ENVIRONMENT AND SUSTAINABILITY SCRUTINY COMMITTEE – 14TH MAY 2019

SUBJECT: **HIGHWAY ASSET MANAGEMENT PLAN ANNUAL STATUS AND OPTIONS REPORT – CARRIAGEWAY ASSET**

REPORT BY: **INTERIM CORPORATE DIRECTOR - COMMUNITIES**

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1. PURPOSE OF REPORT

1.1 To provide the Scrutiny Committee with a summary status of the Council's Highway (carriageway & footway) asset and to ask Scrutiny members to consider and comment on the options available for future planned maintenance strategies and their resultant budgetary implications, prior to a final funding strategy being considered as part of the 2020/21 budget setting process.

2. SUMMARY

2.1 The report focusses on the Annual Status and Options Report (ASOR - Appendix 1) for carriageways, which is based on the Asset Management Framework template derived from the collective effort of Welsh and Scottish Local Authorities, namely; County Surveyors Society Wales (CSSW) and the Society of Chief Officers of Transportation in Scotland (SCOTS).

2.2 The ASOR analyses evidence of Asset Management practice and it can;

- Describe the current condition of the asset
- Detail the service that the asset and current budgets are able to provide
- Present the options available for future planned maintenance budgets and strategy

2.3 The long term options within the report consider the strategic approaches available together with the proposed outcomes associated with each alternative.

2.4 The predicted impacts of future options are explored and recommendations made based upon this evidence.

3. RECOMMENDATIONS

3.1 Caerphilly Council's resources, both operational and financial, are inevitably finite. This reinforces the need for a proportionate response to the longer-term impact of budget commitment in relation to maintenance strategies. Members are therefore asked to review the strategic approaches (Para 5.9), which detail the future impacts and financial liabilities associated with each option and consider the long term impact on the network and our future generations.

3.2 Given the value of the Highway asset and its strategic importance, Members are therefore asked to support investing as much capital as possible into the Authority's Highway Infrastructure while recognising that there will be other strategic priorities competing for the limited resources available to the Authority over the medium term.

3.3 In this context it is recommended that the Scrutiny Committee supports option C4 paragraph 5.9 (Maintain current condition) as the minimum standard we should consider adopting. This would require an annual capital investment increase of **£1,570,000** on top of the 2019/20 planned maintenance budget of £767,000 (option C2), **or** an investment increase of **£660,000** if the temporary MTFP saving for 2019/20 is restored in 2020/21 (option C3). This would maintain roads at current standards in the medium term.

3.4 Members are asked to note that the final approval of the Capital Programme is a matter for Full Council when annual budget proposals are considered in February each year.

4. REASONS FOR THE RECOMMENDATIONS

4.1 To allow Cabinet and Council to understand the Scrutiny Committee views on the preferred option to achieve a strategic approach to planned maintenance when considering future funding programmes.

4.2 To achieve a strategic approach to planned maintenance that considers the impacts of the highway network and its effect on future generations.

5. THE REPORT

5.1 The highways infrastructure provides local access to all road users be that for education, leisure, business or wider authority and regional connectivity. It shapes the character of an area adding to the social, well-being and quality of life in a community. Experience during the recent severe weather events has highlighted the significant cost to the economy and social life when parts of the infrastructure become inaccessible or defective.

5.2 The ASOR (Appendix 1) follows a best practice approach in terms of applying the principles of Highway Asset Management. In particular, it uses tools, methods and advice pertaining to 'Long Term forecasts' and 'Impact Risks' to illustrate the effects of longer-term maintenance strategies and budgetary implications.

5.3 The total length of carriageway in the authority is 1,176 km and footway is 2,033 km, with each asset increasing by over 27km and 55km respectively, over the past 5 years. The increase in asset size has been met with MTFP savings resulting in a drop in planned maintenance regimes and the ASOR demonstrates the medium to long term implications.

5.4 The status report for carriageways identifies the 2018/19 planned corrective maintenance (Resurfacing) and planned preventative Maintenance (Cold applied ultra-thin surfacing) budget of circa £2.75m was less than a third of the Annualised Depreciation Cost (ADC) of £10.6m, with ADC representing the average amount by which the asset will depreciate in one year if no investment in asset renewal is made.

5.5 The investment level of £2.75m over the last year (including £0.98 million Welsh Governement Grant funding) is providing return periods that will result in roads having a new surface applied, on **average**, every 18 years. Without the Grant funding, the resepective and **average** resurfacing time inreases to 25 years. These resurfacings are predominantly Cold applied ultra-thin surfacings (preventative treatments).
These projections are not considered to be sustainable in the long term.

5.6 Five options have been analysed, in relation to budget allocation, to determine the predicted condition in 20 years, along with the consequential cost impact;

- C1: 2018/19 Budget £2.75m (includes WG Grant Funding levels continuing for 20 years of £0.98m per annum)
- C2: Actual Budget 2019-20 £767k (plus WG Grant Funding for Year 1 only £0.977m)
- C3: 2019/20 Budget (Temporary £910k MTFP saving reinstated)
- C4: Option to Maintain Current Conditions £2.337m (Preventative)
- C5: Option to Improve Current Conditions £13m (Corrective)

5.7 The ASOR report summarises predicted impacts for each option in relation to budget, reactive maintenance, planned maintenance, Third Party Claims and customer satisfaction. Varying levels of outcomes are predicted based on the varying investment options. In terms of optimistic expectations, option C4: Maintain Current Condition (Preventative) – produces the most realistic steady-state condition opportunity, which reflects the most viable level of investment.

