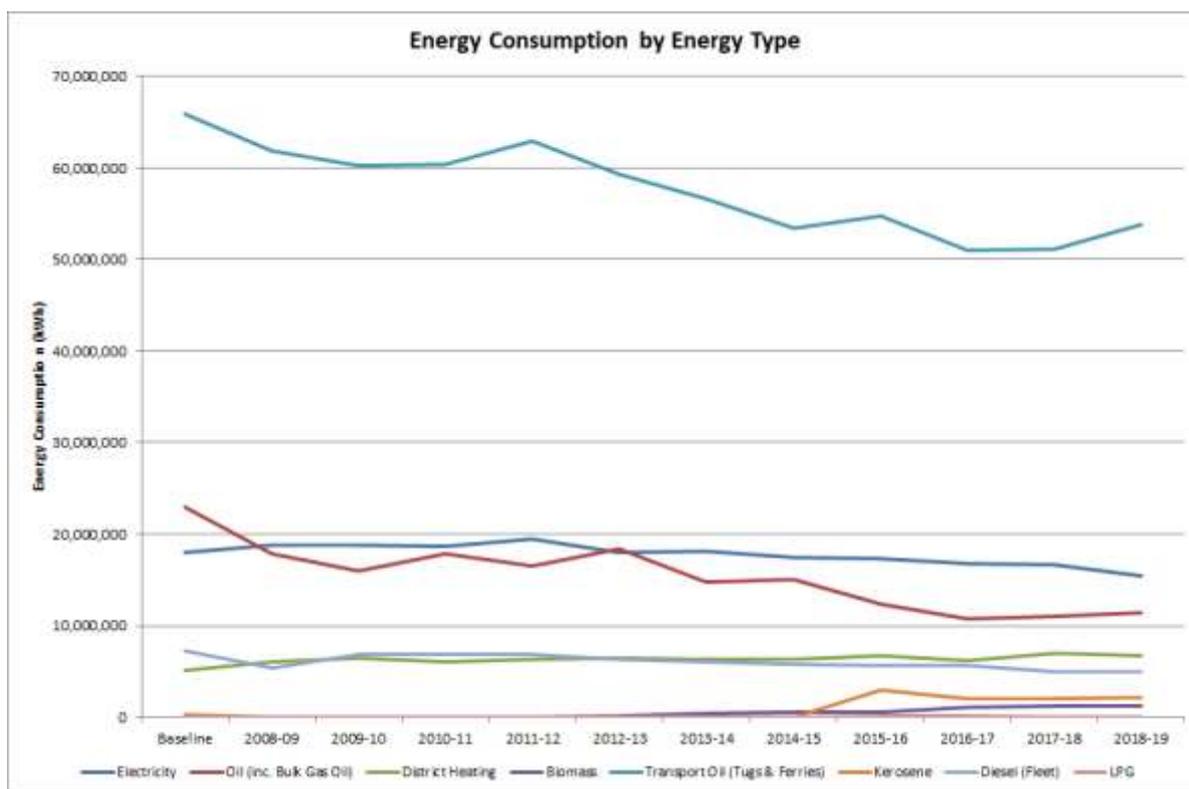
- The introduction of the shore power facility for the tugs (although this same facility achieved far higher reductions in oil use and this consumption has reduced significantly in this financial year)
- External usage e.g. shore power at Scalloway and also the old Rova Head site
- The extension at the College
- Other additional buildings e.g. Support Services at Montfield

2017/18 to 2018/19 – There has been a decrease in electricity consumption again through the following:

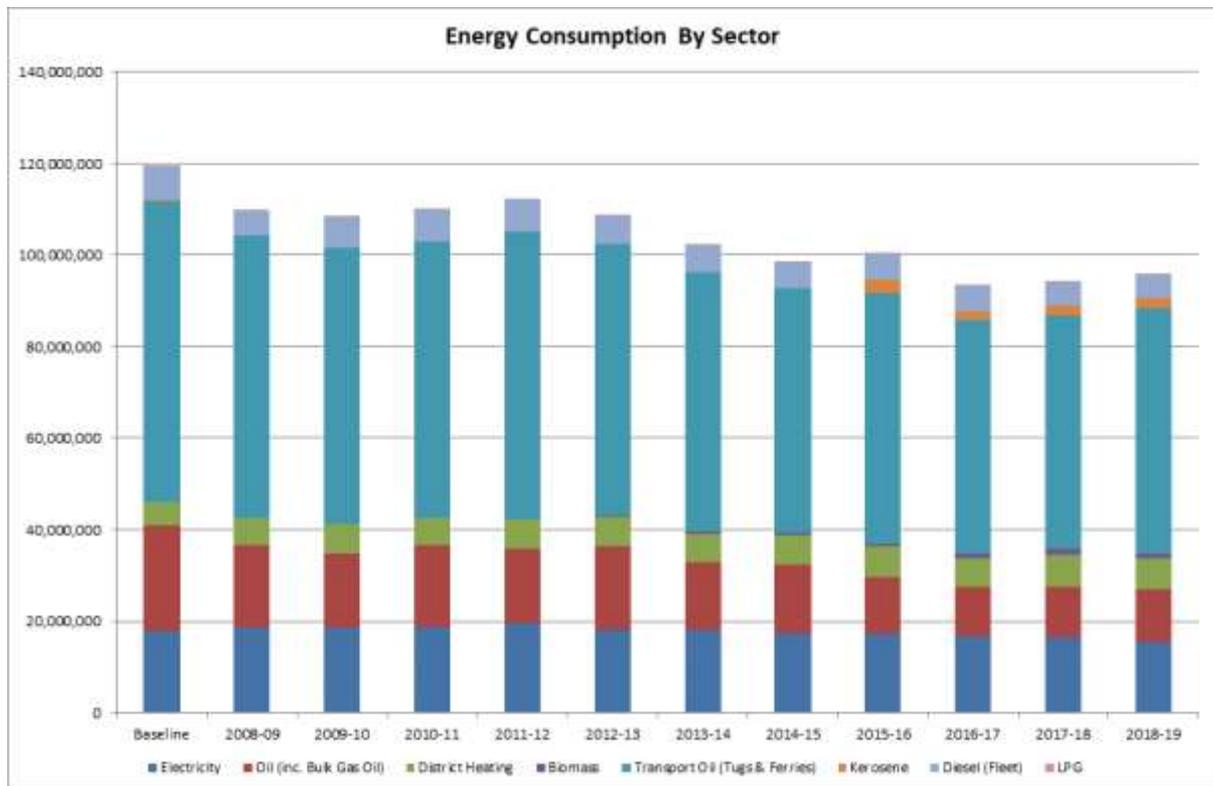
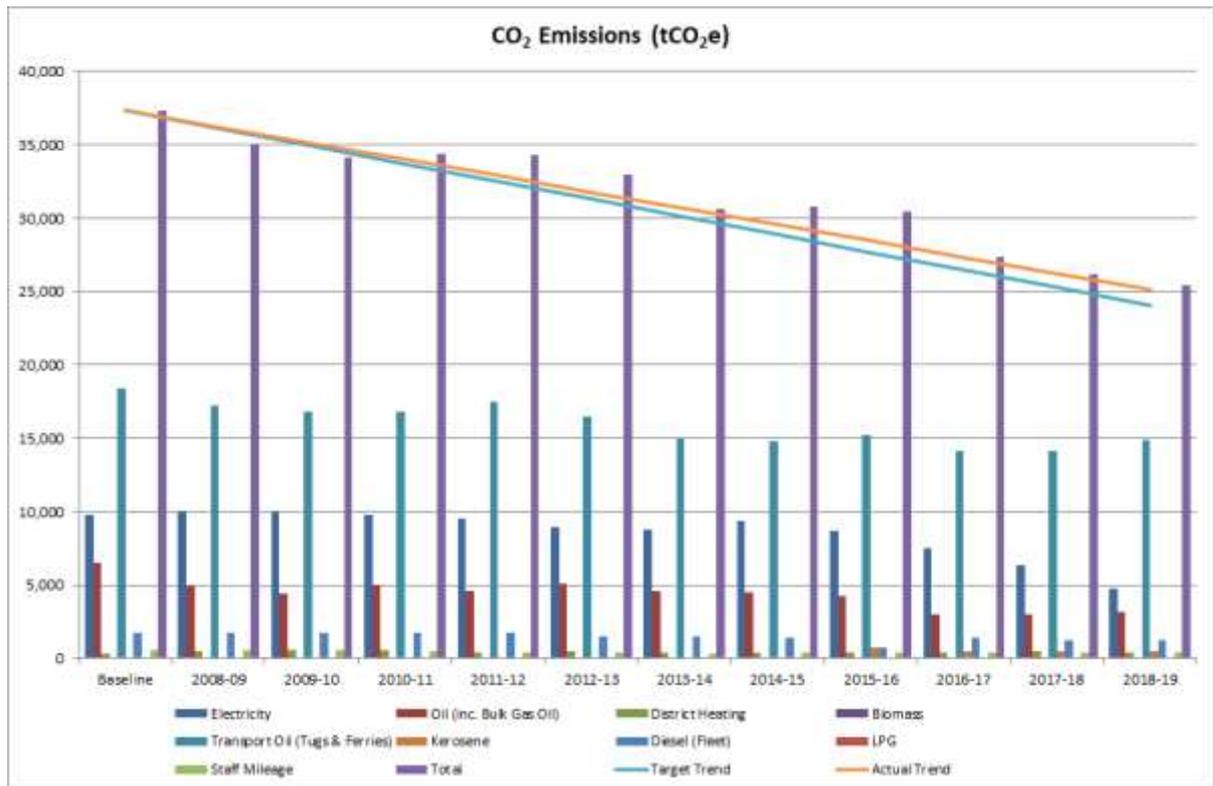
- The reduction generally in buildings through efficiency programmes (lighting, heating etc)
- Conversions to alternative fuels e.g. removal of Bells Brae storage heating
- Renewable projects including small scale wind turbines and solar PV
- Asset management although this has been impacted on by the continued use of the old AHS site

4.9 Temperature Data

From 2017/18 to 2018/19 any reductions in space heating use can be partly attributed to the warmer year in 2018/19 (measured in degree days).



5 Emissions Breakdown by Year



There has been a significant reduction in the UK average emissions factor for electricity which is the reason that although consumption has risen slightly emissions from electricity consumption has dropped impacting significantly on emissions overall.

Referring to the consumption trends graph in section 2 please note that for **emissions** the reduction from the baseline to the 2018/19 is closer to 32% compared with an **energy** consumption reduction of approximately 20% and this difference is due to the emissions factor noted above, cleaner fuels generally (relative to previous years) and the use of alternative fuels.

PROGRAMME INITIATION DOCUMENT (PID)

Climate Change – Developing Shetland’s Response

Date: 13 January 2020

PRINCE2

Author: John Smith

Owner: Shetland Islands Council

Document Ref:

Version No: V0.1

1 Programme Initiation Document History

1.2 Revision History

Date of this revision: 13 January 2020

Date of next revision:

Revision date	Previous revision date	Summary of Changes	Changes marked
25 November 2019		First issue	
13 January 2020		SIC 22 nd January	

1.3 Approvals

This document requires the following approvals.

Signed approval forms should be filed appropriately in the project filing system.

Name	Signature	Title	Date of Issue	Version

1.4 Distribution

This document has been distributed to:

Name	Title	Date of Issue	Version

2 Programme Definition

Background

The Climate Change Programme is intended to provide an overview of the strategy, governance arrangements, target development and action planning required to address the internationally

recognised issues and responses required to adapt to, and mitigate, climate change in Shetland and contribute to an effective Scotland, UK and international response.

It will help inform the identification of issues and options and assist in evidence based planning and decision making so that environmental, economic and social needs are recognised, balanced and met efficiently, effectively and economically to support key outcomes for Shetland and its residents.

Project Objectives

- To drive actions which support our response to Climate Change as Shetland Islands Council.
- To enable and facilitate Climate Change actions within individual organisations, businesses and community groups in Shetland.
- To inform the ongoing development of policy and planning in relation to Climate Change, across the Partnership in Shetland, and within Shetland Islands Council.

