

## **Item: 7**

**Development and Infrastructure Committee: 13 November 2018.**

**Roads Management and Maintenance Plan.**

**Report by Executive Director of Development and Infrastructure.**

### **1. Purpose of Report**

To consider the draft Roads Management and Maintenance Plan 2018 to 2023.

### **2. Recommendations**

The Committee is invited to note:

#### **2.1.**

That the draft Roads Management and Maintenance Plan 2018 to 2023, attached as Appendix 1 to this report, has been developed in accordance with the national guidance document “Well-Managed Highway Infrastructure: A Code of Practice”.

#### **2.2.**

That the Code of Practice referred to at paragraph 2.1 above, which was published in 2016 and replaces various previous codes of practices, recommends that Roads Authorities should adopt a “Risk Based Approach” to managing their assets.

#### **2.3.**

That the Roads Management and Maintenance Plan 2018 to 2023 will continue to be developed to keep the infrastructure asset contained in the appendices to the plan up-to-date.

**It is recommended:**

#### **2.4.**

That the Roads Management and Maintenance Plan 2018 to 2023, attached as Appendix 1 to this report, be approved.

### **3. Background**

#### **3.1.**

In July 2017, the Council approved the Roads Asset Management Plan 2017 to 2020 (RAMP). The road and bridge network, together with its associated infrastructure, is the Council’s highest valued asset and provides direct support for all of Orkney’s communities, businesses and economic development.

### **3.2.**

The Roads Management and Maintenance Plan 2013 to 2018 (RMMP) was approved by Council in March 2013.

### **3.3.**

Future updates of the RAMP will be guided by the Annual Status and Options Report, which will outline the status of the Council's roads assets, detailing the output from the previous year's investment together with options for subsequent years. The delivery of the roads service and works programme will be guided by the RAMP and the RMMP.

### **3.4.**

Maintaining and improving the road network is a priority action for the Council and is a continuing challenge against the backdrop of reducing levels of funding and competing pressures from other services. The operation of a comprehensive roads asset management planning process and agreement of a long-term investment strategy are both essential requirements if this challenging priority is to be met.

## **4. Well-Managed Highway Infrastructure: A Code of Practice**

### **4.1.**

Well-Managed Highway Infrastructure: A Code of Practice was published in 2016 and is intended to apply throughout the United Kingdom. The Code recommends that roads authorities should adopt a "Risk Based Approach" to managing assets. The Code is not statutory but provides roads authorities with guidance on roads asset management.

### **4.2.**

The Code is designed to promote integrated asset management of roads infrastructure by establishing local levels of service through risk-based assessment. It provides guidance to roads authorities on developing their approach in accordance with local needs, priorities and affordability.

### **4.3.**

A risk-based approach means there is no prescriptive investigation or intervention level that defines a defect, the rationale being that a defect can represent a different level of risk depending on various factors including road hierarchy, traffic volumes and location. In the past this may have led to unnecessary and costly temporary repairs. By using a risk-based approach resources can be targeted towards works that in the long term will lead to overall improvement of the road network.

## **5. Roads Management and Maintenance Plan**

### **5.1.**

The RMMP reflects the recommendations in “Well-Managed Highway Infrastructure: A Code of Practice” to adopt a risk-based approach to roads maintenance. The purpose of the RMMP remains the same as before, to maintain the roads network in a safe and serviceable condition for the efficient movement of people, goods and services, both now and in the future.

### **5.2.**

A safe and serviceable road network is an essential requirement for the well-being of any community. It is therefore vital that there is a structured approach to roads management and maintenance that ensures the integrity of the network and minimises the need for reactive maintenance and ensures serviceability for road users.

### **5.3.**

Roads management and maintenance must meet the challenge of sustainability, which requires that a balance of the social, economic and environmental implications of both individual schemes and the service as a whole is achieved. It should also provide, where practicable, both present needs and those of future generations.

### **5.4.**

In developing the RMMP, account will be taken of other Council Services' objectives for transport integration and network management, including strategies for public transport, walking and cycling, to give added value to these projects.

### **5.5.**

The RMMP will focus on the management and maintenance of the infrastructure itself at an operational level. It will contain detailed operational plans for the delivery of front line services and will establish an inspection regime to monitor and report on the condition of the asset.

### **5.6.**

The RMMP will continue to be developed to allow officers to update the infrastructure asset, operational plans and other appendices to the plan. The appendices are not included with this report but will be made available on the Council's website once the draft RMMP has been approved.

### **5.7.**

The RMMP, attached at Appendix 1 to this report, is recommended for approval.

## **6. Links to Council Plan**

### **6.1.**

The proposals in this report support and contribute to improved outcomes for communities as outlined in the Council Plan strategic priority of Connected Communities.

### **6.2.**

The proposals in this report relate directly to Priority 1.3 Retain and where possible enhance public road infrastructure and coastal flood protection of public road infrastructure of the Council Delivery Plan.

## **7. Links to Local Outcomes Improvement Plan**

The proposals in this report support and contribute to improved outcomes for communities as outlined in the Local Outcomes Improvement Plan priorities of Strong Communities and a Vibrant Economy.

## **8. Financial Implications**

### **8.1.**

There are no financial implications associated directly with this report. However, the new RMMP will allow spending to be targeted where it will best improve the Council's asset.

### **8.2.**

With ever decreasing budgets, the funding required to maintain Orkney's roads to an acceptable standard is predicted to rise. The revenue budget in 2015 to 2016 was £3,914,000 and for 2018 to 2019 this is £3,380,000. This means the investment from the roads revenue budget is falling. This shortfall will inevitably lead to a reduction of maintenance from the revenue budget resulting over time in a need to seek funding through the capital budget.

### **8.3.**

Funding for the maintenance services detailed in the Roads Management and Maintenance Plan is contained within the Roads Services Revenue Budget

### **8.4.**

Funding for the routine Asset Replacement Programme is included in the Capital Programme and is currently set at £950,000 which includes £350,00 for surfacing works.

## **9. Legal Aspects**

The RMMP assists the Council in discharging its management and maintenance duties under section 1(1) of the Roads Scotland Act 1984. This provides that: "a local roads authority shall manage and maintain all such roads in their area as are

for the time being entered in a list prepared and kept by them under this section; and for the purposes of such management and maintenance (and without prejudice to this subsection's generality) they shall, subject to the provisions of this Act, have power to reconstruct, alter, widen, improve or renew any such road or to determine the means by which the public right of passage over it, or over any part of it, may be exercised".

## **10. Contact Officers**

Gavin Barr, Executive Director of Development and Infrastructure, extension 2301,  
Email [gavin.barr@orkney.gov.uk](mailto:gavin.barr@orkney.gov.uk)

Darren Richardson, Head of Infrastructure and Strategic Projects, extension 2310,  
Email [darren.richardson@orkney.gov.uk](mailto:darren.richardson@orkney.gov.uk)

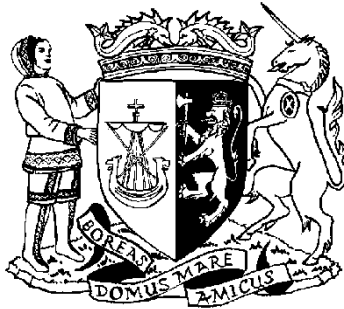
John Wrigley, Roads and Environmental Services Manager, extension 2725  
Email [john.wrigley@orkney.gov.uk](mailto:john.wrigley@orkney.gov.uk)

Kenneth Roy, Roads Support Manager, extension 2326,  
Email [kenny.roy@orkney.gov.uk](mailto:kenny.roy@orkney.gov.uk)

Matthew Wylie, Roads Support Officer, extension 2318  
Email [matthew.wylie@orkney.gov.uk](mailto:matthew.wylie@orkney.gov.uk)

## **11. Appendix**

Appendix 1: Draft Roads Management and Maintenance Plan 2018 to 2023.



# **ORKNEY**

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## **ISLANDS COUNCIL**

**Development and Infrastructure  
Roads Management and Maintenance Plan  
2018 - 2023**

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# Document Control and Council Approval

Version Number/Date.	Approved by Council
V1/November 2018	
Next Update Due.	November 2023

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# **Part A - Introduction**

## **Section 1 - Purpose of Plan**

### **1.1 Introduction**

This plan reflects the recommendations in Well-Managed Highway Infrastructure: A Code of Practice 2016 to adopt a risk-based approach to roads maintenance. The purpose of the Roads Management and Maintenance Plan (RMMP) remains the same as before, to maintain the roads network in a safe and serviceable condition for the efficient movement of people, goods and services, both now and in the future.

### **1.2 The Importance of Roads Management and Maintenance**

A safe and serviceable road network is an essential requirement for the well-being of any community. The roads not only carry all people, vehicles and goods, but also all the other service apparatus, such as water, sewerage, electricity and telephones that are essential to maintain our present standard of living. In addition, the roads network is the first thing most tourists or other visitors to Orkney will see and consequently will be the first impression that they receive of the area and the Council.

It is therefore vital that there is a structured approach to roads management and maintenance that ensures the safety of the network whilst minimising the need for reactive maintenance and ensures serviceability for road users by maximising the long-term benefits of routine maintenance.

Roads management and maintenance must also meet the challenge of Sustainability, which requires that we achieve a balance of the social, economic and environmental implications of both individual schemes and the service as a whole, that provides, as far as we are able, for both our present needs and for those of future generations.

### **1.3 Roads Management and Maintenance Mission Statement**

To Manage and Maintain the roads network to ensure the safe and efficient movement of people, goods and services for the long-term social and economic benefit of the whole community.