5.8 It should be noted that the prediction tools are sensitive to the variety of surfacing/preservation techniques that can be used. If you compare option C1 and C4 in the table below (5.9), it is evident that C1 identifies a deteriorating network and C4 identifies a steady state network even though C4 has less money invested than C1. This is down to the split of the investment and the amount of surface area treated. C1 has £1.887m spent on traditional resurfacing (small amount of surface area treated) and £860k on surface preservation treatments (large amount of surface area treated) and C4 has a projected investment of £837K and £1.541m respectively. With surface preservation treatments a much larger area is treated although the expected life expectancy is less. However, the longer term projections give a reduced amount of projected deterioration.

5.9 The table below details the total proposed highway maintenance budget commitment, deterioration from baseline current condition and consequent investment to return to current standard (in 20 years) associated with each option.

Option	Planned surfacing Budget Commitment (000's)	Condition change over 20 years	Investment to recover / achieve current standard
C1 - 2018/19 Budget, including assumed WG grant funding over 20years	£2.75m	4% Deterioration	If 2018/19 budget levels and WG grant funding (£0.98m) are maintained for 20 years a 4% deterioration in asset condition will occur.
C2 – 2019/20 Actual budget figures with Grant funding for one year only	£767k plus Year 1 only – grant funding £0.977m	31% Deterioration	If current budgets are maintained with no further cuts or increases the asset will deteriorate leaving our future generations with a **£30.4 million** investment requirement to return roads back into todays current standards
C3 – 2019-20 Budget (Temp £910k MTFP saving reinstated)	£1.667m	16% Deterioration	If current budgets are maintained with no further cuts or increases the asset will deteriorate leaving our future generations with a **£15.7 million** investment requirement to return roads back into todays current standards

C4 – Option to maintain current conditions	£2.337m	0% Current conditions maintained	Steady State achieved. (Future generations No better / No worse off)
C5 – Option to Improve condition	£13m	17% Improvement	This demonstrates the long term funding requirements to acieve a 17% improvement in asset condition over a 20 year period.

5.10 The Highway asset is currently underfunded and from the above summary, it is apparent that any reduction of budget commitment greatly affects the rate of road surface condition deterioration and the consequent level of investment needed to address this and to restore the condition to current (baseline) standards.

5.11 It is however, important for members of the committee to note that Caerphilly County Borough Council is not in a unique position in relation to planned, pro-active maintenance of its highway asset. Most Local Authorities are facing similar issues as a result of Public Sector Austerity and the lack of investment in the highway network has been the subject of significant media attention.

5.12 In terms of benchmarking our position. The recently published APSE Performance Networks report for Roads, Highways and Winter Maintenance 2017-18, which compares data from across the UK identifies Caerphilly as being ranked as follows in comparison to the 19 Authorities that submitted data:-

- Condition of all non principal roads (Class A roads - England and Wales only) – Caerphilly is ranked 12th out of 19 with 6.1% considered in a poor condition. The average for the 19 authorities is 5.71% in poor condition with the best being 2.0% in poor condition and worst being 12.4% in poor condition.
- Condition of non principal roads (Class B - England and Wales only) - Caerphilly is ranked 11th out of 19 with 3.6% considered in a poor condition. The average for the 19 authorities is 3.67% in poor condition with the best being 1.9% in poor condition and worst being 6.29% in poor condition.
- Condition of non principal roads (Class C - England and Wales only) - Caerphilly is ranked 14th out of 19 with 7.3% considered in a poor condition. The average for the 19 authorities is 6.56% in poor condition with the best being 0.8% in poor condition and worst being 16.3% in poor condition.

5.13 Caerphilly Council's resources, both operational and financial, are inevitably finite. This reinforces the need for a proportionate response to the longer-term impact of budget commitment in relation to maintenance strategies. The findings of the ASOR, as presented within this report, highlight the necessity for budget commitment to achieve option C4 as a minimum requirement.

5.14 It is noted that each year the Asphalt Industry Alliance (AIA) commissions an independent survey of local authority highway departments in England and Wales. The 2019 Annual Local Authority Road Maintenance (ALARM) survey reports that, overall, average highway maintenance budgets are up for the second successive year and there are some small signs that this is stemming further decline in local road conditions. This increase reflects the current availability of Grant funding. It should be noted that these figures are an average across England and Wales and England has seen a recent increase in Central Government grant funding that is not fully reflected in Wales.

5.15 The AIA report identifies "Despite these glimmers of hope, the average annual carriageway budget shortfall in England and Wales is reported to be £3.9 million per authority, up from £3.3 million in 2018, and the amount needed to bring the local road network up to scratch is now approaching £10 billion."

5.16 The report further acknowledges “it’s a long journey from slowing decline to improving the overall condition and resilience of the network – which we all rely on every day – and the additional investment could go to waste if it is not continued. Sustained investment over a longer timeframe is needed if we want a local road network that supports enhanced mobility, connectivity and productivity.”

5.17 The results of the ALARM survey echo the content of the ASOR report and further support the information within this report.

5.18 It should also be noted that that if there is any deterioration to the highways network then it follows that the number and value of third party claims will increase, and this will lead to increased insurance premiums to the authority and an increase in claim settlements.

5.19 In terms of insurance claims relating to Highway defects, Caerphilly’s percentage change in number of non-repudiated third party claims in the last 3 years compared to the previous 3 year period results in Caerphilly being ranked 46th out of 50 with an increase of 42.31%. This compares to an average of a -5.27% reduction. The largest increase in another authority was 100% and the biggest decrease was -88.89%. This needs to be taken in context as Caerphilly’s historical repudiation rate and claims settlement is extremely low. By way or example, Caerphilly’s actual repudiation rate for 2017/18 for 66 claims received was 90%. The number of claims settled was 15no with a total value of £2785.00.