Desired Outcomes

1. A responsive and structured planning framework for adaption to, and mitigation of, Climate Change in Shetland across all sectors, principally:
 - Energy supply
 - Transport (including aviation and shipping)
 - Business and industrial process
 - Residential and public buildings
 - Waste Management
 - Land use, land use change and forestry
 - Agriculture
2. A wide understanding and awareness, inside organisations and across the whole of Shetland, about the issues and opportunities which Climate Change presents.
3. A framework of collaboration, support and communication which enables:
 - sustainable solutions to Climate Change to be developed, implemented and shared across Shetland;
 - agreed Climate Change targets to be met.
4. For Shetland Islands Council, appropriate and robust support processes in place across:
 - administrative schemes
 - financial regulations
 - procurement and commissioning regulations
 - asset investment strategies
 - service planning

- HR policies
- ICT policies

Project Scope and Exclusions

This programme has two associated but overlapping scopes:

- adaptations and mitigations of greenhouse gas emissions from Shetland Islands Council's estate and operations, and activities;
- adaptations and mitigations for the whole of Shetland, our Local Authority area and Regional Transport Partnership area.

At this stage it is not fully established what precise duties or obligations in terms of planning, target setting or delivery will be the formal duty of the Council. These are the subject of the current consultation on "The role of Public Sector Bodies in Tackling Climate Change".

However it is likely to be quite "direct" in respect of the first scope and we will be expected to at least "lead and influence" with respect to the second.

It is also inevitable that achievement in the narrow scope will be heavily determined by progress on the wider front, therefore the overall programme will be being designed to address both.

Constraints and Assumptions

Competing priorities, available technology, financial and human resources, commercial developments, legal obligations and limitations are all likely to be significant constraints across this Programme.

Understanding the relationships between potential adaption and mitigation actions and the constraints and dependencies which will affect them will be a very important part of the development of sectoral plans.

It will be crucial to understand how the sequence of activity can be best progressed in light of some very fundamental constraints around alternative energy sources and very material dependencies around the development of alternatives such as an interconnector or a substantive hydrogen infrastructure.

The information which emerges from these sectoral plans will then allow a better identification of the critical paths that will have to be followed to reach solutions that work for Climate Change, and work for and in Shetland. Perhaps the most critical component of this overarching programme will be the identification and management of these dependencies and constraints.

At this time the most significant constraint and dependency is how and when an alternative electricity grid supply solution is going to be implemented.

Resolution of the uncertainty around that would then allow a wide range of other activity to plan with some confidence and address the wide range of very important but dependent matters.

3 Project Approach

The project will be guided by HM Treasury's Green Book and the Prince2 method to achieve best practice in its outcomes.

The Climate Change Strategic Outline Programme recommends that the Chief Executive, supported by the Corporate Management team should function as the Council's "Climate Change Programme Board". This Programme Board should liaise regularly with Council Leader supported by Committee Chairs and the Policy and Resources Committee to provide programme governance and report plans and progress regularly to Council.

The Programme Management function and Programme Board composition will take account of duties and governance requirements of partner organisations where necessary and ensure these are accommodated in the overall governance approach.

Prince2 methodology will be adopted in the management of individual projects.

4 Business Case

The Council is the Local Authority for Shetland and has a duty as a public body to reduce greenhouse gas emissions and support Scotland's adaptation to a changing climate. Scottish Ministers, in turn, are legally required to provide guidance to Public Sector Bodies to help them with this.

Public Sector Bodies, including the Council, are also legally required to report annually on their greenhouse gas emissions and what they are doing to help adapt to a changing climate.

The Scottish Ministers must ensure that the net Scottish emissions account for the year—

- (a) 2020 is at least 56% lower than the 1990 baseline,
- (b) 2030 is at least 75% lower than the baseline, and
- (c) 2040 is at least 90% lower than the baseline.
- (d) 2045 is net zero

It is understood that all sectors, as listed above, are expected to meet these targets. The 2045 scenario for net-zero has all sectors at zero, or virtually zero, emissions except for agriculture, some parts of industry, and international aviation.

It is accepted by the Scottish Government that a lot of what individual Public Sector Bodies will be able to achieve in terms of reducing their emissions will be dependent on what progress is made in the rest of society.

Within six months of the Climate Change (Emissions Reduction Targets) (Scotland) Bill receiving Royal Assent the Government will update the Climate Change Plan, setting out the pathway to decarbonisation for Scotland as a whole.

We also expect that further clarity will emerge on a similar time frame about other obligations and duties in particular sectors, such as road vehicles, shipping and aviation, which inform around other targets or regulations.

Following the update to the Climate Change Plan, the Scottish Government proposes that in their future annual reports, all Public Sector Bodies will report the date by which they intend to achieve zero direct emissions – those are the emissions that the bodies are directly responsible for.

Local Authorities may not be required to “ensure” that targets for their overall geographical area are met, but it is anticipated they will be expected to lead the process of setting these targets, influence their delivery and play a significant role in annually reporting progress.

5 Programme Management Team Structure and Roles

	Role	Appointee
Board	Chair, SRO/Executive	Maggie Sandison, Chief Executive
	Programme Assurance	John Smith, Director of Infrastructure Services
	Board Members	Corporate Management Team
Team	Programme Manager – Climate Change	Audrey Edwards, Executive Manager, Change Programme
	Programme Manager – Shetland Energy Hub and Community Energy Networks	Douglas Irvine, Executive Advisor, Energy Networks
	Products Advice	Colin Bragg, Team Leader, Waste Management
	Products Advice	Mary Lisk, Team Leader, Energy Efficiency and Carbon Management
	Products Advice	Jim Macleod, Assets, Commissioning and Procurement
	Other Team Members	TBA

7 Quality Management Strategy

The Chief Executive and Director of Infrastructure, in consultation with all Corporate Assurers, have responsibility for the quality of the work undertaken in the programme.

The quality assurance of workstreams and products will be subject to the developing legislative framework, targets and tools produced by the Scottish and UK Governments.

Products will follow the principles of HM Treasury’s Green Book and the Prince2 project method. Reports and other documents prepared for the Council and Shetland Partnership will be subject Board approval, and existing quality assurance processes.

8 Configuration Management Strategy

All programme documents will be recorded electronically, A Sharepoint area will be created for the Programme.

The Programme Board must authorise any fundamental changes to the Programme Initiation Document. Other minor changes will be documented in the Programme Board Minutes.

The in-house Project Team members will be responsible for the Issues and Activity Logs and maintaining the Risk Register.