### **1.4 Roads Management and Maintenance Strategy**

The Roads Management and Maintenance Plan (RMMP) will deliver the following:

#### **Roads Network Safety**

- Provide a safe environment for all road users.
- Complying with statutory obligations
- Meeting user's needs

#### **Roads Network Serviceability**

- Ensuring network availability
- Achieving network integrity
- Maintaining network reliability
- Enhancing network condition

## **Roads Network Sustainability**

- Minimising cost over time
- Maximising value to the community
- Minimising environmental intrusion

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## **Part B - Framework**

### **Section 2 - Policy Framework**

#### **2.1 Objectives of the Roads Management and Maintenance Plan (RMMP)**

Network Safety, Serviceability and Sustainability remain the three core objectives of the Roads Management and Maintenance Plan. However, the plan should also provide a framework for establishing outcomes against which service and asset performance can be measured and the development of local performance indicators for comparison and use in best value reviews. The RMMP will also contribute towards the implementation of the developments and improvements detailed in the Development and Infrastructure (D and I) Service Plan (SP).

#### **2.2 Policy Co-ordination**

The RMMP will, as directed by the Development and Infrastructure Service Plan, contribute to the wider corporate objectives of the Council Plan 2018-2023, the Community Plan, Orkney 2020: Our Vision and the single outcome agreement agreed with the Scottish Government. If appropriate, maintenance priorities will be altered to assist the wider corporate strategic goals which may include: community regeneration projects, safer communities, social initiatives or similar types of projects.

In turn it is hoped that the RMMP will help influence the wider policy agenda and budget allocations of the Council through Corporate Resource Planning.

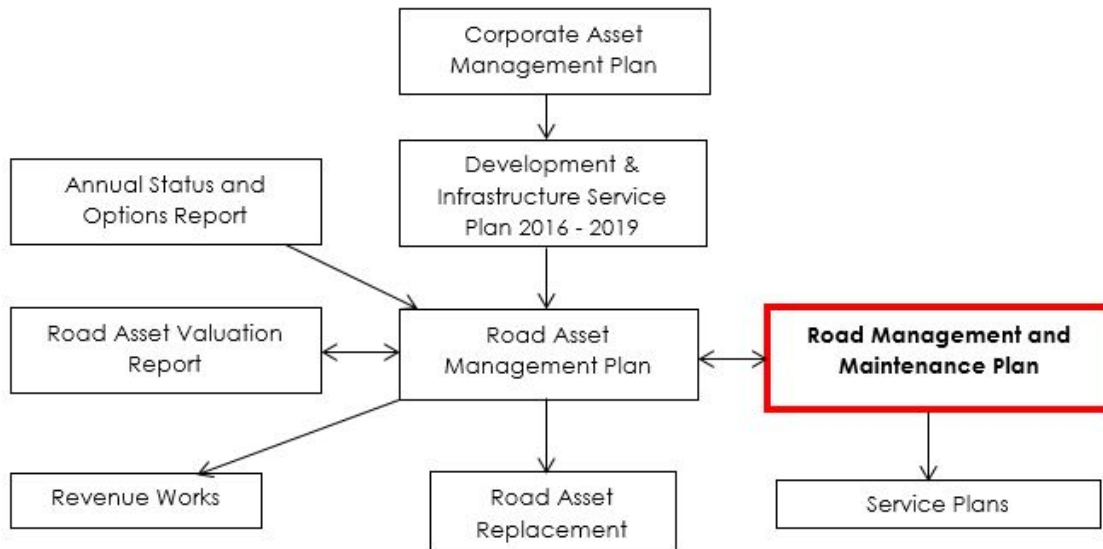
In developing the RMMP, account will be taken of other Council Services' objectives for transport integration and network management, including strategies for public transport, walking and cycling, again to give added value to these projects.

#### **2.3 Roads Asset Management**

The management of roads maintenance needs to be set within the context of the Development and Infrastructure Service Plan, the Roads Asset Management Plan and an overall asset management regime. The Service Plan will provide the strategic framework within which roads services are delivered and will form the link between the wider corporate aims of the Council, contained in the Council Plan 2018 – 2023, the Community Plan and its local Transport Strategy and will focus primarily on its front-line services.

The Roads Asset Management Plan (RAMP), which will include the roads and associated infrastructure replacement programme, will enable us to value the assets we have and identify the funding required to maintain the asset in its present condition. It will help identify the effects of budgetary constraints on the level of service provided and allow a considered assessment of the effects of the reduced level of service and ensure that they are mitigated through an efficient use of the available resources.

The Roads Management and Maintenance Plan (RMMP) will focus on the management and maintenance of the infrastructure itself at an operational level. It will contain detailed operational plans for the delivery of front line services and will establish an inspection regime to monitor and report on the condition of the asset.



## 2.4 Risk Management

The Code of Practice recommends that roads maintenance, including the establishment of inspection regimes, levels of service, determining priorities and programmes of work, and procuring the service, should all be undertaken against a clear understanding of the risks and consequences involved.

Although the most commonly understood risks affecting the service relate to the safety of the network and liability for accidents or injury to users or employees, there are a wide range of other risks that should be considered. These include: -

- Asset loss or damage.
- Service failure or reduction.
- Operational risks.
- Environmental risks.
- Financial risks.
- Contractual risks.

The risk register for this plan is attached as Appendix 20.

## 2.5 Sustainable Roads Management and Maintenance

Sustainability in relation to the RMMP means securing a balance of social, economic and environmental wellbeing in the delivery of the service that does not compromise the ability of future generations to meet their own needs. However, it must also mean securing sufficient investment and operational resources to avoid a progressive deterioration of the asset.

It may also, in the current economic climate, mean maintaining, as far as possible, the current asset in a steady state condition with a shrinking budget or as an absolute minimum, ensuring that it is safe to use.

## **Section 3 - Best Value and Continuous Improvement**

### **3.1 Service Improvement Plan, Best Value Reviews and Management Reviews**

Best Value reviews will be used to identify opportunities for improvement and to add value to other services provided by the Council and others. Best Value reviews will also be used as an aid to bench marking the policies, strategies and practices of the Authority.

The Development and Infrastructure Service Plan will provide the strategic framework within which the RMMP exists.

### **3.2 Principles of Service Delivery**

Our policies, programmes and service delivery arrangements for roads management and maintenance will provide for efficient, effective and economic management of the network, giving priority to the needs of the user and support to the wider corporate objectives of the Council. However, network safety and statutory duties are the prime considerations.

### **3.3 Consultation**

The views of users, the wider community and their representatives will be sought in the development and regular review of roads management and maintenance policies, programmes and priorities. These views will be acknowledged when setting levels of service and developing operational procedures.

In addition, consultation will also take place with other Local Authorities and organisations.

### **3.4 Information and Publicity**

We will provide timely information and publicity about the nature and programming of road maintenance works to enable those affected, where necessary, to plan to mitigate such effects. This information will be updated if works are delayed or extended.

### **3.5 Public Transport Service Reliability**

Attention will be paid to the quality and the timeliness of information to providers and users of public transport in view of the importance of maintaining confidence in the timetable of advertised services. Closures and diversions will be for the minimum period required for efficient completion of the works.

### **3.6 Community Relations and Contact**

Arrangements will be put in place for receiving regular feedback from samples of users and others affected by works to monitor performance and review priorities.

Arrangements are also in place to receive, deal with and monitor compliments, service requests, complaints and other information from users and the community, including standards for response, arrangements for immediate or planned action and recording of all transactions.

Employees responsible for dealing with user and community contacts will be competent to determine the relative urgency of response and to enable immediate action to be taken where necessary.

### **3.7 Customer Care Code**

The views people have of the Council can be influenced by the reception they receive from the employees they contact.

In accordance with the Council's policies we will carry out all our dealings with people, including other employees, in the following manner:

- Responsive.
- Effective.
- Supportive.
- Professional.
- Efficient.
- Caring.
- Tolerant.

### **3.8 Involvement of Employees, Contractors and Agents**

Arrangements will be made to facilitate the involvement of all the elected members, employees, contractors and agents in building commitment and pride in the roads management and maintenance service, and to maximise individual contributions to the process of continually improving Best Value Service Delivery.

### **3.9 Training and Development**

In addition to the need for Health and Safety training, standards can be improved, and objectives achieved more easily if all those involved in the road maintenance functions receive training necessary to raise their level of competence in the field.

We will endeavour to have all relevant personnel trained to SVQ level in addition to professional qualifications for other relevant personnel involved in the delivery of the road maintenance service.

Training will be given for Inspections and Surveys where the quality and treatment of data could have significant legal and financial implications.

Special training and familiarisation with operational procedures and equipment will be given for personnel involved in the delivery of Winter Services.

We will make sure that all those involved are aware of the extent and nature of the Authority's legal obligations for road maintenance and how these relate to their responsibilities, including the important distinction between duties and powers.

### **3.10 Management of Claims**

All claims against the Council's Roads Service will be documented upon receipt and investigated timeously. Results of investigation will be confirmed to claimant within 28 days of initial receipt of claim.

## **Section 4 - Legal Framework**

### **4.1 Road Maintenance Legal Framework**

This section is not intended to be a comprehensive statement of the legal situation regarding roads management and maintenance. It is provided for general information and full legal advice should be sought elsewhere.

#### **Roads (Scotland) Act 1984**

The Roads (Scotland) Act 1984 Section 1, states that "...a local roads authority shall manage and maintain all such roads in their area as are for the time being entered in a list (in this Act referred to as their "list of public roads") prepared and kept by them under this section."

#### **Common Law – Duty of Care**

Road Authorities have a Duty of Care under Common Law. The criteria commonly used by the courts to determine if a defendant is liable are:

1. The harm which occurred must be a reasonable foreseeable result of the defendant's conduct;
  - Was the authority aware of the defect?
  - Was the route inspected within assigned timescales?
  - Experience of similar defects and the deterioration/degradation rates? Will the defect deterioration/degradation cause the likelihood and/or impact of the defect to increase before the next inspection?
  - Has there been similar incidents on the authorities' network or is the authority aware of similar incidents occurring?
  