5.20 Further Caerphilly’s performance in relation to responding to emergencies and undertaking planned safety inspections is second to none with Caerphilly ranked 1st out of 53 and 41 authorities respectively achieving 100% compliance against both measures.

6. ASSUMPTIONS

6.1 No inflationary costs are included. Analysis is based upon current budget commitments and agreed engineering deterioration modelling.

6.2 Option C1 makes an assumption that Welsh Government will continue with their current grant funding for the next 20 years with a value of circa £1M per annum.

6.3 The report assumes that the current austerity measures will continue in the medium term.

7. LINKS TO RELEVANT COUNCIL POLICIES

7.1 The report links to the Council’s Corporate Plan 2018-2023, and contributes to the Well-being Objective 4:

- Promote a modern, integrated and sustainable transport system that increases opportunity, promotes prosperity and minimises the adverse impacts on the environment

7.2 There are further links to the Infrastructure Service Objectives:

- To promote safe and efficient transport and land drainage infrastructure through quality service delivered by means of cost effective management, maintenance and improvement of the networks.

8. WELL-BEING OF FUTURE GENERATIONS

8.1 This report links directly to the Well–being goals within the Well-being of Future Generations Act (Wales) 2015:

- A prosperous Wales
- A resilient Wales
- A healthier Wales
- A more equal Wales
- A Wales of cohesive communities, and
- A globally responsible Wales

8.2 It is consistent in all of the five ways of working as defined within the sustainable development principle in the Act that it supports:

8.2.1 **Long-term –** The ASOR provides long term resourcing and asset management solutions of this specialised service and allows for more effective and predictable resource/financial/carbon reduction commitments going forward.

8.2.2 **Integration -** A well maintained highway forms part of an overall strategy providing efficient integration of local roads to regional transport systems.

8.2.3 **Involvement –** The ASOR principles were developed collaboratively by CSSW and SCOTS involving all regional authorities in Scotland and Wales. During internal consultation of the document input was also received on cross border issues to ensure network users' needs are considered as they leave / enter the Authority.

8.2.4 **Collaboration –** The ASOR is based upon a collaborative approach between Welsh and Scottish Authorises. It not only brings internal departments together to deliver effective planned maintenance regimes across the authority over the medium and long term, but also promotes discussion and agreement with neighbouring authorities.

8.2.5 **Prevention –** Carefully prioritised budget commitment for planned maintenance regimes will afford timely proactive response; thus ensuring the asset is best maintained and safe for use. Confidence of developed future maintenance programmes will prevent unnecessary deterioration of the network and lessen the burden of reactive responses, promoting a more efficient use of finite budgets.

9. EQUALITIES IMPLICATIONS

9.1 An Equalities Implication Act (EIA) screening has been completed in accordance with the Council's Strategic Equality Plan and supplementary guidance. No potential for unlawful discrimination and/or low level or minor negative impact has been identified, therefore a full EIA has not been carried out.

9.2 Following the sound Asset Management Principles contained within the ASOR and adopting a preventative approach will benefit the vulnerable, young and elderly, by ensuring the infrastructure on which other services depend (including emergency services), remains robust throughout the years to come.

10. FINANCIAL IMPLICATIONS

10.1 The Highway Operations budget funded this statutory provision/service with limited grant funding options from Welsh Government, however, a longer term corporate / strategic approach is required.

10.2 An increasing asset size together with MTFP savings have significantly reduced the planned maintenance budget which will in turn add pressures to the existing budget for reactive maintenance (potholes) of circa £950,000. When comparing the amount of planned versus routine/reactive works undertaken since 2012/13 it is evident that the planned works (carriageway resurfacing) has been declining to its lowest percentage split last year as demonstrated below :-

	Planned	Routine/Reactive
2017/18	55%	45%
2016/17	57%	43%
2014/15	68%	32%
2013/14	69%	31%
2012/13	64%	36%

10.3 In addition to the MTFP savings already identified and committed, the need to maintain the highway network needs to be set in the context of further, significant revenue savings requirements from 2020/21 onwards.

10.4 Maximising capital spend on the Highway Infrastructure to reduce future revenue liabilities is therefore a key issue for the Authority that will need to be considered alongside other strategic priorities competing for the limited resources available to the Authority.

10.5 The financial implications of the various options are outlined in the table at paragraph 5.9. The range of financial investments achieve varying degrees of highway asset deterioration or improvement.

10.6 As outlined in the report, the approach recommended by officers (after realistic consideration of the current financial climate) is option C4 (maintain current condition). In this regard, taking into account that the highway asset is valued at over £2 billion, an increase in capital investment would be required. This could be achieved in one of two ways:-

- Either £1,570,000 per annum on top of the current 2019/20 planned maintenance budget of £767,000, which already includes £739,000 capital.
- Or, - £660,000 per annum on top of the 2019/20 budget of £767,000 should the £910k temporary MTFP one year saving be reinstated for 2020/21 which again already includes £739,000 capital.

10.7 Increasing capital investment in the Highway Network could also be achieved by using a combination of prudential borrowing, the insurance and risk management fund and WG Highways Capital Grant (if it continues). However, Members should note that any new borrowing would have revenue implications that would require growth to be identified with consequential savings being required.

10.8 This is required to underpin the planned maintenance programmes, maintain long-term asset condition and protect the most valuable asset Caerphilly owns.