9. Risk Management Strategy

It also important to identify the key risks that might stop this programme from achieving its objectives. These are likely to include risks associated with uncertain technical factors, the scale of resources which will have to be applied or redirected, legislative, regulatory and fiscal obstacles in developing locally appropriate solutions, the complexity and interdependency of actions, and political disagreements on the right way forward.

General Risks	Description	Mitigating Actions
Operational and Performance	Increase in the cost of providing services and reduction in the volumes of service provided	Early planning for introduction of Climate Change measures across all services
Technology	Implementing sub-optimal technical solutions that are overtaken by transformational changes	Understanding the work being done in climate change technology and making a commitment to be an early adopter of proven technology
Funding	Constrained funding leads to delay/reduction in scope of Climate Change measures	A planned programme of professionally scoped measures combined with full knowledge of external funding to augment Council budgets
Legal and Fiscal	Law changes mean that certain sources of energy become illegal or are subject to high taxation eg. diesel	Need to be sighted on the legal and fiscal developments combined with an early understanding of what changes are likely
Policy	Government policy targets for reducing carbon emissions towards zero are accelerated in response to heightened public opinion	Adoption of a full-scale approach for bringing in practical Climate Change measures as soon as resources permit
Specific Risks		

Ignorance	Lack of knowledge on the Council's use of energy, how energy efficient operations are, funding opportunities and global best practice in Climate Change measures	Coordinate staff and resources to provide the best up to date information possible so that project planning can be done based on a sound basis
Geographical	Dependence on mains electricity from diesel generated source with only localised project based alternatives available	Make representation to UK and Scottish Governments, Ofgem, SSE etc to stress that Shetland cannot meet Climate Change targets without a base renewable energy supply. We should also plan to be as energy self-sufficient as practicable.
Political	Shetland is at the end of the line as governments roll out Climate Change solutions from the main population centres	Making representation to Governments combined with identifying all the practical Climate Change measures that can be achieved internally
Population Loss	Shetland becomes a less attractive place to live and work as energy costs rise faster than in the rest of the UK. Demand for Council services fall and staff are more difficult to recruit	As above
Complacency	Not responding adequately and early to the challenges posed by Climate Change leads to severe future pressure to introduce rapid measures with very high costs	The Council needs to understand the scale of the task ahead and to plan measures early and well to avoid future operational and financial difficulties
Fuel Poverty	Increased energy costs causes fuel poverty levels to rise with a greater demand on support services	Impacts on the less well-off members of the community need to be built into all Climate Change measures
Public Opinion	A perceived inadequate Council response to the Climate Change issue results in negative public publicity and undermines the Council's role as a Community leader on the subject	Adopting the Climate Change Strategic Outline Programme and progressing with early achievable outcomes
Option Confusion	Finding the more practical solutions is made difficult by many different external and in-house approaches pushing particular interest focused options. Thus leading to delayed	The Council has to be guided by established methods for option appraisal based on sound baseline information on energy use, emissions and Climate Change measures

	decision taking.	
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A detailed risk register will be prepared for each project arising from this programme, and this will be subject to scrutiny and revision by the overall Programme Board.

10 Communication Management Strategy

A detailed Communications Strategy will be written for the Programme, and assured by the Programme Board. This task is included in the Programme Plan.

This Programme reaches all parts of our community. Key stakeholders are:

- all people who live in Shetland, including any specific interest groups (eg Eco Youth)
- Shetland Islands Council members
- Shetland Islands Council staff
- Other partners who provide services to the Council
- Shetland Islands Council elected members
- All Shetland Community Planning Partners
- The Scottish Government, and all Scottish Government agencies which support carbon reduction and Climate Change
- The UK Government
- SSE
- OFGEM

11 Outline Programme Plan

Actions for Shetland Islands Council as Service Provider (our Estate & Services)

No.	Heading	What needs to be done	Who by	By when
1	Policy and Service Planning	Review all headline strategies, policies, Shetland Development Plan, service plans, capital programme and other projects to integrate systematic alignment with Climate Change measures	Led by CMT and P&R Committee	ASAP to start, backstop of March 2021 for revisit to all key strategies.
2	Carbon Management Plan	Revise and update the Council's Carbon Management Plan 2015-2020 to extend to 2030 including definition of Shetland reduction targets.	Carbon Management Team	31 December 2020

3	Existing Carbon Management and Reduction measures	Intensify actions in existing carbon measures such as the carbon reduction strategy for the Council's built estate and vehicles and waste minimisation and recycling	Director of Infrastructure Services	With immediate effect
4	Priority - Service Action Areas	Progress carbon reduction plans for Service areas where significant future carbon reduction could be achieved eg Ferries, Port of Sullom Voe, and Buses	Service Project managers / Service Managers in consultation with CC Project Manager	ASAP to start
5	Electricity from renewable mains supply	Work with SSE, OFGEM, UK and Scottish Governments to secure the renewable energy sourced mains electricity necessary to replace the diesel fuelled Lerwick and gas and diesel fuelled SVT power stations	Chief Executive, Directors of Development & Infrastructure	By end 2020 for planning, by 2025 for implementation
6	Understanding advances in technology to reduce carbon and identify best practice	Fully co-ordinate renewable energy and carbon reduction information gathering and dissemination, using dedicated staff	CC Project Manager in consultation with project team	31 March 2020
7	Make full use of external funding	Engage dedicated staff to identify all sources of external support and funding for carbon reduction projects and ensure systematic communication of these to all service areas	CC Project Manager with support from Finance & Project Team	Ongoing and built into all plans
8	Measuring Progress Systematically	The Council's Carbon Management Plan will include progress on all Council Climate Change Actions	Director of Infrastructure Services	With Immediate Effect
9	Peatland Restoration	Work with agricultural tenants and SNH and other partners to identify areas of damaged peatland on the Council's agricultural estates suitable for restoration projects (may include some woodland development), including the identification of funding opportunities and cost / benefit analysis.	CC Project Manager supported by Development Services & Assets, Commissioning and Procurement	31 March 2020 for initiation

10	Emerging Ideas	Set up a cross-service in-house group to review and evaluate best practice from other places and emerging ideas that have been submitted from staff and the public with a view towards application in the Council's operations.	CMT	Established by 31 March 2020
11	Energy Efficiency Service Projects	Identify the most likely projects for advancing based on proven technology, funding availability and carbon reduction potential.	CMT	30 September 2020
12	Industry / Sectoral Projects	Engagement with business (perhaps key sectors) to identify proposals to provide or access renewable energy and/or reduce carbon emissions.	Development Services (Planning and Economic Development)	Initiated by March 2020 then as these projects emerge