2. It is fair, just and reasonable to impose liability.
  - Did the authority assess, prioritise and maintain the defect in accordance with their Maintenance Strategy/Manual or equivalent documents?
  - What was the defect risk and priority?
  - If necessary, what action(s) had been taken to repair the defect? Timescale for the repair?
  - Was the defect repaired within specified timescales?

#### **Well Managed Highway Infrastructure – a Code of Practice**

As of October 2018, Well Maintained Highways will be superseded by Well Managed Highway Infrastructure (WMHI), removing all prescriptive intervention levels, action timescales, inspection frequencies, etc.

WMHI recommends that Roads Authorities should adopt a risk-based approach to managing their asset. The rationale being that a defect can represent a different level of risk in different contexts. Judging a defect on risk rather than a fixed intervention level can lead to a more focused maintenance regime to ensure resources are directed where they are needed most for the benefit of the network, and its users, as a whole.

## **The Transport (Scotland) Act 2005**

The Transport (Scotland) Act 2005 empowers the Scottish Road Works Commissioner whose main functions are to monitor the carrying out of road works in Scotland by Roads Authorities and Utilities and their compliance with the New Roads and Street Works Act 1991 and the obligations imposed under it. In addition, the Commissioner is the Keeper of the Scottish Road Works Register through which overall planning and co-ordination of works on roads is achieved.

Overall, to comply with legislation, regardless of the common sense need to maintain the asset, authorities require to have appropriate written policies and procedures in place for road maintenance management.

In view of the legal situation and the present challenging environment, it is essential that the road revenue budget is allocated in a systematic logical manner based on a structured maintenance management plan. This Plan is prepared on this basis.

### **4.2 Health and Safety**

The principle items of Health and Safety legislation affecting this plan are as follows;

- The Health and Safety at Work etc Act 1974.
- The Management of Health and Safety at Work Regulations 1999.
- The Construction (Design and Management) Regulations 2015.

The Act and these regulations make it a requirement for the Authority to establish suitable arrangements for the management of all construction works to ensure that all works are carried out in a safe manner.

In addition, there are other regulations and Codes of Practice that relate to the management of Health and Safety on site which include but are not limited to;

- The Traffic Signs Manual Chapter 8
- New Roads and Street works Act 1991.

All those involved in the planning, management and delivery of the Roads Maintenance will receive appropriate training to ensure that all activities are carried out in accordance with relevant Health and Safety legislation.



# Part C - Roads Management and Maintenance Plan

## Section 5 - Strategy and Hierarchy

### 5.1 Roads Management and Maintenance Service

The Road Management and Maintenance Service is the responsibility of Development and Infrastructure, Roads Services. In addition to the maintenance and management of the Council's roads, the Service also undertakes all Street Lighting Maintenance and provides Winter Service activities, including the core resources to enable an Emergency Response Service in support of the Council's Corporate Emergency Plan.

The Roads Maintenance Service looks after an ever-expanding roads network as our community continues to grow. The roads network is a very valuable asset with the estimated replacement cost of more than £1000 million. This replacement value is not practically achievable therefore maintaining the asset is of paramount importance to properly serve the present generation of road users who rely upon the network daily.

The list of maintained assets is an appendix to this document and can be viewed on the Council's Website or on request at the Council Offices.

### 5.2 Roads Management and Maintenance Strategy

Our roads management and maintenance strategy will be based upon;

- A robust framework of policies and objectives for the service (Development and Infrastructure Service Plan).
- A detailed inventory of all relevant components of the asset (RAMP).
- A defined hierarchy of all elements of the network (RMMP).
- A comprehensive management system of inspecting, recording data, analysing, prioritising and programming works (Pavement Management System, WDM).
- Arrangements to monitor, review and update as necessary, each component of the strategy and the performance of the strategy in delivering the core maintenance objectives (Development and Infrastructure Service Plan).
- All in accordance with sustainability and best value.

The strategy will be subject to alterations as required by changing circumstances, changes to the network or other relevant matters.

### 5.3 Designing to Minimise Maintenance

The design of new roads or alterations to existing roads will take account of the need to consider the future maintenance implications of the new construction.

### 5.4 Maintenance Management System

#### 5.4.1 Introduction

The Roads Maintenance Management System comprises various components, these are;

1. **The network model.** This is the Street Gazetteer; all asset data is referenced against it. This will contain a list of all roads in the area, both public and private, whether maintained by the Roads Authority or not. The Gazetteer will be

maintained in accordance with the agreed conventions and will comply with BS7666:2006.

2. **The Asset Database.** An integrated Road Asset Management System has been procured from WDM Ltd. This will record information on the type, condition and location of all assets in a GPS map format.
3. **Specialist Applications.**
  - Scottish Road Maintenance Condition Survey (SRMCS) and Skid Resistance Survey (SCRIMS) – Data from the annual survey will be used as a basis for planning future roads maintenance works and will provide an objective assessment of the condition of the road network. This information is stored and utilised through the Pavement Management System (PMS).
  - Accident Management System (AMS) – This system will hold data on all road traffic accidents in Orkney and is used to create a geological overlay showing all locations of accidents over a 10-year period.
  - Routine Management System (RMS) – This system is used for the management and administration safety inspections, defects and programmed work.

## 5.5 Network Inventory

The Roads (Scotland) Act defines a road as any way over which the public has a right of passage and carriageways, footways, footpaths and cycle ways are all roads for the purposes of the Act. Where the public right of passage includes a right of passage by vehicle, the road is termed a carriageway. Where the right of passage is by foot only, the road is either a footway or a footpath. A footway is associated with a carriageway, that is, a traditional pavement. A footpath is independent of a carriageway.

As noted above, the Council, as Roads Authority, has a duty to prepare and keep a list known as the 'list of Public Roads' and has a statutory duty to manage and maintain all roads that are entered on to that list. A public road is defined as a road that is maintained by the local Roads Authority. This is distinct from a private road which is a road over which the public has a right of access, but which is maintained by the landowner. The public or private status of a road is a matter of maintenance liability only.

The list of roads, and all other assets maintained by the Roads Service is contained on the Councils website as Appendices to this plan. The list of assets included are listed below:

- Carriageway
- Other Council Roads
- Footways
- Footpaths
- Cycleways
- Street Lighting
- Illuminated Signs and Bollards
- Non-Illuminated Signs and Bollards
- Bridges and Structures
- Sea Walls and Retaining Walls
- Drainage
- Road Markings

- Safety Barriers and Railings
- Life Buoys
- Car Parks
- Other Assets

This inventory is the basis of quantifying and establishing the annual maintenance programme to be carried out within the constraints of each year's budget. Any shortfall in available budget compared to the desirable works programme will be reported to the Development and Infrastructure Committee in the first instance.

### **5.6 The Road Network Hierarchy**

A hierarchy of all carriageways, footways/footpaths and cycle routes has been determined in accordance with the Code of Practice modified where appropriate to reflect the Orkney environment.

There are no Motorways or Trunk Roads in the Orkney Islands Council's area and, as such, Category 1 is not included in Table 1 below. Three additional categories of 5a, 5b and 6 will be created, 5a for roads within the Kirkwall and Stromness Conservation areas, 5b for shared surface roads in urban areas and 6 for Roads Services maintained car parks. This higher frequency reflects their high pedestrian usage and special engineering requirements.

For the purpose of this Plan the road network hierarchy, which is the responsibility of Orkney Islands Council, is categorised as follows:

## 5.6.1 Carriageway Hierarchy - As detailed in Appendix 1

Table 1

Category	Hierarchy Description	General Description	Detailed Description
2	Strategic Route within Orkney	Principal "A" roads between Primary Destinations	Routes for fast moving traffic linking principle centres of population, transport hubs and service centres such as Hospitals and ferry terminals. Normally two lanes with no footway out with urban areas
3a	Main Distributor	Main Urban network and routes connecting secondary centres of population to Main towns, the strategic network and services	Routes linking the larger villages and other centres of population to the strategic network and services within main population areas. They are of varying widths and are not always able to take two-way traffic
3b	Secondary Distributor	Classified (B and C) class roads and some unclassified urban routes carrying local traffic with frequent junctions	Roads linking smaller villages and centres of population to the strategic and main distributor network. In urban areas these roads generally have 30mph speed limits and significant pedestrian activity including crossing points. On street parking is generally unrestricted.
4a	Link Road	Roads linking between the strategic, main and secondary distributor network with frequent junctions	In rural areas these roads provide links between the main distributor roads network. They are generally single track with passing places. In urban areas they are residential or industrial interconnecting roads with 30mph speed limits, random pedestrian movements and uncontrolled parking.
4b	Local Access Road	Roads serving limited numbers of properties carrying only access traffic	In rural areas roads providing access to small groups of houses or individual properties and land. Generally single track, dead end and often unsuitable for HGV's. In urban areas they are often residential loop roads or cul-de-sacs.
5a	Road within Conservation Area	Road, generally without footway within busy urban shopping, business area and residential areas.	Roads within Local conservation areas with high public space and streetscene contribution, heavy pedestrian usage and special engineering requirements.

5b	Shared Surface	Road, generally with service strips within urban residential area.	Roads within Urban areas which have been designed without segregated footways and instead assume that Pedestrians and Vehicles shall share the same carriageway surface.
6	Car Parks	Car parks maintained by Roads Services	Generally, car parks which are covered by a Traffic Regulation Order.