11. PERSONNEL IMPLICATIONS

11.1 There are no direct personnel implications from this report.

12. CONSULTATIONS

12.1 All comments received have been taken into consideration and are included in the report.

13. STATUTORY POWER

13.1 Highway Act 1980.

13.2 Well-being of Future Generations (Wales) Act 2015.

Author: Chris Adams – Highway Engineering Group Manager (adamsc@caerphilly.gov.uk)
Consultees: Councillor S Morgan – Deputy Leader and Cabinet Member for Economy, Infrastructure, Sustainability & Wellbeing of Future Generations Champion
Councillor DT Davies – Chair of Environment and Sustainability Scrutiny Committee
Councillor A Hussey – Vice Chair of Environment and Sustainability Scrutiny Committee
Mark S Williams - Interim Corporate Director – Communities
Marcus Lloyd – Head of Infrastructure
Robert Tranter – Head of Legal Services/Monitoring Officer
Stephen Harris – Interim Head of Business Improvement and Section 151 Officer
Corporate Management Team
Mike Eedy – Finance Manager
Shaun Watkins – Principal Personnel Manager
Anwen Cullinane – Senior Policy Officer – Equalities and Welsh Language
Sue Ruddock – Insurance and Risk Manager

Background Papers:
Highway Asset Management Plan (HAMP)
Annual Local Authority Road Maintenance (ALARM) survey

Appendices:
Appendix 1 Annual Status and Options Report

APPENDIX 1

Roads/Highways
Annual Status and Options Report

Carriageway Asset
Caerphilly CBC

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1 Introduction

This report presents a summary of the council's carriageway asset as at the end of March 2019, and essentially;

- Describes the current condition of the asset
- Details the service that the asset and current budgets are able to provide
- Presents the options available for the future

The report complements the Highway Asset Management Plan (HAMP). It provides information to assist with budget setting for roads.

Status

The status of the asset is provided in terms of current condition, the output that are delivered, the standards being achieved and an indication of customer satisfaction.

Options

The report considers the following options:

- **C1 -** Maintain 2018/19 Budget (includes WG Grant Funding levels for **20 years**)
- **C2 -** Maintain 2019-20 Budget (includes WG Grant Funding for Year 1 only)
- **C3 -** Maintain 2019-20 Budget (Temporary £910k revenue saving reinstated)
- **C4 -** Option to Maintain Current Conditions **(Preventative)**
- **C5 -** Option to Improve Current Conditions **(Corrective)**

Long Term Forecasts

Road assets deteriorate slowly. The impact of a level of investment cannot be shown by looking at the next couple of years. The report includes 20 year forecasts to enable decisions to be taken with an understanding of their long term implications.

Impacts Risk

To reflect continuing budgetary pressures the report contains an assessment of the impact for each option presented. In some instances however, the level of detail of assessment is currently hindered by an absence of data.

2 Carriageways

2.1 Status Report

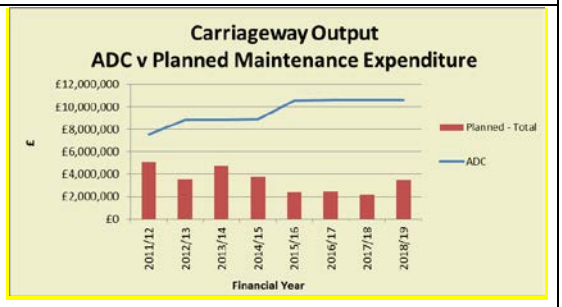
Asset Group: Carriageways

The Asset

- The total length of carriageway is **1,176 km**
- The carriageway asset has increased by over **27 km** in the last five years.

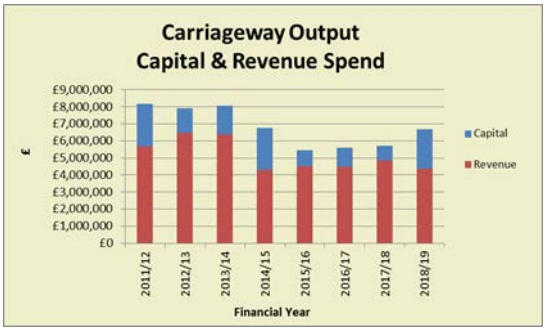
Valuation

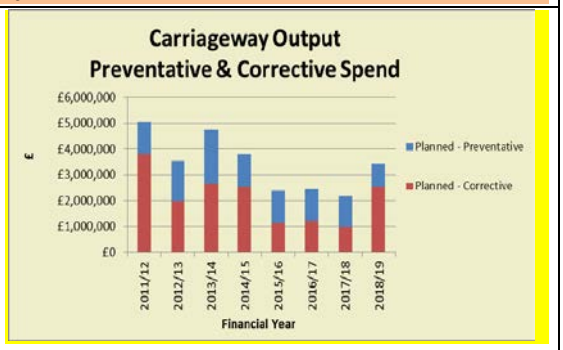
Gross Replacement Cost	£1,145,197k
Depreciated Replacement Cost	£1,027,475k
Annualised Depreciation Charge	£10,611k



- The Annualised Depreciation Charge (ADC) £10.6m represents the average amount by which the asset will depreciate in one year if no investment in asset renewal is made.
- Current Planned Maintenance Expenditure of about £3.5m (including a one-off grant of £980k and deferred grant of £496k), was only a third of the ADC of £10.6m.