Actions for Shetland Islands Council as Community Leader, Facilitator and Enabler

No.	Heading	What needs to be done	Who by	By When
1	Political	Work with Government and Government Agencies to ensure that climate change transition measures recognise Shetlands circumstances, are applied equitably and do not leave Shetland as a stranded community. May include the preparation of a "Just Transition Plan" for Shetland.	Council Leader and Council leadership group, CMT and officer support.	Initiated by 31 st March 2020, "Just Transition Plan" drafted by end of 2020.
2	Community Planning	Work with Community Planning partners to align the Shetland Partnership Plan and The Shetland Partnership Delivery Plan with national and local net zero carbon emission policy and actions.	Community Development working with all Community Planning Partners	31 December 2020
3	Shetland Renewable Energy Forum (SREF)	Act with the renewable industry in Shetland to reform SREF to help guide future renewable energy policies, communication and developments	Development Services, Infrastructure Services	31 March 2020

4	Shetland Energy Source Analysis	Commission an updated study of all energy sources in Shetland's & CO2 impacts to provide baseline information for developing carbon reduction measures	Development Services	Commission by 30 November 2019, complete by 31 June 2020.
5	Energy Efficiency Grants – domestic and commercial	Seek continuing external funding to help promote and install energy efficiency measures in Shetland households and businesses.	Carbon Management Team	Ongoing as funding opportunities arise
6	Community Projects	Support 10 energy efficiency and renewable energy projects in the community every year – Align projects with emerging “Community Energy Networks”.	Carbon Management Team, Development Services	Per year
7	Larger Scale Opportunities	Engagement with potential larger scale development projects at an early stage including “Shetland Energy Hub”, Shetland Electricity Grid Strengthening, Infrastructure for distribution of new energy sources, e.g. hydrogen or LNG, dissemination of lessons learned from Council actions to industry, e.g. boats and heavy plant.	Directors of Development and Infrastructure Services	In progress
8	Communications Strategy	Prepare and keep update a relevant Communications Strategy for the Programme	Project Manager	As required

12 Project Controls

A Programme Board will be established for Climate Change. In addition, regular updates/feedback reports will be provided to Shetland Planning Partnership Management and Leadership Team and Shetland Islands Council.

The estimated Council contribution to the cost of the project is £250,000 over three years broken down as follows:

Recruited staff - two project officer / graduate placement / project support appointments for focused research and project support as a substantive contribution to a multi-agency, public sector / private sector / academic research team collaboration – This will be funded through applications to the Change Fund, estimated at approximately £108,000, each, over three years, resourced through the Harbour Account.

In-house seconded staff – consideration will be given to the appointment of a full-time project manager with appropriate skills and experience to manage the project internally, engage at a strategic level with key partners, interface with aligned internal project teams, facilitate the generation of external funding and monitor and report on progress towards objectives, plans for future actions, risk management and the identification and resolution of issues. This will be investigated with CMT supported by HR with costs to be ascertained depending on the details of secondment arrangements.

Other costs to support information gathering, networking and partner engagement, any specialist technical advice and any additional recharges will be resourced through appropriate Infrastructure Services budgets or through applications by individual project areas for Spend to Save or Change Fund.

The core objectives and outcomes from this project are aligned with the Council's General Fund and its requirement to support the sustainable delivery of services to the public of Shetland. The financial implications of this project will therefore be managed within those arrangements.

It is also anticipated that the Programme will attract significant partnership contributions from agency, commercial and academic partners. This would be intended to leverage substantial additional activity focused on energy transition and energy integration in Shetland to meet our economic and social objectives.

At this stage it is uncertain what level these additional contributions will achieve, however an initial target would be for at least a double in external funding to that contributed by the Council.

Lerwick Town Hall
Hillhead
Lerwick
ZE1 0HB



Shetland Climate Action
15 Quoys Road
Lerwick
ZE1 0WH

3 October 2019

Dear Chief Executive Maggie Sandison,

Please find enclosed our petition calling on Shetland Islands Council to declare a climate emergency. The petition has been signed by 276 people and we trust this demonstrates that the climate crisis is of crucial and urgent importance to islanders.

Last month, Holyrood committed to reducing carbon emissions by 75% by 2030, and to net zero by 2045. Do you feel Shetland is doing enough to achieve this? Declaring a climate emergency would leave the people in Shetland with no doubt as to the SIC and councillors' commitment to meet these targets. In doing so, the council can enable residents - individuals, businesses, organisations - to effectively play their part and do the same.

Over 200 members of the community gathered at the Market Cross on Friday 20 September, joining 4 million others across the globe in demanding action on the climate crisis. We invited participants to share their reasons for joining the event and we have enclosed a selection with this letter.

We trust the petition will soon be debated by the council. In the meantime, we would welcome the opportunity to speak with you individually, or as a group, to express our concerns and hopes. Please do let us know if this is of interest.

Yours sincerely,

Shetland Climate Action
shetlandclimateaction@outlook.com

cc: All Elected SIC Members

The Petition

The climate is changing and we're already seeing the impacts of rising temperatures on the natural world. Scientists say we have only got a few years to turn this global climate crisis around. We need to **ACT NOW**.

We want Shetland Islands Council (SIC) to **Declare a Climate Emergency**. By Declaring a Climate Emergency, SIC can give us the effective leadership that we need to play our part in stabilising our climate. To date, 228 UK councils have declared a climate emergency and it's time for SIC to step up to the mark leaving no doubt of their focus on and commitment to rising to this challenge.

In February 2016, global temperatures spiked to well over **1.35°C above pre-Industrial times**, just weeks after, the Paris Climate Agreement set an aim of not exceeding 1.5°C. Climate scientists say that we are facing a climate emergency, and that the future of ecosystems and human civilisation hangs in the balance.

We all need to take responsibility for the climate crisis and our individual choices do matter. However, part of our individual carbon footprint is influenced by higher decisions. Councils, corporations and governments must **Declare a Climate Emergency** and start to take responsibility and action. The changes are too vast for individuals to make alone - we must all work together. Declaring a Climate Emergency is a vital step in building support for the very large changes required to restore a safe climate.