### 5.6.2 Footway Hierarchy (This may also include footpaths if specified) – Appendix 3 and 4

Table 2

Category No	Category Name	Brief Description
2	Secondary Walking Route	Medium usage routes through local areas feeding into primary routes, local shopping centres, schools and industrial centres
3	Link Footway	Linking local access footways through urban areas and busy rural footways
4	Local Access Footway	Footways associated with low usage, short estate roads to the main routes and cul-de-sac

### 5.6.3 Cycle Route Hierarchy – Appendix 5

Table 3

Category	Description
A	Cycle lane forming part of the carriageway – There are no Cat A Cycle lanes in Orkney.
B	Cycle track; a route for cyclists not contiguous with the public footway or carriageway.  Shared cycle/pedestrian paths; either segregated by a white line or other physical segregation, or unsegregated.
C	Cycle trails, leisure routes through open spaces. These are not necessarily the responsibility of the roads authority.

## 5.7 Maintenance Types and Categories

The typical types of maintenance functions which should be considered in terms of the output contribution to the core maintenance objectives of safety, serviceability and sustainability are:

- Reactive

- Routine
- Programmed
- Regulatory
- Winter Service
- Weather and other Emergencies

### 5.7.1 Reactive

Responding to safety inspections, complaints, public requests or emergencies.

Table 4

Activity – Response	Description
All Assets - Emergencies	Assess - Sign and make safe for safety purposes
All Assets – Complaints and Public Requests	Assess – Make safe and/or provide permanent repair for safety purposes
All Assets - Inspections	Make safe and/or provide permanent repair for safety purposes

### 5.7.2 Routine

A regular consistent schedule of Cyclic maintenance works such as: drainage works, electrical maintenance and verge maintenance.

Table 5

Activity	Description
Drainage	Cleaning of ditches, culverts (Incl' grills), offlets, gullies, safety channel and kerbs, storm water and french drains
Verge Maintenance	Grass cutting
Road Marking and Studs	Refresh and replace if damaged
Street Lighting and Electrical Systems.	Clean, repair and replace if damaged

### 5.7.3 Programmed

An annual programme of planned works, primarily surface treatments such as surface dressing and resurfacing, and including road reconstruction schemes and new drainage works.

Table 6

<b>Activity</b>	<b>Description</b>
Carriageways	Minor works: - Reconstruction, Resurfacing, Surface Dressing, Edge Strengthening, including haunch reconstruction
Footway	Minor works: - Reconstruction, Resurfacing, Slurry Sealing and Kerbing
Drainage	Culvert Replacement, New Ditches / Cut offlets / French Drain
Bridges / Structures	Major Bridge Repairs, Sea Walls and Retaining Wall Repairs, Embankment Repair
Lighting	Column, Lantern and Cable Replacement

#### 5.7.4 Regulatory

Inspecting and regulating the activities of others e.g. the New Roads and Street works Act (NRSWA).

Table 7

<b>Legislation</b>	<b>Activity Description</b>
Road (Scotland) Act 1984	Keeping List of Roads up-to-date. Maintaining all public roads.
Road (Scotland) Act 1984	Road Opening Permits, Road Closures Skip Permits, Scaffolding Permits, Illegal Signs etc.
New Roads and Street works Act 1991	Enforcement of New Roads and Street Works Act including the co-ordination of road works, inspections of utilities reinstatements and Maintaining the National Street Gazetteer.
Flood Prevention and Land Drainage (Scotland) Act 1997	Carry out an assessment of Water Courses. Ensure Maintenance of Water Courses.
Road Traffic Act 1984	Temporary Traffic orders.
Transport (Scotland) Act 2005	Established the Scottish Road Works Commissioner whose purpose is to work with the road works community to oversee improvements to the planning, co-ordination and quality of road works in Scotland.

**5.8 Winter  
Winter Service**

Table 8

<b>Activity</b>	<b>Description</b>
Pre-Treatment	Preventative salting.
Treatment	Suitable treatment for prevailing conditions.
Snow	Clearing of snow from carriageway.

**5.9 Emergencies  
Weather and Other Emergencies**

Table 9

<b>Activity</b>	<b>Description</b>
Major	OIC Major Emergency Plan
Flooding, Spring/Surge tides	Clearing of floods and debris, signing to make safe.
High Winds/Storm Damage	Closure of Barriers and clearing of debris.
High Temperatures	Melting Bitumen (Surface Dressing) etc
Others	Accidents, Minor incidents, Oil spillages, debris etc.



## Section 6 - Inspection, Assessment and Recording Regime

### 6.1 Inspection

The effective regime of inspection, assessment and recording is the most crucial component of roads management and maintenance. The characteristics of the regime, including frequency of inspection, items to be recorded and nature of response, has been defined following an assessment of the relative risks.

The inspection, assessment and recording regime provides the basic information for addressing the core objectives of network safety, serviceability and sustainability.

All elements of the inspection and assessment regime will be applied systematically and consistently in accordance with the principles of Quality Management Systems such as ISO 9000:2015. It is important to recognise that all information recorded may have consequential implications for safety and may therefore be relevant to legal proceedings.

The risk assessment process for safety inspections is based on ISO 31000 covering the processes of Identification, Analysis and Evaluation as recommended by SCOTS guidance.

### 6.2 Categories of Inspection

Inspections and surveys will be carried out as follows: -

**Safety Inspections (SI's)** - These comprise frequent inspections of all road elements to identify any defects likely to create danger or serious inconvenience to users of the road or the wider community. They include scouting for road failures such as potholes and failure of road lighting and illuminated signs and less frequent specialised inspections for electrical safety.

**Service Inspections** - These are more detailed than safety inspections and relate to the requirements for serviceability. These inspections may be restricted should resources be limited. They may be either;

- Coarse Visual Inspection (CVI).
- Detailed Visual Inspection (DVI).
- Inspection for regulatory purposes.

**Road Condition Surveys** - These are primarily intended to identify deficiencies in the road fabric which, if untreated, are likely to adversely affect the networks long term performance and serviceability. The survey will include both an annual machine-driven survey of large sections of the network and an annual coarse visual inspection of the entire road network.

Safety inspections could be very valuable in court cases where the court would have regard to "whether the roads authority knew or could reasonably be expected to know, that the condition of the part of the road to which the action relates was likely to cause danger to users of the road". The defects identified in the safety inspections will of course need to be rectified in a timely fashion.

## 6.3 Safety Inspections

### 6.3.1 Roads, Footways and Cycleways – Appendices 1, 3, 4 and 5

Safety inspections are specifically to identify defects which present a risk of immediate or imminent danger to users, or a risk of serious short term structural deterioration and which require urgent attention. Other less serious defects found may also be noted and programmed for repair with no timescales.

Safety inspections of carriageways will generally be undertaken in a slow-moving vehicle. All safety inspections of footways, footpaths and Cycleways will be undertaken on foot.

Additional safety inspections may also be necessary in response to customer requests or complaints, or to user or community concern, as a result of incidents, extreme weather events, or in the light of monitoring information.

The safety inspection regime will take account of potential risks to all road users, in particular the most vulnerable, and are designed to identify any defects likely to create an immediate or imminent danger to the network users.

The frequency with which these safety inspections are undertaken on any part of the network is determined by its position within the hierarchy shown in the list of roads. A list of frequency of safety inspections is set out in Table 10 below.

#### Frequency of Safety Inspections

Table 10

Feature	Description	Category	Frequency	Method
Roads	Strategic Routes	2	3 Monthly	Driven / Walked
	Main Distributor	3a	4 monthly	Driven / Walked
	Secondary Distributor	3b	6 Monthly	Driven / Walked
	Link Roads	4a	Annually	Driven / Walked
	Local Access Roads	4b	Annually	Driven / Walked
	Road within conservation area	5a	1 Monthly	Walked
	Other shared surfaces	5b	6 Monthly	Walked
	Car Parks	6	3 Monthly	Walked
Footway	Secondary Walking Routes	2	6 Monthly	Walked
	Link Footway	3	Annually	Walked

	Local Access Footway	4	Annually	Walked
Cycleway	Cycle Lane	A	6 Monthly	Walked
	Cycle Track	B	6 Monthly	Walked
	Cycle Trail	C	N/A	

The basis of establishing the frequency of safety inspections is the balance between the rate of deterioration of the road and the degree of risk any defect has on road users.

As we will carry out limited Service Inspections we will also list other defects which require programmed attention.

### **6.3.2 Electrical Installations, Lighting, Illuminated Signs and Bollards – Appendix 7 and 8**

Electrical equipment relating to road lighting, illuminated traffic signs, bollards and road crossings requires particular attention to ensure the safety of users and the community. In addition, failure of any part of the system will have implications for the safety of users. An Inspection and monitoring system is in place which ensures that all electrical equipment is inspected once every 6 years upon satisfactory inspection results. Where an unsatisfactory inspection is produced the system must be inspected again in 12 months or as soon as repair works are undertaken. Once a system is repaired back to a satisfactory level it will revert to the 6-year inspection cycle.

Immediate attention will be paid to any damage or defect that could result in structural failure of a lighting column or exposure to live cables.

### **6.3.3 Sea Walls and Retaining Walls – Appendix 10**

All Sea Walls and Retaining Walls will be inspected once every 4 years. Known high risk sea walls will be inspected annually with additional inspections taking place when deemed appropriate by the Roads Service, such as after storms or prevailing strong tides. Any repairs identified during these inspections will be added to a works programme or escalated to an emergency repair if the structural integrity of the asset is deemed at risk.

### **6.3.4 Life Buoys – Appendix 14**

These will be inspected quarterly with all repairs identified being carried out before the end of the next working day.

### **6.3.5 Schedule of Defects to be Included in Safety Inspections**

The following is a schedule of defects that may be identified during Safety Inspections. The list is not exhaustive and can be modified to suit local circumstances however it will form the basis for a check list to be used during inspections.