Historical Investment





- Capital Expenditure has been supplemented by a £1.5m grant, (including a one-off grant of £980k and deferred grant of £496k), in 2018-19 but has generally reduced over the last few years.
- Investment in preventative and corrective treatments is in a slow decline.
- Revenue funding has also reduced over the last five years.

Investment levels over the last year, (including the £1.5m grant funding), meant that 5.7% of roads had a new surface applied. This means that on **average** roads will only have a new surface applied once every 18 years. Without the grant, only 4% of roads would have been treated increasing the **average** resurfacing time to 25 years.

This is not considered to be sustainable in the long term as the deterioration rate occurs differently on each road meaning some roads may not get surfaced for 40+ years.

Current

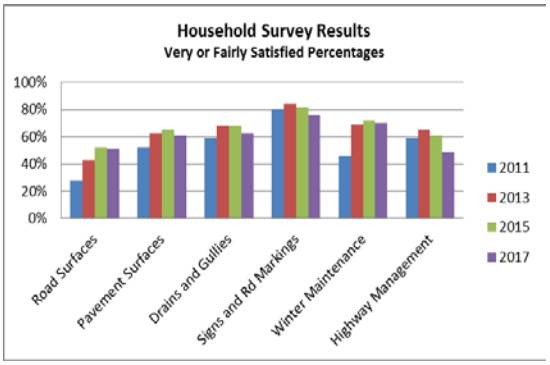
The current HAMP prediction modelling is based upon:

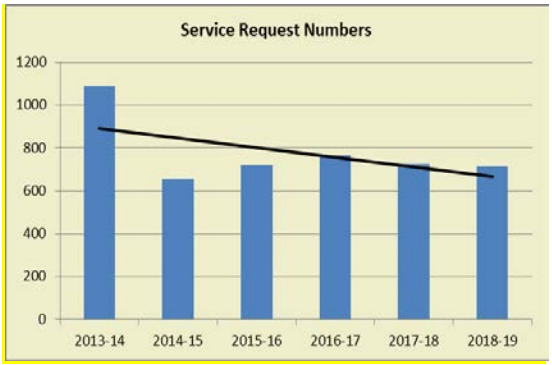
- A Roads: Aim to maintain condition using 50% corrective / 50% preventative.
- B & C Roads: Controlled deterioration (allowing roads to deteriorate to a national average condition
- U Roads: Aim to improve condition to a target RCI of 32% using a predominanty preventative strategy based upon 25% corrective / 75% preventative strategy .

Cost Category Summary

	Cost Category	Budget	Output
Capital	Planned Maintenance – Corrective (inc. £160k RCCO and £1.5m Grant)	£2,500k	• 85,300m^2 Resurfacing • 292,750m^2 Surface Dressing
Revenue	Planned Maintenance - Preventative	£910k	
	Routine Cyclic Maintenance	£475k	
	Routine – Reactive Repairs (emergency)	£378k	
	Routine – Reactive Repairs (non-emergency)	£1,000k	
	Routine – Inspection & Survey	£206k	
	Operating Costs	£737k	• Winter Maintenance
	Overheads	£497k	• Staff & Central Charges
	Loss	£408k	• Insurance Claims

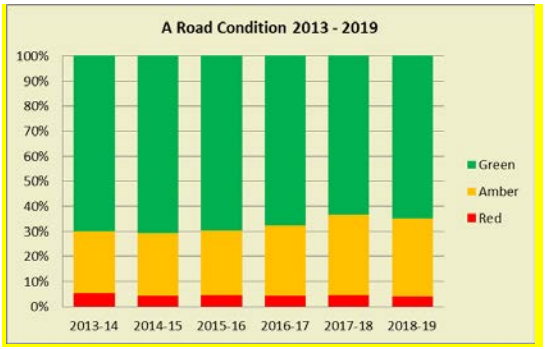
Customer Expectations

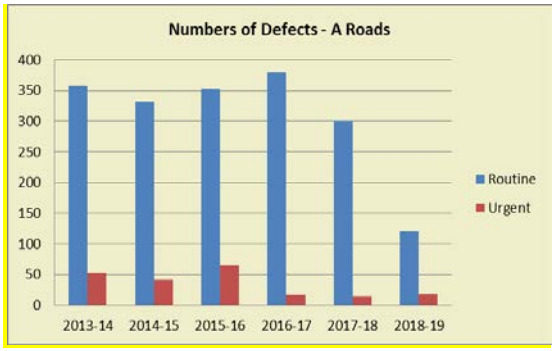




- The level of customer satisfaction has trended downwards in the most recent survey in 2017 compared with an upward trend in the previous surveys.
- The number of customers contacting the council about carriageways has remained fairly consistent over the last five years.

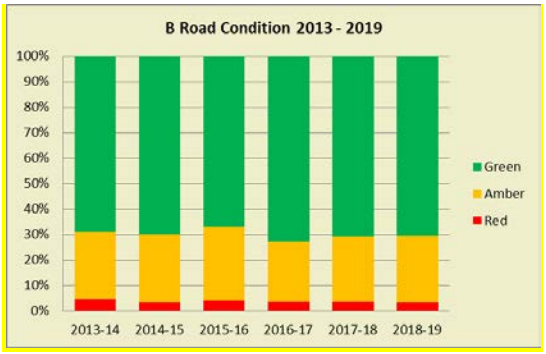
A Road Condition

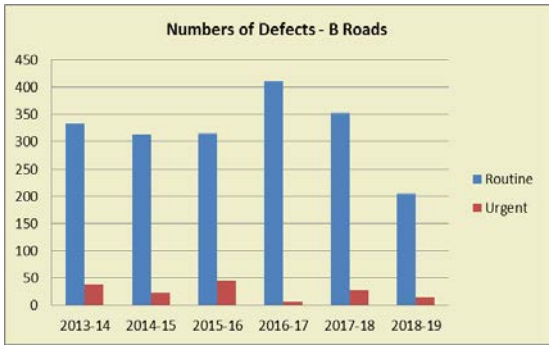




- The RCI for 2018/19 was 3.9% which is a decrease from 4.6% the previous year. The levels of roads at a green level is decreasing consistently indicating a steady deterioration in road condition
- The level of urgent defects is broadly consistent over the past few years.
- The level of routine defects has trended downwards over the past few years.