We recognise the carbon reductions that the Council has made in recent years through its Carbon Management Plan. However, much more needs to be done, very quickly, and we cannot expect a sufficiently ambitious plan to be adopted by all levels of the council until this is acknowledged as an emergency.

We're calling on our elected representatives at SIC to **Declare a Climate Emergency** with the following outcomes -

- To **recognise** that we are in a state of climate emergency, and that we need to restore a safe climate to avoid further climate degradation.
- To **develop** a Climate Emergency Action Plan.
- To set up a **working group** to report within a short timescale on immediate and longer term actions as part of a Climate Emergency Action Plan.
- To set local emission reduction **targets** to achieve zero net emissions / carbon neutral by 2030. Projects should increasingly prioritise the greatest emission reduction rather than relying on offsetting.

- To **integrate** climate mitigation across all departments and into local plans, including a mandatory section in reports on how activities may affect carbon targets.
- To **engage with the public** about the state of the emergency and inspire collaborative community action projects, such as community waste and food projects.

change.org

Shetland Climate Action

Recipient: Shetland Islands Council

Letter: Greetings,

I want Shetland Islands Council to declare a climate emergency

Shetland Islands Council

Key Carbon Reduction Actions

January 2020

Shetland Island Council - Proposed Approach

Described in more detail in the “Climate Change - Strategic Programme” reporting January 2020.

That programme recommends the Council;

- Adopts a “proactive” approach to Climate Change mitigation and adaptation in Shetland.
- Proposes a range of immediate actions and priority areas
- Emphasises that it is essential to act in partnership with other agencies, business and communities to be successful.

See Climate Change - SOP section 4.2 & draft PID

Key Action - Energy Efficiency & Community Recycling

- Accelerate current energy efficiency, energy conversion, waste reduction and reuse initiatives, within the Council and across the community.
 - Timing - this is a core long term foundation for Council and community behavioural change and needs to be progressed from now, through 20+ years.
 - Actions / Outcomes -
 - Support “Climate Change Conversations” across the community
 - Act to double the pace of domestic energy efficiency upgrades
 - Promote commercial energy efficiency actions, particularly for SME companies.
 - Ensure all Council new builds / refurbishes prioritise zero carbon
 - Accelerate roll-out of electric vehicle charging points.
 - Increase Electric / Pilot hydrogen vehicles in the Council fleet
 - Intensify community recycling and reuse initiatives.
 - Prepare and implement a Green ports and harbours plan

Key Action - Energy Efficiency & Community Recycling

- Accelerate current energy efficiency, energy conversion, waste reduction and reuse initiatives, within the Council and across the community.
 - Potential Council contributions;
 - Facilitative community engagement on climate change
 - Maximise carbon impact from spend of existing Council replacement and renewal budgets
 - Provide support to access external funding
 - Potential pilot or trial project investments through Change Fund
 - Options to further extend / target / accelerate efficiency actions through individual business cases

Key Action - Green Internal Ferries and/or Fixed Links

- Internal ferries are 50% of the Councils carbon emissions;
 - Timing - Conclude the funding and implementation plan for “Fair Ferry Funding” with the Scottish Government, including a delivery programme across the next 2 - 7 years, ensuring fixed links are also properly considered as alternatives.
 - Outcomes / Actions;
 - Renew all internal ferries with zero-carbon vessels, or zero-carbon capable within 10 years.
 - And / or replace internal ferry routes with fixed links.
 - Provide renewable power sources for vessels at all ferry terminals.
 - Provide renewable power sources for vehicles at all ferry terminals.

Key Action - Green Internal Ferries and/or Fixed Links

- Internal ferries are 50% of the Councils Carbon emissions
 - Potential Council contributions;
 - Secure Fair Ferry Funding agreement
 - Conclude and implement the internal ferry renewal programme
 - Pilot project support including research into practical alternative fuels
 - Research support to translate marine lessons learned / support of linkages across to commercial marine sectors
 - Conduct fixed link research and progress options for future funding through national infrastructure planning

Key Action - Strong / Smart / Green / Affordable Electricity Grid

- Support the design and delivery of a strong, smart, green internal electricity distribution grid; one which reaches across all of Shetland, and enables further public, community and commercial “greening”.
 - Timing - Reliable green electricity would appear to be a fundamental prerequisite for most transition opportunities. Target for replacement of Lerwick Power station is 2025. Planning local grid strengthening needs to be before that; grid build out would also ideally be before then too, but most likely after.
 - Actions / Outcomes;
 - Contribute to the defining the requirements and design for a strong, reliable, smart, green and affordable electricity grid across the whole of Shetland that can integrate with community generation and use.
 - Integrate community scale projects into the Shetland Energy Hub project to emphasise Shetland based solutions
 - Support research and learning from other areas that are advancing green energy through “smartening” constrained electricity grid situations

Key Action - Strong / Smart / Green / Affordable Electricity Grid

- Support the design and delivery of a strong, smart, green internal electricity distribution grid; one which reaches across all of Shetland, and enables further public, community and commercial “greening”.
 - Potential Council contributions;
 - Campaigning and facilitation
 - Support for research
 - Input to ensure the new local grid is designed to meet Shetlands needs
 - Support pilot project work / linkages across to commercial sectors
 - Alignment of Council transition planning and implementation with new grid capacity and smart capabilities.