Note – the term ‘running surface’ applies to the carriageway, footway or cycle route;

- Debris, spillage or contamination on the running surface.
- Displaced road studs on running surface.
- Overhead wires damaged or unstable.
- Damaged or exposed electrical wiring.

- Unstable embankments or cuttings.
- Trees and bushes with loose branches, unstable or obscuring visibility.
- Signs or light columns damaged defective or unstable.
- Road markings or studs damaged, missing or badly worn.
- Signs, signals or lighting dirty or obscured.
- Sight-lines obscured by trees, bushes, unauthorised signs or other obstructions.
- Safety fencing, parapets, handrails or other barriers missing or defective.
- Abrupt level differences in the running surface.
- Potholes, cracks or gaps in the running surface.
- Crowning, depression or rutting of the running surface.
- Edge deterioration of the running surface.
- Kerbing, edging or channel defects.
- Rocking or otherwise unstable running surface.
- Apparently slippery running surface.
- Ironwork broken or missing.
- Gullies, drains, offlets or ditches blocked or defective.
- Standing water, water discharging onto or overflowing across the running surface.
- Cattle grid damaged

### **6.3.6 Deficiency and Risk**

Whether these defects should be treated, how they will be categorised in particular circumstances and the speed and nature of the response will depend, amongst other things, upon the assessed risk posed by it.

This will depend upon;

- The depth, surface area or other degree of deficiency of the defect;
- The volume, speed and other characteristics of traffic;
- The location of the defect;
- The number of defects and their interaction;
- Forecast weather conditions, especially the potential for freezing of surface water;
- Pedestrian usage, volume and type e.g. children, elderly etc.

### **6.3.7 Defects investigatory levels for safety inspections**

Defect investigatory levels for safety inspections are detailed in Appendix 18 of this plan. The criteria specified in this appendix should form minimum investigatory levels for Safety Inspections with all response times being determined by the Inspector dependant on the characteristics in 6.3.6 above.

### **6.3.8 Inspection Tolerances**

All inspections shall be carried out within 10 working days before or after the due date.

In the event of being aware that the due date for a programmed inspection cannot be met, the inspector must, without delay, inform the Roads Support Manager and provide reason(s) for this. The Roads Support Manager must document all instances of missed or late inspections.

In the case of absence of an inspector due to, for example, annual leave or ill health the roads authority will ensure that a suitably trained substitute Inspector undertakes any inspection due within the time frames set down in this document.

During periods of extreme weather, the roads authority will decide on the viability of a safety survey being undertaken, considering the availability and safety of staff and the ability to identify defects. For example, when carriageway is covered in snow, visibility of defects is severely hindered therefore consideration should be made for delaying inspection in these conditions.

## **6.4 Service Inspections**

### **6.4.1 Types of Service Inspection**

Service inspections will be carried out primarily to identify deficiencies that compromise the reliability, quality, comfort and ease of use of the network. Although not intended for identifying defects that could compromise user safety, any such defects observed during service inspections will be recorded and dealt with in the same way as safety inspections.

Categories of Service Inspections available for use: -

- CVI (Coarse Visual Inspections);
- DVI (Detailed Visual Inspections); and
- Inspections for Regulatory Purposes e.g. NRSWA.

Details of the above types of service inspections are detailed in Table 11.

## Service Inspections

Table 11

Type	Description	Frequency
Coarse Visual Inspection	<p>Normally carried out from a slow-moving vehicle. Rather than recording detailed measurements of individual defects, the survey identifies and categorises lengths of features having generally consistent defects.</p> <p>This survey would include all aspects of the network including Drainage, Embankments, Trees and Scrub, Fences, Traffic Signs and Road Markings.</p>	Whole carriageway network is driven annually.
Detailed Visual Inspection	Records measured areas or lengths of more closely defined defects, aggregated within short sub-sections, 20m in length.	Will generally only be undertaken if required to determine finite details of programmed maintenance projects.
Inspection for Regulatory Purposes	The most significant of which involves responsibilities under the New Roads and Street works Act.	See inspection Code of Practice for New Roads and Street works Act.
	<p>Management of List of Roads.</p> <p>Dealing with illegal and unauthorised signs, skip permits, temporary closures and other authorised occupation of the road. Adoption of new roads.</p>	As required.

### Condition standards for service inspections

Condition standards for service inspections are detailed in Appendix 19 of this plan.

## 6.5 Road Condition Surveys

### 6.5.1 Machine Driven Survey

In partnership with all other Local Authorities in Scotland, a programme that will examine the condition of our roads using a purpose-built vehicle will be undertaken. This will not only give us information on the condition of our roads but will also give us benchmark comparisons with other local authorities.

The results of the survey are given in a Green, Amber, Red format and will form a basis on which to consider our roads network for future surface treatment along with CVI's and SI's.

## 6.6 Defects and Response Times

Five categories of defects will be used for the safety inspections. They will be determined by using the below risk matrix.

## Likelihood

Very High – Will undoubtedly happen – Daily occurrence

High – Will probably happen, but not a persistent issue – Weekly occurrence

Medium – May happen occasionally – Monthly occurrence

Low – Not expected to happen, but it is possible – Annual occurrence

Very Low – Improbable – Every 100 years

## Impact

Very High – Death

High – Extensive injury, major permanent harm

Medium – Medical treatment required, Semi-permanent harm up to 1 year

Low – First aid treatment, non-permanent harm up to 1 month

Very Low – No obvious harm/injury

## Risk Matrix

RISK MATRIX					
Likelihood → Impact ↓	Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Very Low (1)	Cat 5 No Response	Cat 5 No Response	Cat 5 No Response	Cat 5 No Response	Cat 5 No Response
Low (2)	Cat 5 No Response	Cat 5 No Response	Cat 4 Programme	Cat 4 Programme	Cat 3 (20 Days)
Medium (3)	Cat 5 No Response	Cat 4 Programme	Cat 4 Programme	Cat 3 (20 Days)	Cat 2 (5 Days)
High (4)	Cat 5 No Response	Cat 4 Programme	Cat 3 (20 Days)	Cat 2 (5 Days)	Cat 1 (24 Hours)
Very High (5)	Cat 3 (20 Days)	Cat 3 (20 Days)	Cat 2 (5 Days)	Cat 1 (24 Hours)	Cat 1 (24 Hours)

**Category 1: Make safe within 2 hours. Temporary / Permanent repair within 24 hours.** Represent a high risk to road users and **should be corrected or made safe at the time of inspection, if reasonably practicable.** In this context, making safe may constitute displaying warning signs and/or coning off to protect the public from the defect. Where practicable, safety defects of this category should not be left unattended until a temporary or permanent repair has been carried out.

**Category 2: Temporary / Permanent repair within 5 working days.** This allows a more proactive approach to be adopted for those defects that represent a medium risk to road users or because there is a risk of short-term structural deterioration.

**Category 3: Temporary / Permanent Repair within 20 working days.** Defects that require attention because they represent a low risk to road users. This allows defects of this nature to be included into longer planned programmes of work.

**Category 4: Monitor and/or programme for repair.** Defects in category 4 are not classed as safety defects and as such will not be responded to within a set timescale.

**Category 5: No Response.** Will review in future safety inspection. Defects in category 5 are not classed as safety defects and as such will not be responded to within a set timescale.

## **6.7 Health and Safety**

### **6.7.1 General**

In general road inspections are carried out from a slow-moving vehicle or on foot. The vehicle should be driven at an appropriate speed to allow any defects to be identified and recorded. All Cat 2 and Cat 3a driven inspections will be carried out by two people due to the increased speed and volume of traffic on these roads.

### **6.7.2 Health and Safety**

Inspections are to be conducted in accordance with the Council's procedures for the health, safety and welfare of its employees and others.

#### **As a minimum:**

- a. All staff engaged in inspections must wear high visibility clothing to BS EN 471 class 3.
- b. All vehicles used to carry out inspections shall be liveried to meet the standard set in the Code of Practice "Safety at Street Works and Road Works" and all necessary vehicle checks shall be carried out prior to inspections undertaken.
- c. Data capture device checks shall be carried out prior to inspections being undertaken.

Should it be necessary to stop the vehicle it shall be parked off the live carriageway wherever possible. If this cannot be achieved, there must be clear visibility in both directions and the roof mounted beacon and hazard lights switched on. Traffic must not be forced across continuously solid white lines. If this cannot be achieved, advanced temporary traffic signing must be installed.

All surveys should make use of two-way communications (i.e. Mobile telephone).

Drivers must abide by Regulation 110 of the Road Vehicles (Construction and Use) Regulations, which prohibits a person from driving a motor vehicle from using a hand-held mobile telephone or a hand-held device.

Communications devices must only be utilised by drivers when the vehicle is safely parked unless it is an emergency and the driver needs to dial 999 and it is unsafe or impractical to stop.

### **6.7.3 Making Safe**

If a Category 1 defect is identified, it shall be rectified or made safe at the time of the inspection, if reasonably practicable. Appropriate traffic management shall be put in place immediately and repair crew called out to make repair. The safety inspection vehicle is to remain at the defect if deemed necessary.



#### **6.7.4 Equipment**

Three 750mm Traffic Cones - All inspection vehicles should carry a minimum of three 750mm traffic cones. The cones should be kept clean and should be inspected quarterly and replaced as necessary. A record of cone inspections will be maintained by Development and Infrastructure.

GPS enabled data capturing system - All inspections shall be undertaken with a GPS enabled system to accurately record the location of defects. Although photographs of defects are not necessary, they may be taken in certain circumstances to aid the repair crew in locating the defect if its location is not clear.

#### **6.7.5 Documents**

The following documents must be present in the safety inspection vehicle at all times:

- a. Orkney Islands Council Inspectors Operations Manual 2018 – 2023.
- b. The New Roads and Street works Act 1991 – Code of Practice for Inspections
- c. Safety at Street Works and Road Works, A Code of Practice.