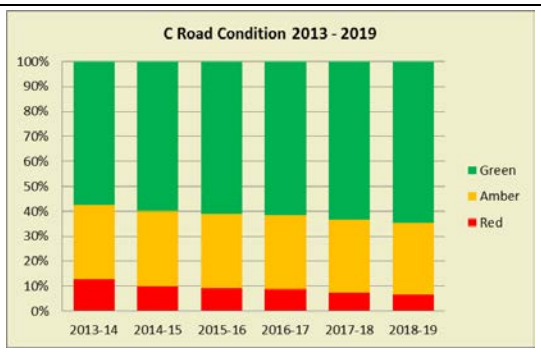
B Road Condition

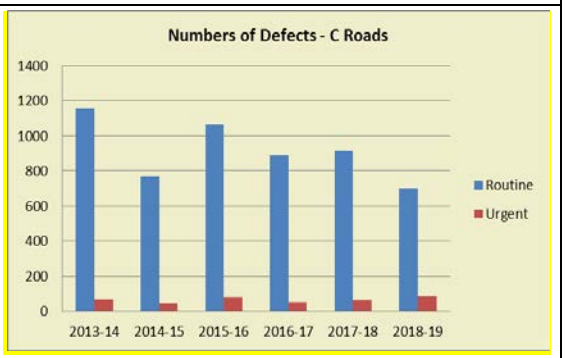




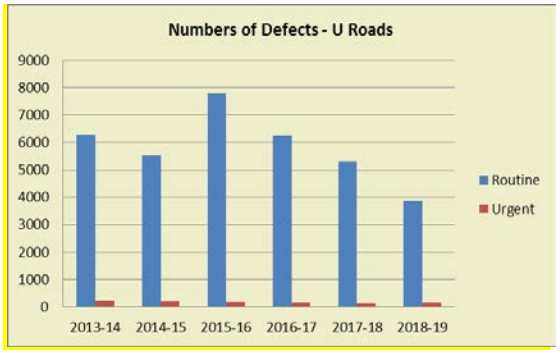
- The RCI for 2018/19 was 3.4%, a slight improvement over the previous year. The levels of roads at green levels is also fairly consistent.
- The level of urgent and routine defects has reduced this past year.

C Road Condition





- The RCI for 2018/19 is 6.6% which is an improvemnet over the previous year.
- The level of urgent defects has increased ove the last three years.
- The trend for routine defects has decreased in the last year.

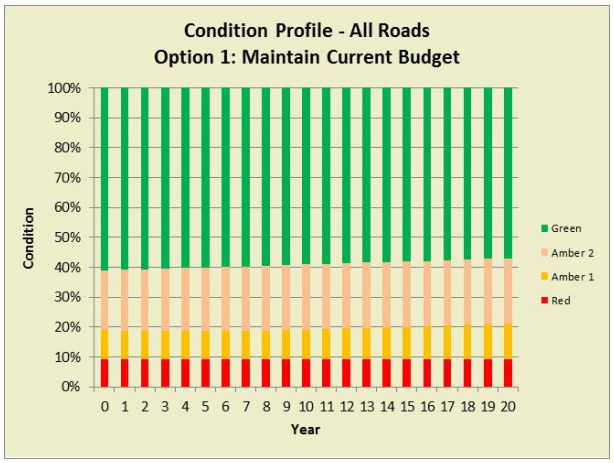
U Road Condition	There are no condition surveys / RCI data for U Roads  • The level of urgent defects has increased over the last year. • The level of routine defects has consistently declined over the last four years.

Carriageway Options

2.1.1 Option C1: Maintain 2018/19 Budget (includes WG Grant Funding levels for 20 years)

HAMP Cost Category	Expenditure (£000's) (2018/19 budget)	%
Planned Maintenance - Corrective	£1,887k	29%
Planned Maintenance - Preventative	£860k	14%
Routine Cyclic Maintenance	£475k	7%
Routine – Reactive Repairs (emergency)	£378k	6%
Routine – Reactive Repairs (non-emergency)	£1,000k	16%
Routine – Inspection & Survey	£206k	3%
Operating Costs (Winter Service)	£737k	11%
TOTAL	**£5,543**	
Overheads	£497	8%
Loss (3rd Party Claims associated with (c/ways)	£408	6%
TOTAL (including claims costs)	**£6,448**	

Predicted Condition



This option is predicted to result in the asset remaining at a similar standard over time resulting if WG funding is maintained. The percentage of carriageway in need of maintenance (red + amber condition) increasing by about 4% in 20 years.

Predicted Impacts

Reactive Maintenance

Continuance of this budget and WG funding levels is likely to keep the number of reactive repairs at a similar level over time.

Planned Maintenance

Based on the reported decrease in maintenance needs (5% over 20 years) this essentially equates to £6.5 million worth of investment to improve the percentage of roads at green condition and maintain the percentage of roads at red condition.

3rd Party Claims

3rd party claims are expected to remain similar to present levels.