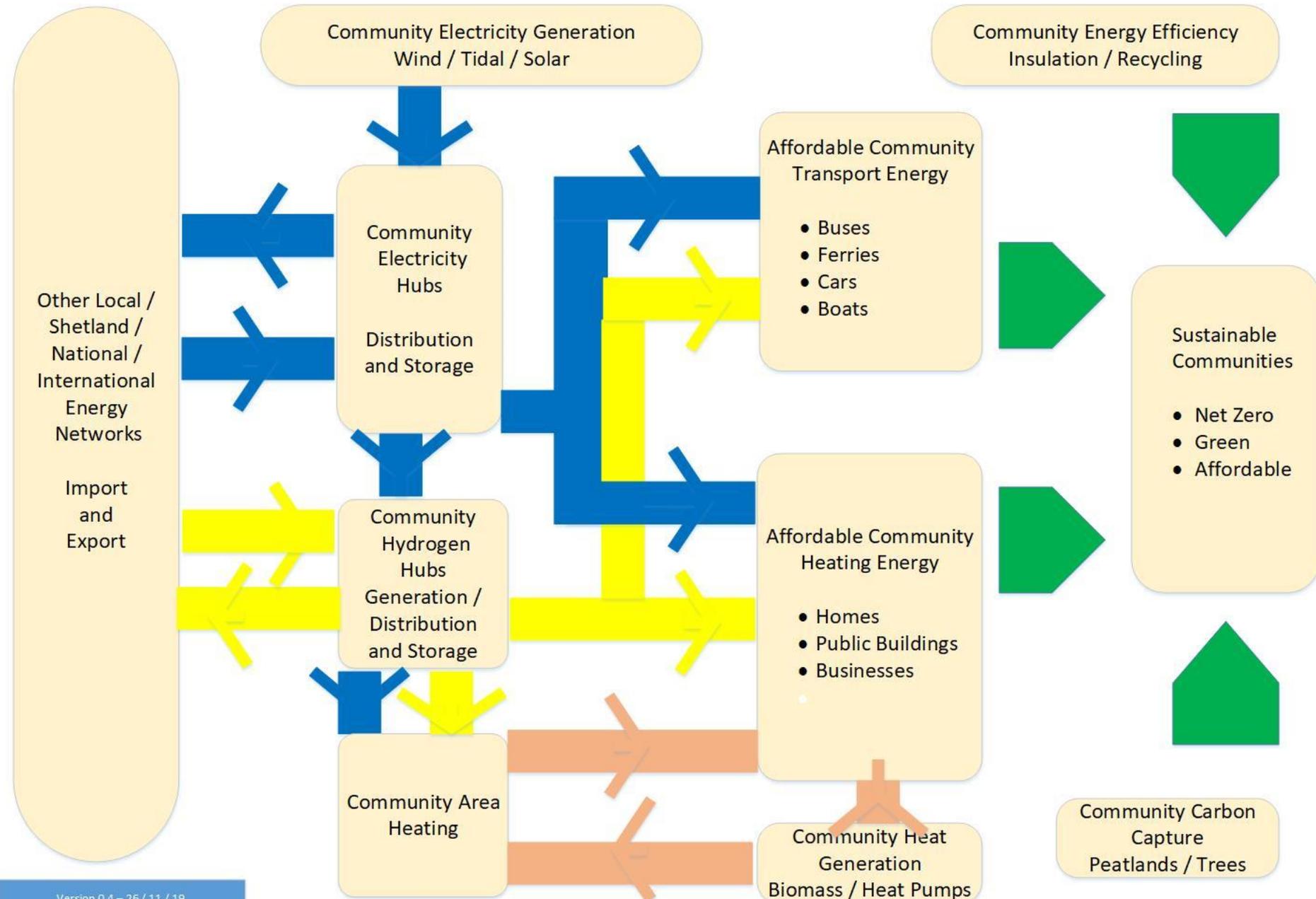
Key Action - Facilitate Community Energy Networks

- Facilitate the emergence of Community Energy Networks across Shetland. Ensure these networks can interlink with a green and strengthened Shetland Electricity Grid and complement / enable local energy efficiency, recycling and carbon capture initiatives.
 - Timing - Understanding opportunities, issues and limitations with communities over the next 5 years through the research, development and deployment of community pilots.
 - Actions / Outcomes;
 - A range of community energy networks that tap into community energy generation opportunities
 - Community involvement in delivery to contribute to reliable and affordable green energy across the whole of Shetland.
 - Achieve five community generation projects by 2025
 - Achieve a further five by 2030.

Key Action - Facilitate Community Energy Networks

- Facilitate the emergence of Community Energy Networks across Shetland. Ensure these networks can interlink with a green and strengthened Shetland Electricity Grid and complement / enable local energy efficiency, recycling and carbon capture initiatives.
 - Potential Council contributions;
 - Support for research on potential and opportunities
 - Support to secure external funding for local initiatives
 - Some pump-priming e.g. new technology trials or possible participation in community carbon capture (peatland restoration) or similar community initiatives
 - Community engagement and facilitation support
 - Support to identify community arrangements that facilitate community involvement and benefit from Local Energy networks
 - Support research and learning from other areas that are advancing green energy in constrained geographies

Shetland Climate Change – Community Energy Networks



Key Action - Support Transition in Key Commercial Sectors

- Support partners to plan and deliver energy reduction / transition in the key commercial sectors which are the big Shetland carbon emitters / energy users. They must identify solutions to remain competitive and become compliant with emissions targets.
 - Timing - The challenges are substantial and actions are likely to need to be sustained over an extended time period.
 - Actions / Outcomes;
 - Support the development of sectoral plans that address the particular needs of;
 - Fisheries
 - Aquaculture
 - Agriculture
 - Commercial Transport
 - Aviation
 - Oil & Gas

Key Action - Support Transition in Key Commercial Sectors

- Support partners to plan and deliver energy reduction / transition in key commercial sectors.
 - Potential Council contributions;
 - Mainly facilitation and assistance in co-ordination
 - Possible “Island Proofing” lobbying and campaigning
 - Research support
 - Pilot project support
 - Linkages from any similar Council activity across to commercial initiatives
 - Assistance in learning lessons from communities with similar industry sector and geographical challenges

“Just Transition”

The Scottish Government have emphasised that the transition away from dependence on hydrocarbons should follow “Just Transition” principles, which they summarise as;

- plan, invest and implement a transition to environmentally and socially sustainable jobs, sectors and economies, building on Scotland’s economic and workforce strengths and potential
- create opportunities to develop resource efficient and sustainable economic approaches, which help address inequality and poverty (including fuel poverty)
- design and deliver low carbon investment and infrastructure, and make all possible efforts to create decent, fair and high value work, in a way which does not negatively affect the current workforce and overall economy

Key Action- Just Transition / Energy Affordability

- Campaigning at all levels to ensure that future developments recognise that energy affordability is already a key issue in Shetland, and ensure that progress on that issue is designed into all significant proposals and solutions
 - Timing - Importance of designing “Just Transition” principles in from the start, especially in electricity grid strengthening & Community Energy Networks.
 - Actions / Outcomes;
 - Prepare and support a Shetland Integrated Energy Plan to tackle the current inequalities in energy affordability and the reskilling required to make new energy systems work/re-engage people whose jobs have been affected by transition.