#### **6.8 Competency**

##### **6.8.1 Qualifications**

Roads inspectors undertaking safety inspections shall be registered on the IHE Roads Inspectors Register and shall undertake internal training based on the risk-based approach. This must be refreshed annually and will be evidenced by a certificate upon completion of a test.

All officers involved in investigation of public requests through the Customer Services Platform shall undertake the same internal training mentioned above. This must be refreshed annually and will be evidenced by a certificate upon completion of a test.

Internal training and test will be based upon SCOTs template and will be administered by Development and Infrastructure.

Full record of qualifications held by persons involved in Roads inspection and Customer Services Platform shall be held by Development and Infrastructure.

## Section 7 – Condition Standards and Investigatory Levels

Each element of the network has the potential to contribute to some extent to each of the core maintenance objectives of Safety, Serviceability and Sustainability.

It is necessary to define standards for the condition of each element of the network to meet the core objectives. The Condition Standards set the level at which the need for repairs is established. When funds are limited, the primary objective of safety may be the only one which can be addressed fully or at least substantially.

The following paragraphs set out the standard of conditions to be used in this Plan for the various elements. They will be developed further over time, in consultation with users, providers and the wider community.

The manner in which the various defects impinge on the key objectives of safety, serviceability and sustainability is shown in Table 7 below.

### Table 7 – Condition of Network

#### A - Carriageway, Footway and Cycle Routes

Table 12

Key Objectives	
Safety	<ol style="list-style-type: none"> <li>1. Nature, extent and location of surface defects</li> <li>2. Nature and extent of kerb and edge defects</li> <li>3. Nature and extent of surface skidding resistance, where appropriate</li> </ol>
Serviceability	<ol style="list-style-type: none"> <li>1. Nature and extent of surface defects</li> <li>2. Ride quality of the surface</li> <li>3. Extent of encroachment and weed growth</li> <li>4. The slipperiness of the surface</li> <li>5. Noise and vibration</li> </ol>
Sustainability	<ol style="list-style-type: none"> <li>1. Nature and extent of surface defects</li> <li>2. Nature and extent of carriageway deflection</li> </ol>

#### B - Drainage Systems

Table 13

Key Objectives	
Safety	<ol style="list-style-type: none"> <li>1. Accumulation of water on carriageway, footway or cycle route</li> </ol>
Serviceability	<ol style="list-style-type: none"> <li>1. Accumulation of water on carriageway, footway or cycle route</li> </ol>
Sustainability	<ol style="list-style-type: none"> <li>1. Control flooding</li> <li>2. Control pollution</li> <li>3. Inadequate drainage will affect the integrity of the road, reduce the effective life and increase maintenance costs</li> </ol>

## C - Traffic Signs, Bollards and Pedestrian Crossings

Table 14

Key Objectives	
Safety	<ol style="list-style-type: none"> <li>1. Identification of risk to users</li> <li>2. Separation of potential traffic conflicts</li> <li>3. Key safety contributor for vulnerable road users</li> </ol>
Serviceability	<ol style="list-style-type: none"> <li>1. Contributes to network efficiency and ease of use</li> <li>2. Contributes to network integrity</li> </ol>
Sustainability	<ol style="list-style-type: none"> <li>1. Support of sustainable transport mode</li> <li>2. Contributes to local economy</li> <li>3. Heavy traffic routeing can optimise maintenance</li> </ol>

## D - Fences and Barriers

Table 15

Key Objectives	
Safety	<ol style="list-style-type: none"> <li>1. Integrity and location of safety fencing for vehicles and pedestrians</li> </ol>
Serviceability	<ol style="list-style-type: none"> <li>1. Risk of livestock disrupting traffic</li> </ol>
Sustainability	<ol style="list-style-type: none"> <li>1. Appearance and condition of fencing</li> </ol>

## E - Road Markings and Studs

Table 16

Key Objectives	
Safety	<ol style="list-style-type: none"> <li>1. Route delineation in darkness and poor weather</li> </ol>
Serviceability	<ol style="list-style-type: none"> <li>1. Ease of use in darkness and bad weather</li> </ol>
Sustainability	<ol style="list-style-type: none"> <li>1. Support of sustainable transport modes</li> <li>2. Edge delineation to reduce edge damage</li> </ol>

## F - Verges, Landscaped Areas and Trees

Table 17

Key Objectives	
Safety	<ol style="list-style-type: none"> <li>1. Obstruction to user visibility</li> <li>2. Leaf fall and debris from trees and bushes causing slippery surfaces</li> <li>3. Root growth affecting surface regularity</li> </ol>
Serviceability	<ol style="list-style-type: none"> <li>1. Improved quality of user experience</li> </ol>

Sustainability	<ol style="list-style-type: none"><li>1. Landscape conservation</li><li>2. Support for habitat and biodiversity</li><li>3. Problems of root growth causing damage to road surface, structures and drainage</li></ol>
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Each element of the network will be given a defined standard of condition, which is considered necessary to meet the requirements for safety, serviceability, and sustainability. Where it is not possible to meet these standards within the constraints of the available budgets, targets will be set for attaining and sustaining these standards in the long-term. These standards will be consistently applied and will be reviewed at intervals in light of changing circumstances.

For full details of Condition Standards to be applied see Appendix 19.

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## **Section 8 - Performance Management**

### **8.1 Performance Management Systems**

Service Plans for each Service within the Council have been developed as part of the Council's Performance Management System within the context of the Council Plan 2018-2023, Orkney 2020: Our Vision, and the Single Outcome Agreement with the Scottish Government.

The Performance Management System monitors and measures outcomes by means of several tools, including Service Plans (SP). Service Plans describe core services and activities and provide the mechanism for further planning to take account of new legislation, statutory guidance, political and management priorities and improvements identified through Specified Performance Indicators (SPI).

The mechanisms through which service priorities contained within service improvement plans are progressed, monitored and reported are by Service Plan Action Plans and Service Balanced Score Cards which are monitored by Service Management Teams, the Corporate Management Team and the relevant Service Committees of the Council.

### **8.2 Specified Performance Indicators**

The Accounts Commission as part of their obligations under The Local Government Act 1992 requires that local authorities publish performance information on a range of Specified Performance Indicators.

One such indicator is the percentage of the road network that should be considered for maintenance treatment. This is presented in the form of the results of the annual SRMCS survey.

The condition of roads will be affected by budgetary constraints, traffic flows/usage and weather patterns. Section 6 of this plan deals with relevant inspection, assessment and recording regimes.

### **8.3 Roads Function Actions within D and I SP Action Plan**

Updated depending on SP Balanced Scorecard performance.

### **8.4 Performance Indicators within D and I SP Balanced Scorecard**

Street Lighting, Safety Inspections, Defect Repairs and Road Condition all feature in the annual Development and Infrastructure Quality Objectives and Targets.

## **Section 9 - Programming and Priorities**

Developing and implementing an effective system for programming and prioritising roads maintenance is a key requirement of the roads service. It allows comparison of the overall maintenance requirement against the level of funding available and for appropriate choices to be made. It is especially important when dealing with claims and or awards against the Authority for failure to maintain the roads network properly.

The broad priorities for the respective types of roads maintenance (reactive, routine and programmed) will largely be determined by the outcome of safety and service inspections and condition surveys, assessed against local risks and policies identified within the Roads Service Plan. Priorities and programmes for the remaining categories of regulation, winter service and weather and other emergencies will largely arise out of the design of the service.

Reactive maintenance is primarily for maintaining network safety and involves attending to Category 1 defects and other matters requiring urgent attention arising from inspections and public requests in accordance with the specified standards of response.

Routine maintenance is primarily for providing defined standards of network serviceability, maximising availability, reliability, integrity, and quality. The priorities and programmes will largely be determined from Category 2 and 3 defects identified during inspections and the implementation of good working practices.

Programmed maintenance will be undertaken to provide a sustainable roads network that minimises costs over time and adds value to the community and contributes to a sustainable environment. In the longer term it will also contribute to the safety and serviceability of the network. These will incorporate works produced from long term programmes and Category 4 defects from Safety Inspections.

## **Section 10 - Winter Service**

### **10.1 Winter Service Policy**

The Winter Service will be provided in accordance with the aims and objectives of the Council Plan, the Development and Infrastructure Service Plan and the Winter Service Policy Statement.

The Roads Service will produce a Service Plan which details the carriageway and footway hierarchy for precautionary treatment, post treatment and snow clearing operations. The plan will be reviewed annually following consultation with Community Councils and other stakeholders. The Service will monitor the standard of performance achieved and all fixed and variable costs incurred, and the Roads and Environmental Services Manager will present an annual report to the Head of Infrastructure and Strategic Projects.

Although there is no requirement for a SLA under the current structure within Development and Infrastructure, the present SLA will be retained and developed as an operational specification and plan.

Development and Infrastructure, on behalf of the Council as Roads Authority, will continue to ensure that the approved standards and levels of service are achieved. The operational management and delivery of the service will continue to be undertaken by the Roads Function who will utilise the in-house resources of the Service supported by external contractors as appropriate.

### **10.2 Winter Service Operations**

#### **10.2.1 Service Level Agreement (SLA) for the Delivery of Winter Services**

The Service Level Agreement will specify the level of service that has been approved by the Council and the method of payment for the delivery of the service. The SLA is included in the List of Operational Plans within Appendix 17 of this plan.

#### **10.2.2 Winter Service Plan**

The Winter Service Plan provides the detailed information required to deliver the Winter Service, such as periods of cover, treatment times and route priorities for all roads in Orkney and is included in the List of Operational Plans within Appendix 17 of this plan.

## Section 11 - Weather and Other Emergencies

There is a requirement as part of the delivery of the Winter Service to provide a 24-hour response to weather and other emergencies, and maintenance teams are required to provide assistance during periods of bad weather or other notified civil emergencies, such as road traffic accidents, oil pollution incidents or extreme weather events.