Customer Satisfaction

It is predicted that customer satisfaction is expected to remain similar to present levels.

Option Summary

The baseline option of a continuance of current funding levels is predicted to result in:

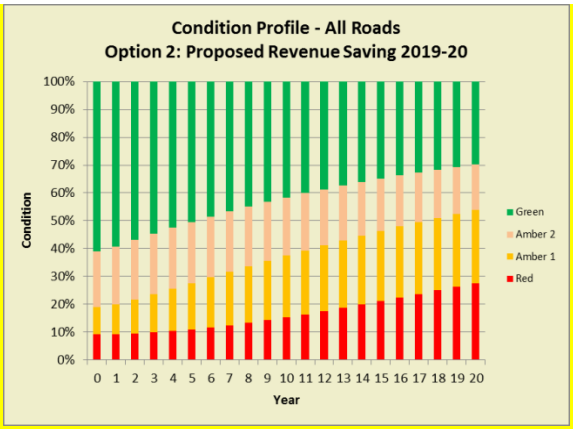
a. → annual budget remaining the same
b. → similar measured condition
c. → similar quantities of minor defects (pot holes and the like)
d. → similar amounts of 3rd party claims
e. → similar customer satisfaction

2.1.2 Option C2: Maintain 2019-20 Budget (includes WG Funding for Year 1 only)

Option C2 takes into account the actual budget savings and proposals for the 2019-20 financial year and carries these forward assuming WG funding is only available for next year only

HAMP Cost Category	Expenditure (£000's)	%
Planned Maintenance - Corrective	£1,716k **(£739 from year 2)**	36%
Planned Maintenance - Preventative	£28k	1%
Routine Cyclic Maintenance	£278k	6%
Routine – Reactive Repairs (emergency)	£286k	6%
Routine – Reactive Repairs (non-emergency)	£915k	19%
Routine – Inspection & Survey	£206k	4%
Operating Costs (Winter Service)	£491k	10%
TOTAL	**£3,920**	
Overheads	£497	10%
Loss (3rd Party Claims associated with (c/ways)	£408	8%
TOTAL (including claims costs)	**£4,825**	

Predicted Condition



This options is predicted to result in deterioration of the asset over time resulting in the percentage of carriageway in need of maintenance (red + amber condition) increasing from the current 39% to 70% in 20 years.

Predicted Impacts

Reactive Maintenance

Continuance of this budget model will increase the level of reactive repairs substantially over time.

Planned Maintenance

Based on the reported increase in maintenance needs (31% over 20 years) this will essentially leave our future generations with a requirement to find £40.3 million worth of investment to bring the carriageway condition back to the current standard.

3rd Party Claims

3rd party claims are expected to rise with a potentially greater level of pay outs.

Customer Satisfaction

It is predicted that customer satisfaction will decrease with the worsening condition of the carriageways.

Option Summary

The option detailing the savings from 2019-20 is predicted to result in:

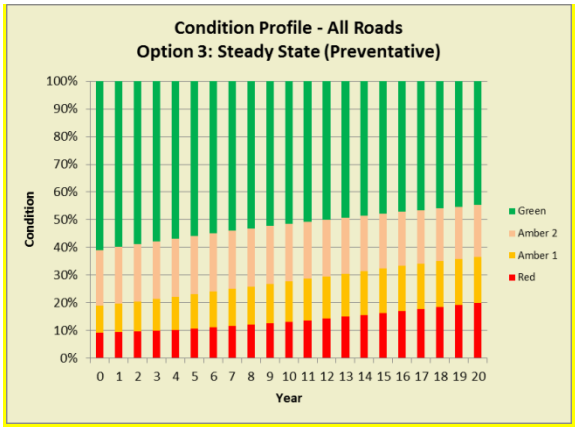
a. ↗ annual budget increase required over time to accommodate increasing reactive repairs
b. ↘ reduction (deterioration) of measured condition
c. ↗ increasing quantities of minor defects (pot holes and the like)
d. ↗ potential for increase in 3rd party claims
e. ↘ decreased customer satisfaction as a result of increasing repairs

2.1.3 Option C3: Maintain 2019-20 Budget (Temporary £910k revenue saving reinstated)

Option C3 re-instates the budget saving for 2019-20 and carries this forward. This option does not include any grant funding

HAMP Cost Category	Expenditure (£000's)	%
Planned Maintenance - Corrective	£849	18%
Planned Maintenance - Preventative	£828k	18%
Routine Cyclic Maintenance	£278k	6%
Routine – Reactive Repairs (emergency)	£286k	6%
Routine – Reactive Repairs (non-emergency)	£915k	19%
Routine – Inspection & Survey	£206k	4%
Operating Costs (Winter Service)	£491k	10%
TOTAL	**£3,853**	
Overheads	£497	10%
Loss (3rd Party Claims associated with (c/ways)	£408	9%
TOTAL (including claims costs)	**£4,758**	

Predicted Condition



This options is predicted to result in deterioration of the asset over time resulting in the percentage of carriageway in need of maintenance (red + amber condition) increasing from the current 39% to 55% in 20 years.

Predicted Impacts

Reactive Maintenance

Continuance of this budget model will increase the level of reactive repairs substantially over time.

Planned Maintenance

Based on the reported increase in maintenance needs (16% over 20 years) this will essentially leave our future generations with a requirement to find £19.5 million worth of investment to bring the carriageway condition back to the current standard.

3rd Party Claims

3rd party claims are expected to rise with a potentially greater level of pay outs.

Customer Satisfaction

It is predicted that customer satisfaction will decrease with the worsening condition of the carriageways.

