

## Item 2

3rd February 2016



**Glasgow City Council**

**Sustainability and the Environment Policy Development Committee**  
**3 February 2016**

**Report by Executive Director of Land and Environmental Services**

**Contact: Andy Waddell**

**Ext: 70438**

### **ROADS INFRASTRUCTURE – ANNUAL STATUS AND OPTIONS REPORT**

#### **Purpose of Report:**

The purpose of this report is to advise Committee of the status of our roads infrastructure and to present investment options for consideration. The options presented and issues raised are aimed to assist with the budget setting process.

#### **Recommendations:**

It is recommended that Committee:

- Considers the Annual Status & Options Report (Appendix 1);
- Instructs the Executive Director of LES to approach the Scottish Government regarding the ongoing and future funding of the Clyde Tunnel and its approaches (including the Shieldhall viaduct); and
- Note that the Clyde Valley Roads Alliance Group, chaired by Glasgow City Council, continue to identify collaboration opportunities.

Ward No(s):

Citywide: ✓

Local member(s) advised: Yes ☐ No ✓

consulted: Yes ☐ No ✓

## **1 Background**

- 1.1 The Annual Status and Options Report is a product of our Road Asset Management Plan, which records the level of service that the council is aiming to achieve and provides a means of identifying and prioritising the overall funding needs of our road assets.
- 1.2 The Status and Options Report (Appendix 1) summarises the status of our road assets in terms of size, value and condition and presents a number of investment options for our major road assets. The options presented and issues raised are designed to assist with the budget setting process.
- 1.3 Asset groups considered are; Carriageways, Footways, Lighting, Bridges & Structures, Street Lighting and the Clyde Tunnel. Land and Environmental Services has conducted an extensive programme of inventory collection and condition assessments over the course of the past six years. The information collected gives an accurate picture of the extent of the city's roads infrastructure and the impact recent investment has had on its condition. An up to date record of condition allows LES to accurately identify overall funding needs and predict the impact investment options will have on condition.
- 1.4 Road infrastructure deterioration is slow and often unseen, meaning that the impact of investment cannot be assessed in the short term. The investment options presented consider the projected impact over a 20 year period. This allows decisions to be taken with an understanding of medium and long-term implications.
- 1.5 The financial tools used to develop forecasts consider the existing condition of our infrastructure and scope the remedial costs of network improvement. It should be noted that no allowance has been made for construction inflation; forecasts are based upon current (2015) prices.

## **2 Current Status & Key Issues**

- 2.1 The key issues concerning our major road assets are summarised below. Further detail is provided in Appendix 1.

### **Carriageways**

- 2.2 The Council has committed additional investment of £61m over the last five years to improve the condition of our roads. This investment has slowed the overall deterioration of the road network, whilst improving the condition of our main roads. There has also been a significant reduction in the number of reported potholes; the average number of public pothole reports has fallen from 33 per day in 2013/14 to 9 per day over the last 12 months (72% reduction).
- 2.3 It is important to recognise that although the current investment is optimised, as an ongoing strategy, to control the number of potholes across the city, the overall condition of the road network continues to deteriorate. The Road Condition Index indicates that 601km (32.7%) of the road network still requires

attention. These roads are vulnerable to rapid deterioration, especially in the event of severe winter weather.

- 2.4 Investing early offers long term cost savings. The options modelled show that effective use of budgets and planned remedial and preventive measures at the earliest stage of deterioration is the most cost-effective strategy to maintain our assets. This general principle applies to all assets.

### **Footways**

- 2.5 Although footway investment has increased in recent years, the level of investment, like many other local authorities remains below the level required to improve overall condition. There remains a significant length of our footways that are still in poor condition.

### **Street Lighting**

- 2.6 The age profile of Glasgow's lighting infrastructure is a significant issue. There are approximately 30,000 lighting columns and 35,500 lanterns that have exceeded their expected service life with the recent level of investment on lighting infrastructure is significantly below the annual depreciation cost.
- 2.7 The price of electricity is a significant issue. It is likely that electricity prices will continue to rise significantly in the coming years. Growth rates, between 3.5% and 10%, have been used to measure potential increases in electricity costs, over the next 20 years. If the projected energy cost increases are realised, the Council's annual electricity bill for street lighting could increase from £4.3m (2013/14) up to £7.5m in 5 years, and as high as £26m in 20 years.
- 2.8 Whilst a project to replace 10,000 lanterns with new energy efficient LED lighting has recently commenced, we must maintain investment in this area in order to prevent service failure and to mitigate against future price increases. A number of projects to reduce costs, energy and carbon usage have been undertaken and investigated including intelligent street lighting and the use of wind turbines.

### **Bridges & Structures**

- 2.9 Currently there are traffic restrictions on weak bridges as a measure to reduce loadings. The effect is significant, due to disruption to traffic flow and increased maintenance costs.
- 2.10 Strengthening and parapet improvements works to our bridges and structures have been identified. Sustained capital investment is required to deliver these works and address the maintenance backlog to our structural assets.

## **Traffic Signals**

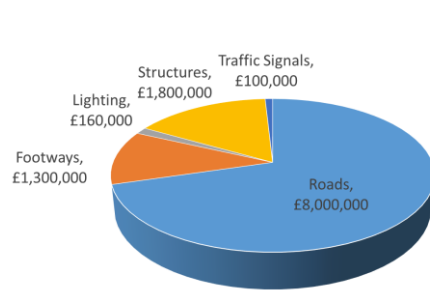
- 2.11 The current level of investment on traffic systems is significantly below the annual depreciation figure. Without significant investment these assets will continue to depreciate.
- 2.12 Sustained investment is required to bring traffic signal assets up to industry standards and deliver cost efficiencies in terms of power consumption and maintenance, in the longer term.