The effects of climate change must also be considered in planning for both roads maintenance and for emergency response. Evidence suggests that the general climate changes will be;

- The climate will become generally warmer.
- Hot, dry summers and mild wet winters will be more frequent. Very cold winters will become less frequent and snow amounts will decrease.
- Relative sea levels will continue to rise, and extreme sea levels will occur more frequently.
- Severe gales and storms will occur more frequently.
- Heavy winter rain, with associated extreme rainfall events, will become more frequent.

The consequences of this will be an increased risk of flooding from both the sea and water courses and from the inability of the present drainage system to cope with the increased flows, together with deterioration and damage to the roads infrastructure and increased roads safety problems from adverse driving conditions.

In addition to the delivery of the Winter Service, maintenance teams will therefore be required to assist in various emergencies, including;

- High winds, including closure of the Churchill Barriers and the clearing of debris from the roads.
- Flooding from the sea due to high or surge tides.
- Flooding due to inadequate drainage following prolonged periods of heavy rain.
- Subsidence, landslips and high temperature.
- Road Accidents in association with the Cleansing Service.
- Oil or other pollution incidents in association with the Cleansing Service.
- Collapsed walls and buildings.
- Other Civil Emergencies.



## **Section 12 - Verge Maintenance**

### **12.1 Introduction**

The cutting of vegetation on roadside verges is done primarily for road safety purposes and to provide a refuge for pedestrians walking on the road. Vegetation on either the roadside verge or private land should not restrict visibility at junctions, access points or bends. In addition, sightlines and minimum stopping distances should be kept clear and signs, lights and marker posts clearly visible at all times.

The Roads Management and Maintenance Plan 2018-2023 is based on the good practice contained within the Code of Practice entitled "Well-managed Highway Infrastructure". In addition, the Council has a duty under the Nature Conservation (Scotland) Act 2004 and has made a commitment to conserve and enhance biodiversity in Orkney in the Orkney Islands Council Delivery Plan 2015 – 2018 and Our Plan 2018 – 2023.

The Verge Maintenance Plan recognises these aims and will contribute to the wider corporate objectives by managing the maintenance of the roadside verges in such a way that it enhances biodiversity whilst ensuring the safety of all road users.

The primary objectives of the verge cutting regime will be:

- To maintain safety;
- To prevent obstruction of sight lines, road traffic signs and other markers;
- To inhibit the growth of dangerous weeds (in accordance with the Weeds Act 1959);
- To prevent encroachment of vegetation onto the carriageway; and
- To manage the roadside verges in a manner that promotes biodiversity by conserving, wherever possible, special wildlife habitats and wild flowers.

### **12.2 Verge Maintenance Plan**

The Verge Maintenance Plan, which is reviewed annually, specifies the frequency of cutting and identifies which verges are considered conservation verges. The Plan is referred to in Appendix 17.

### **12.5 Safety Cuts**

Safety cuts will be undertaken primarily to maintain sight lines at road junctions, sharp bends and blind summits to maintain a safe breaking distance applicable to the character of the road.

### **12.6 Consultation**

The Verge Maintenance Plan will be reviewed annually following consultation with Community Councils and the Environmental Policy Officer.

## **Section 13 - Street Lighting**

### **13.1 Purpose**

The purpose of public lighting is to make the night time environment a safe place to be in for all users. This will include lighting to roads, footways and footpaths, Cycleways and public buildings. An appropriate level of lighting not only creates a safer environment but can also help improve the local economy and contribute to a more inclusive society.

### **13.2 Policy**

Guidance on the provision of street lighting is contained in the Roads Development Guide. The Council hopes to introduce an Orkney Islands Council Streetlight Policy within the term of this RMMP.

### **13.3 Legal Framework**

There is no statutory requirement on Local Authorities to provide public lighting. The Roads (Scotland) Act 1984 empowers a local Roads Authority to provide lighting for roads or proposed roads, which are, or will be, maintainable by them and which in their opinion ought to be lit.

Lighting will generally be designed and maintained in accordance with the European and British Standards BS EN 13201-4:2015 Road Lighting, and BS 5489-1:2013 Code of Practice for the Design of Road Lighting.

Further regulations and standards that affect the design and maintenance of road lighting include the Local Government (Scotland) Act 2003, the Health and Safety at Work Act 1974, the Construction (Design and Management) Regulations 2015, the New Roads and Street Works Act 1991 and the Electricity Safety, Quality and Continuity Regulations 2002.

### **13.4 Strategy and Hierarchy**

All elements of the public lighting system require inspection and maintenance to ensure that they are safe, operate correctly and continue to provide their designed performance and maximise their life. Maintenance can be divided into two categories:

- **Cyclical** – Preventative maintenance carried out on a cyclical basis to reduce or eliminate failures and to ensure that the system is operating safely in the way it is designed to.
- **Reactive** – Repair or replacement of equipment that has failed or been damaged.

An inspection and testing regime is in place to meet both the statutory requirements for electrical inspection and testing and to improve the reliability of the street lighting asset.

### **13.5 Inspection, Assessment and Recording Regime**

Control Pillar inspections will be undertaken on a 6-year cycle. Where defects are identified this will increase to an annual inspection until all defects are rectified at which time the inspections will revert back to a 6-year cycle.

### **13.6 Performance Management**

The percentage of light faults repaired within 7 days is a performance indicator within the annual list of Development and Infrastructure Quality Objectives and Targets.

# **Part D – Sustainability, Procurement and Financial Management**

## **Section 14 - Sustainable Roads Maintenance**

### **14.1 Sustainable Development Policy**

Roads maintenance has a significant role to play, and impact to make, in the achievement of sustainable development. To ensure delivery of this objective, authorities should develop policies for sustainable development in roads maintenance that ensure that there is a linkage between the strategic objectives of the authority at the highest level, and the materials, practices and processes used in an ongoing way on the roads network.

Sustainable development for roads maintenance involves living within environmental limits whilst achieving a sustainable economy and includes effective protection of the environment and the prudent use of natural resources.

### **14.2 Quality of Life**

The third core objective of the RMMP is network sustainability which can be defined as: -

- Minimising costs over time (whole life costs)
- Maximising community value
- Maximising environmental contribution

These are based on the principle that roads maintenance should not be just about repairing and replacing the roads infrastructure in the most efficient way possible but, in doing so, should add value to the community and benefit to the environment. These benefits may include improving the quality of public spaces, improving community safety or improved accessibility.

Not all maintenance will make a direct contribution, and, in most cases, the contribution will be small, however the cumulative effect of an efficiently managed maintenance programme will be significant.

In addition, sustainability will be fundamental to a Best Value review of roads maintenance. We will carry out a sustainability appraisal of our current practices and delivery arrangements to open new areas for consideration of continuous improvement.

### **14.3 Materials, Products and Treatments**

To meet the core objectives of the RMMP, materials, products and treatments used for roads maintenance must meet the required standards for both effectiveness and durability. However, the specification of materials and processes should consider the availability of locally sourced materials, goods or services whenever possible, even where this may incur a financial penalty or require the adoption of a modified technical standard. In the context of Best Value, the right balance of materials or treatments used in any circumstance should not just be a financial or technical issue but should take account of sustainability and their contribution to the wider community.

### **14.4 Technical Specifications and Guidance**

All roads maintenance will be designed to current technical standards and guidance. Where appropriate however, and based on sound engineering judgment, this will be modified to take account of local needs or circumstances.

## **14.5 Quality Management Training and Development**

Quality management systems are intended to encourage and facilitate consistent management and organisational processes. A substantial proportion of the activities carried out within Roads Services are already accredited under ISO 9001:2015 and it is the intention that all Roads Management and Maintenance will in time be subject to a quality management regime based on the same principles which will integrate all Roads Management and Maintenance Systems.

In addition, in pursuing the objective of network sustainability, the environmental contribution made by roads maintenance will be crucial. Consideration will therefore be given to the establishment of an Environmental Management System to ISO 14000 to address the range of issues affecting the environment. These may include;

- Noise.
- Materials utilisation
- Pollution control.
- Nature conservation and biodiversity.
- Environmental intrusion.

## **14.6 Noise**

Road traffic noise is not generally an issue within Orkney however, significant problems may occur with badly specified or maintained ironwork within urban areas. Although not necessarily a safety issue, we acknowledge the disruption caused by such an event and will work to resolve wherever possible.

## **14.7 Materials Utilisation, Waste Management and Recycling**

Roads maintenance activity consumes significant quantities of processed raw materials and manufactured products. Policies for materials purchasing and utilisation, waste management and recycling, can all make a major contribution to the objective of network sustainability.

Wherever possible we will maximise the use of local materials to minimise transport cost and support the local economy. This will also help to maintain the local character, particularly in the conservation areas. Sustainable purchasing and materials utilisation may however have both cost and technical implications which must be balanced against the environmental and economic benefits to the community.

The introduction of a landfill tax in 1996 and the subsequent increases in the tax have encouraged the development of a sustainable waste management policy within roads maintenance. Wherever possible, waste materials arising from the reconstruction of roads and footpaths or from other road surface treatments will either be reused directly or reprocessed for subsequent reuse as secondary materials. This includes all road planings and other bitumen products and all stone and concrete waste materials, including road sweepings. The Waste Electrical and Electronic Equipment (WEEE) Directive will also affect the disposal or recycling of street lighting equipment. Materials that cannot be reused or recycled will be disposed of to a licensed tip or facility. This will include inert excavated material at the Bossack landfill or other licensed landfill site, and silt and other oily wastes arising from gully emptying at the reed bed facility at Chinglebraes waste transfer station.