Key Action- Just Transition / Energy Affordability

- Campaigning at all levels to ensure that future developments recognise that energy affordability is already a key issue in Shetland, and ensure that progress on that issue is designed into all significant proposals and solutions
 - Potential Council contributions;
 - campaigning support
 - research support
 - pilot project support
 - community engagement support



Meeting(s):	Environment & Transport Committee	21 January 2020
Report Title:	Environment and Transport Committee Business Programme – 2019/20	
Reference Number:	ISD-03-20-F	
Author / Job Title:	John Smith, Director of Infrastructure Services	

1.0 Decisions / Action required:	
That the Environment & Transport Committee:	
1.1	CONSIDERS the business planned for Environment & Transport Committee for the remainder of the financial year 2019/20;
1.2	ADVISES the Director of Infrastructure Services of any changes required including new items where the timescale will be confirmed at a later date.
2.0 High Level Summary:	
2.1	The purpose of this report is to facilitate discussion of the Business Programme of the Committee for the financial year 1 April 2019 to 31 March 2020 including items where the date is still to be determined.
2.2	The Business Programme is presented to Environment and Transport Committee at least quarterly to ensure that it is kept up to date incorporating new items as work programmes across the Council are taken forward.
3.0 Corporate Priorities and Joint Working:	
3.1	Our Plan 2016, in its 20 by 20 states that:- <i>“High standards of governance, that is, the rules on how we are governed, will mean that the Council is operating effectively and the decisions we take are based on evidence and supported by effective assessments of options and potential effects”.</i> Maintaining a Business Programme for each Committee/Board of the Council contributes to an effective governance framework for the Council.
4.0 Key Issues:	
4.1	A range of business scheduled or to be scheduled over the coming year in consultation with the Committee.

5.0 Exempt and/or confidential information:	
5.1	None
6.0 Implications :	
6.1 Service Users, Patients and Communities:	<p>The Business Plan provides the community and other stakeholders with important information regarding the planned business for the coming year.</p> <p>The Business Programme complements the Council's Corporate and Directorate Plans and the Shetland Partnership Plan.</p>
6.2 Human Resources and Organisational Development:	None arising directly from this report. Any implications for staff arising from individual reports in the Business Programme will be addressed through the work on those reports.
6.3 Equality, Diversity and Human Rights:	None arising directly from this report. Any implications in this regard arising from individual reports in the Business Programme will be addressed through the work on those reports.
6.4 Legal:	The Business Programme supports the governance framework of the Council which is underpinned by statute.
6.5 Finance:	None arising directly from this report. Any financial implications arising from individual reports in the Business Programme will be addressed through the work on those reports.
6.6 Assets and Property:	None arising directly from this report. Any implications in this regard arising from individual reports in the Business Programme will be addressed through the work on those reports.
6.7 ICT and new technologies:	None arising directly from this report. Any implications in this regard arising from individual reports in the Business Programme will be addressed through the work on those reports.
6.8 Environmental:	None arising directly from this report. Any implications in this regard arising from individual reports in the Business Programme will be addressed through the work on those reports.
6.9 Risk Management:	The risks associated with setting the Business Programme are around the challenges for officers meeting the timescales required, and any part of the business programme slipping and causing reputational damage to the Council. Equally, not applying the Business Programme would result in decision making being unplanned and haphazard; aligning the Council's Business Programmes with the objectives and actions contained in its corporate plans could mitigate against those risks.

6.10 Policy and Delegated Authority:	Maintaining a Business Programme ensures the effectiveness of the Council's PPMF. The Business Programme supports each Committee's role, as set out in paragraph 2.3 of the Council's Scheme of Administration and Delegations.	
Previously considered by:	N/A	

Contact Details:

John Smith, Director of Infrastructure Services

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Appendices:

Appendix 1 – Environment & Transport Committee Business Programme 2019/20

Background Documents:

None



**Environment & Transport Committee - Meeting Dates and Business Programme 2019/20
as at Tuesday, 14 January 2020**

Date / Type of Meeting	Agenda Item	Referred/Delegated
07 May 2019 10am Ordinary	Taxi Tariff Review	R
	Management of Memorial Safety within Burial Grounds and Management Rules relating to Cemeteries ad Burial Grounds	D
	Waste Management – A Zero Waste Strategy for Shetland	D
	Capital Maintenance and Replacement Programme	D
	Environment and Transport Committee – Business Programme 2019/20	D
	Energy Recovery Plant and Shetland Heat Energy and Power – Strategic Outline Case	R
04 September 2019 2pm Ordinary	Environment and Transport Performance Report Quarter 4 to 31 March 2019 and Quarter 1 to 30 June 2019	D
	Development Performance Report 2018/19	D
	Development Services Directorate Plan 2019-2022	D
	Traffic Regulation Orders Etc. – Annual Progress Report	D
	Infrastructure Services Business Programme – 2019/20	D
20 November 2019 2pm Ordinary	Strategic Roads Strategy – Strategic Outline Programme	R
	Carriageway Condition of Shetland’s Roads	D
	Environment and Transport Business Programme 2019-20	D
	Development Performance Report 2018/19	D
21 January 2020 10am Ordinary	Infrastructure Directorate Performance Reporting - Environment and Transport Committee Performance Report Q2 & Q3 to 31 Dec 2019	D
	Grounds Maintenance Provision, Burial Grounds & Amenity Areas	D
	Winter Services Review 2020	D
	Shetland Climate Change – Strategic Outline Programme	R
	Environment and Transport Committee – Business Programme 2019/20	D
19 February 2020 10am Special – Budget Setting	Development Services Budget Proposals	R
	Infrastructure Services Budget Proposals	R
10 March 2020 2pm Ordinary	Shetland Climate Change - Action Plan	D
	Energy Recovery Plant and Shetland Heat Energy and Power –Outline Business Case	R
	Strategic Outline Case – Strategic Roads Review	R



Environment & Transport Committee - Meeting Dates and Business Programme 2019/20
as at Tuesday, 14 January 2020

Date / Type of Meeting	Agenda Item	Referred/Delegated
	Fleet Review	D
	Street Lighting Review	D
	Air and Marine Operations – Environment & Transport Activity Report	D
	Environment and Transport Committee – Business Programme	D

Planned Committee business still to be scheduled

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..... END OF BUSINESS PROGRAMME

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