Option Summary

The option detailing the savings from 2019-20 is predicted to result in:

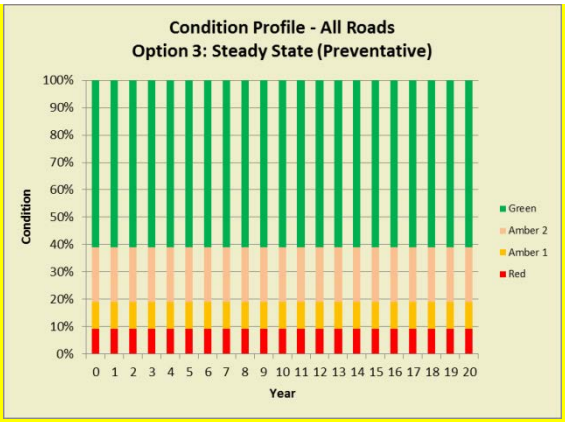
f. ↗ annual budget increase required over time to accommodate increasing reactive repairs
g. ↘ reduction (deterioration) of measured condition
h. ↗ increasing quantities of minor defects (pot holes and the like)
i. ↗ potential for increase in 3rd party claims
j. ↘ decreased customer satisfaction as a result of increasing repairs

2.1.4 Option C4: Option to Maintain Current Condition (Preventative)

The third option involves increasing the levels of the preventative surfacing budget in an effort maintain the current levels of carriageway deterioration.

HAMP Cost Category	Expenditure (£000's)	%
Planned Maintenance - Corrective	£837k	14%
Planned Maintenance - Preventative	£1,500k	25%
Routine Cyclic Maintenance	£475k	8%
Routine – Reactive Repairs (emergency)	£378k	6%
Routine – Reactive Repairs (non-emergency)	£1,000k	17%
Routine – Inspection & Survey	£206k	3%
Operating Costs (Winter Service)	£737k	12%
TOTAL	**£5,133**	
Overheads	£497	8%
Loss (3rd Party Claims associated with (c/ways)	£408	7%
TOTAL (including claims costs)	**£6,038**	

Predicted Condition



This option is predicted to result the condition of the asset remaining the same over time with the percentage of carriageway in need of maintenance (red + amber condition) remaining at 39% in 20 years.

Predicted Impacts

Reactive Maintenance

Reactive repairs are expected to remain similar to current levels.

Planned Maintenance

Planned maintenance will not need to increase based on the reported similar maintenance needs over 20 years.

3rd Party Claims

3rd party claims are expected to remain similar to current levels.

Customer Satisfaction

Customer satisfaction is predicted to stay inline with current levels

Option Summary

The option of no revenue funding for planned maintenance treatments is predicted to result in:

a. → annual budget steady
b. → measured condition at a steady state
c. → similar levels of minor defects (pot holes and the like)
d. → similar levels of 3rd party claims
e. → customer satisfaction to remain the same

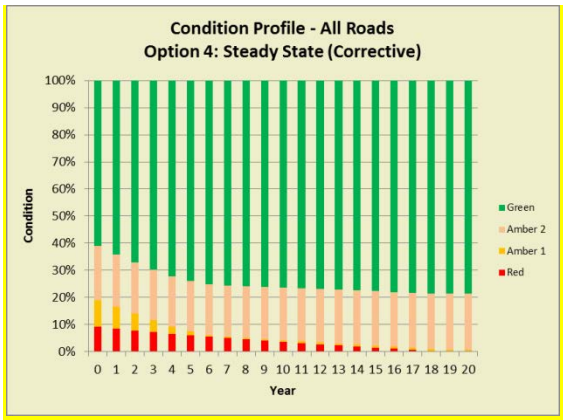
2.1.5 Option C5: Option to Improve Current Condition (Corrective)

Budget

The fourth option involves increasing the levels of the corrective surfacing budget in an effort to improve the current levels of carriageway deterioration.

HAMP Cost Category	Expenditure (£000's)	%
Planned Maintenance - Corrective	£11,023k	66%
Planned Maintenance - Preventative	£1,995k	12%
Routine Cyclic Maintenance	£475k	3%
Routine – Reactive Repairs (emergency)	£378k	2%
Routine – Reactive Repairs (non-emergency)	£1,000k	6%
Routine – Inspection & Survey	£206k	1%
Operating Costs (Winter Service)	£737k	5%
TOTAL	**£15,814**	
Overheads	£497	3%
Loss (3rd Party Claims associated with (c/ways)	£408	2%
TOTAL (including claims costs)	**£16,719**	

Predicted Condition



This option is predicted to result in an improvement of the asset over time resulting in the percentage of carriageway in need of maintenance (red + amber condition) decreasing from 39% to 22% in 20 years.

Predicted Impacts

Reactive Maintenance

Reactive repairs should decrease as the road cndition improves

3rd Party Claims

3rd party claims are expected to decrease as defects decrease

Customer Satisfaction

Customer satisfaction is expected to improve as the deterioration in condition decreases and the increase in the amount of works undertaken will be noticeable.

Option Summary

The option of using preventative maintenance treatments is predicted to result in:

f. ↗ annual budget significantly higher
g. ↗ measured condition improving
h. ↘ lower levels of minor defects (pot holes and the like)
i. ↘ lower levels of 3rd party claims
j. ↗ customer satisfaction likely to improve.

2.1.6 Recommendation

Option C4 – Maintain Current Condition (Preventative) is the minimum standard we should be adopting. This would maintain roads at current standards and remove future liabilities from our future generations.