## **Clyde Tunnel**

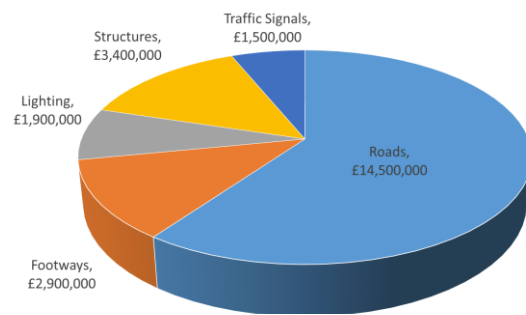
- 2.13 The Clyde Tunnel and its approaches (including the Shieldhall viaduct) are currently designated as local roads. An independent study commissioned in 2004, into the economic value of this busiest stretch of non-trunk road network in Scotland, concluded that "Whilst the Clyde Tunnel does not form part of the trunk road network [...] it fulfils a strategic function for the Scottish economy. Its role needs to be recognised as such and this suggests that there is a case for capital funding from national rather than local sources."
- 2.14 It also advises that were the Tunnel to be closed there would be severe adverse impact on the movement of goods and people in the west of Scotland. It further stated that the effect on this would be felt in the Clyde valley to the west of the Tunnel and threaten the viability of commerce and industry.
- 2.15 Since the report was published there has been further development of the new Queen Elizabeth University Hospital and the SECC/Hydro complex to both the West and East of the tunnel. Given the economic and strategic importance of this asset, engagement with the Scottish Government, to provide a sustainable funding option, is essential to the continued safe operation of the asset.
- 2.16 The current Grant Aided Expenditure allocation of £88k per annum is significantly below the required cost of operating and maintaining the asset. The funding required is estimated at £950k per annum. In addition, there is a requirement for £25m of essential capital investment over the next 10 years. Details and future funding options are outlined in the Report.

## **3 Level of Investment**

- 3.1 The predicted impact that differing levels of investment would have on our road assets is detailed within Appendix 1 - 'The Annual Status and Options Report'. The charts overleaf summarise the current level of investment and the investment required to maintain the existing condition.



Current Investment - £11.36m



Steady State Investment - £24.2m

3.2 The table below summarises the infrastructure improvement plans discussed in Appendix 1.

Asset Group	Investment Option	Comment
Carriageway	5-year (£110m) Improvement Plan	An annual capital investment of £22m would lead to significant improvement, with 85% (currently 67%) of our roads in good condition after 5 years. Investment levels of £9.3m, per annum, would be required to maintain this condition)
	10-year (£180m) Improvement Plan	An annual capital investment of £18m would lead to significant improvement, with 85% (currently 67%) of our roads in good condition in 10 years. Investment levels of £9.3m, per annum, would be required to maintain this condition.
Footway	5-year (£22.5m) Improvement Plan	An annual capital investment of £4.5m would eliminate all major defects after 5 years, with 10% of our footways having minor defects.
	10-year (£39m) Improvement Plan	An annual capital investment of £3.9m would eliminate all major defects after 10 years, with 10% of our footways having minor defects.
Street Lighting	£3.9m per annum	A substantial improvement in condition is achieved after 9 years (2023), with only 5% of columns exceeding the expected service life after 20 years.
	£2.5m per annum	A steady improvement in condition is achieved annually, with approximately 15% of columns exceeding the expected service life after 20 years.
Traffic Signals	4-year (£39m) Improvement Plan	This option would bring traffic signal assets up to industry standards and delivers cost savings in terms of power consumption and maintenance in the longer term
Structures	£6.9m per annum	This option will improve the overall condition of the City's road structures, remove traffic / load restrictions from bridges and reduce the cost of maintenance in the longer term.
Clyde Tunnel	£950k per annum and £25m capital.	This level of investment would maintain the operation of the asset and address the essential maintenance required.

- 3.3 LES continue to work with the Society of Chief Officers for Transportation in Scotland (SCOTS) to implement the recommendations of the National Roads Maintenance Review and in particular to participate in the Roads Collaboration Project, where Glasgow City Council are chairing the Clyde Valley Roads Alliance Group. Discussions are also ongoing with Renfrewshire Council to develop a shared approach to funding and delivering future investment strategies.

## 4 Policy and Resource Implications

### Resource Implications:

<i>Financial:</i>	Investment option profiles are detailed within the report.
<i>Legal:</i>	No legal issues.
<i>Personnel:</i>	No direct personnel issues.
<i>Procurement:</i>	No procurement issues.

**Council Strategic Plan:** Investment in the Road network supports economic growth, supports in the delivery of a vibrant and sustainable city, and improves accessibility for the city's most vulnerable people.

### Equality Impacts:

<i>EQIA carried out:</i>	Not required.
<i>Outcome:</i>	Not applicable.

### Sustainability Impacts:

<i>Environmental:</i>	No impact.
<i>Social:</i>	Jobs and investment in the city.
<i>Economic:</i>	Reduction in maintenance costs and third party liability claims will facilitate economic growth.

## 5 Recommendations

It is recommended that Committee:

- Considers the Annual Status & Options Report (Appendix 1);
- Instructs the Executive Director of LES to approach the Scottish Government regarding the ongoing and future funding of the Clyde Tunnel; and
- Note that the Clyde Valley Roads Alliance Group, chaired by Glasgow City Council, continue to identify collaboration opportunities.