Wherever practicable we will;

- Retain and reuse materials on site.
- Maximise the value of re-used materials.
- Support the market development of recycled materials through their use wherever possible.
- Ensure that any materials that cannot be reused or recycled are disposed of in accordance with statutory requirements.

#### **14.8 Pollution Control**

Several maintenance operations have the potential to cause noise, air or water pollution. Advice will be sought from the Environmental Health Service, SEPA and other appropriate environment agencies regarding statutory requirements.

Scarifying or major resurfacing can cause environmental damage which is inevitable but where possible we will phase, and schedule works to avoid sensitive periods, including the tourist season in main tourist locations and potentially difficult weather conditions.

Fuel and other material storage areas both in depots and sites will be located with care. They will not be sited where they could cause damage to landscape or nature conservation or where they could pollute watercourses or groundwater.

Arrangements will be available to deal with diesel spills particularly on major sites.

All planning and environmental requirements will be complied with.

The use of rock salt for winter maintenance activities will be carefully managed to reduce the impact on the environment.

#### **14.9 Nature Conservation and Biodiversity**

Biodiversity is simply 'the Variety of Life' from the smallest bug to the mightiest whale, along with the ecosystems they live in. Conserving biodiversity is not just about rare and threatened species and habitats, but the common place as well such as, our road side verges and wider 'soft estate'. All those who care about the countryside are in fact appreciating biodiversity. It is important for maintaining the quality of our lives and is intimately bound up with it.

Although the countryside may still appear visually attractive, it has become apparent that much of its richness and diversity is under threat; some plants and animals that were once familiar are now rare. Nature has an in-built propensity to change, continually evolving new variants and new species, but all of this occurs naturally over a very long period. Biodiversity cannot evolve fast enough to compensate for the losses and declines we are currently experiencing.

In 2005, Scotland launched 'Scotland's Biodiversity: It's in Your Hands' a 25-year strategy for the conservation of the biodiversity of Scotland for all. The strategy has been given support from the highest level through the new Biodiversity Duty in the Nature Conservation (Scotland) Act 2004. This marks a major step in the conservation of biodiversity. Our Orkney Local Biodiversity Action Plan has seen great success in achieving our local targets and actions. It is now more important than ever to keep the forward momentum and encourage more participation in the delivery of the local plan and national strategy.

Orkney Islands Council has made a commitment to conserving and enhancing biodiversity in Orkney in the Orkney Islands Council Delivery Plan 2018 – 2023 and Our Plan 2018 – 2023.

The Roads Management and Maintenance Plan will contribute to the wider corporate objectives of the Council by managing the maintenance of road verges and the wider "soft estate" in accordance with the plans noted above, whilst ensuring that the safety of road users is not/never compromised.

#### **14.10 Dealing with Noxious Weeds**

The control of injurious and noxious weeds is a statutory responsibility under The Noxious Weeds Act 1959. The Wildlife and Countryside Act 1981 also makes it an offence to plant, or otherwise cause to grow any plant in the wild at a place out with its native range. We will continue to work in accordance with these Acts and with adjacent landowners to control and prevent the spread of noxious weeds. The prescribed weeds are;

- Ragwort.
- Broad leaved dock.
- Curled dock.
- Creeping thistle.
- Spear thistle.

Advice on controlling ragwort is given in the Code of Practice. Further professional advice will be sought on the methods of control to be used for the control of the above weeds.

#### **14.11 Environmental Intrusion**

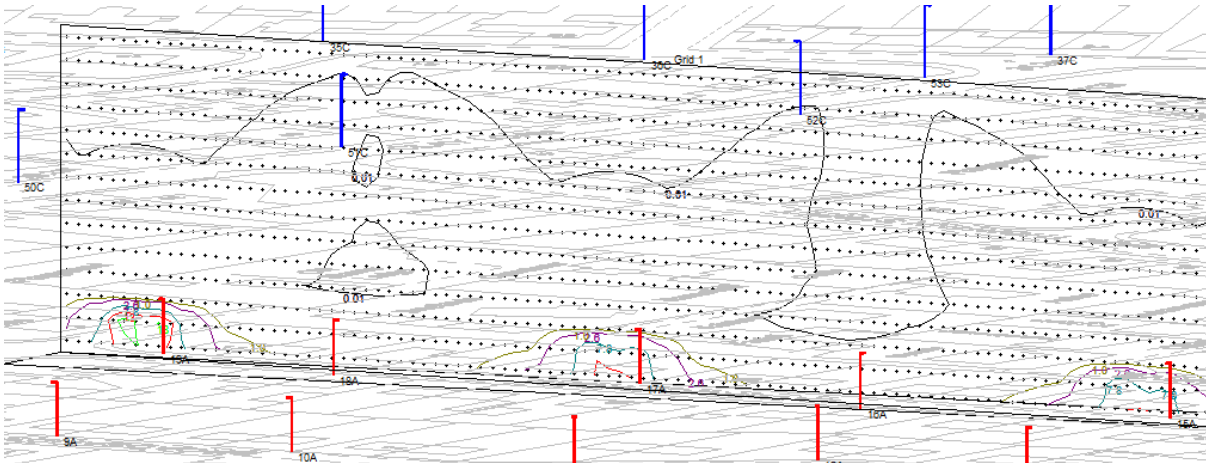
Depots and material storage are often the most visible evidence of the environmental awareness of the service. Whilst these depots must meet the operational requirements of the service, we will ensure that they are located, designed, managed and maintained to the highest practicable environmental standards.

Excessive and redundant sign "clutter" will also cause visual intrusion, opportunities will be taken to remove or simplify redundant signing as part of planned maintenance works.

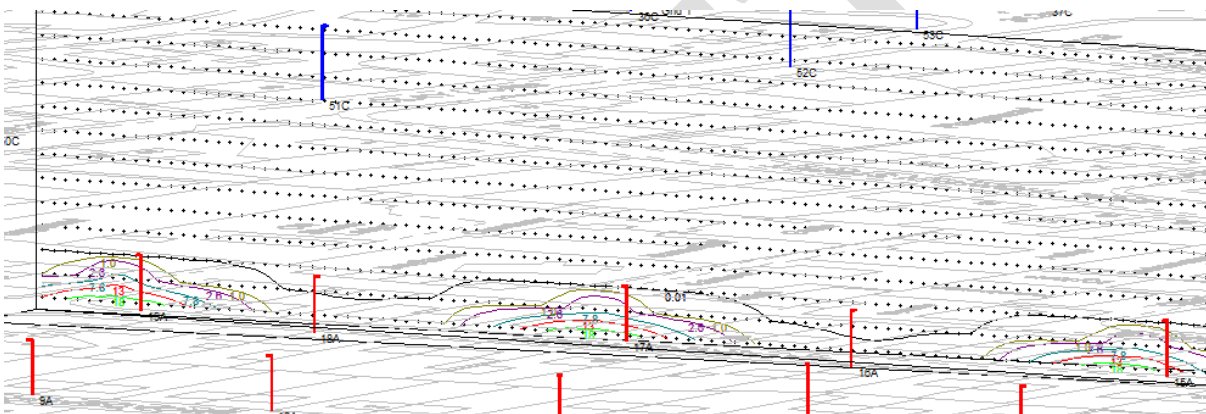
Perhaps the most obvious form of environmental intrusion is the light pollution caused by streetlighting and other lit assets. At the time of writing we have converted approximately 75% of our Street Light network to LED with the aim of converting the entire network by March 2019. This is dramatically reducing the upward lighting spill which enhances the ability to enjoy the night sky in Orkney.

The below examples highlight the lighting spill of 0.01lux which is equivalent to quarter moonlight. Example A highlights how the old SON T lanterns contributed to the Orange glow which used to shine over our urban areas. Example B shows the dramatic reduction in light pollution with the introduction of LED.

## Example A - 100W SON T



## Example B - Philips 46W Luma Mini



There are growing numbers of Local Authorities across Scotland now considering or implementing part night dimming/turn off in the early morning hours. With growing budgetary concerns this could be construed as a low risk reduction in service with dimmed lights using considerable less power yet still providing an appropriate lighting level. This would again contribute to a lessened light pollution. We currently don't dim any of our Street Lighting but may consider doing so in the future.

Signs will not be illuminated unless statutorily required and the latest revision to the "Traffic Signs Regulations and General Directions" in 2016, removes the legal requirements for lighting some traffic signs. We will work towards removing unnecessary lit signs in line with this document.

### 14.12 Environmental Consultation and Assessment

Environmental issues cover a very wide range, each of which is a specialist area and on which experience and best practice is continuing to develop.

We will consult local environmental and conservation groups to develop advice and environmental competence, and to give greater understanding of road maintenance problems. Environmental advisers within the Council will also be consulted. Such consultees on road maintenance and policies are a fundamental requirement for Best Value reviews.

## **Section 16 - Financial Management**

The Head of Finance will report on the financial performance of the service measured against a budget profile developed from a needs-based management and maintenance programme, as specified in the Roads Service.

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# **Appendices**

Appendix 1 – Carriageways

Appendix 2 – Other Council Roads

Appendix 3 – Footways

Appendix 4 – Footpaths

Appendix 5 – Cycleways

Appendix 6 – Street Lights

Appendix 7 – Illuminated Signs and Bollards

Appendix 8 – Non-Illuminated Signs and Bollards

Appendix 9 – Bridges and Structures

Appendix 10 – Sea Walls and Retaining Walls

Appendix 11 – Drainage

Appendix 12 – Line Marking

Appendix 13 – Safety Barriers and Railings

Appendix 14 – Life Buoys

Appendix 15 – Car Parks

Appendix 16 – Other Assets

Appendix 17 – List of Operational Plans

Appendix 18 – Defect Investigatory Levels

Appendix 19 – Condition Standards

Appendix 20 – Risk Register