



Glasgow City Council

**Environment, Sustainability and Carbon
Reduction City Policy Committee**

Report by Executive Director of Neighbourhoods and Sustainability

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ROADS INFRASTRUCTURE STATUS & OPTIONS REPORT 2020

Purpose of Report:

To advise Committee of the status of Glasgow's roads infrastructure and present investment requirements and scenarios.

Recommendations:

It is recommended that Committee notes the issues and investment scenarios detailed in the Annual Status & Options Report 2020 (Appendix 1) as this information feeds into both the Council's budget setting process and capital programme.

Ward No(s): N/A

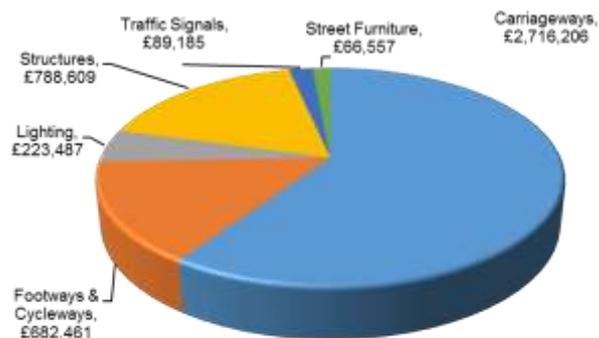
Citywide: ✓

Local member(s) advised: Yes No ✓

consulted: Yes No ✓

1. Introduction

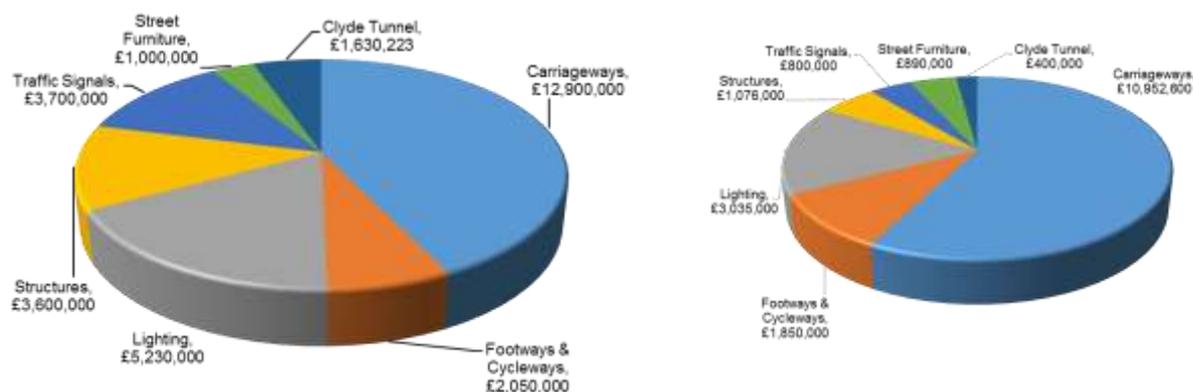
- 1.1 Glasgow City Council is responsible for the operation and maintenance of a significant road network and associated infrastructure. This asset is of vital importance as the transport of people and goods is essential to the economic and social wellbeing of the city and its citizens.
- 1.2 As part of the management of this significant asset, an annual review of the current condition is undertaken along with identifying options for investment. This is undertaken in line with national best practice produced by the Society of Chief Officers of Transportation in Scotland (SCOTS).
- 1.3 The Annual Status and Options Report (ASOR), attached as Appendix 1, sets out the condition of our road related assets and provides a means of identifying and prioritising the overall funding needs of each of the asset categories. The options and scenarios presented aim to assist with the budget setting process and identify where investment should be prioritised.
- 1.4 The cost of replacing all road infrastructure assets is currently estimated at £4.57bn. The pie chart below details the value of the assets broken down by asset type.



1.5 Gross Replacement Cost per Asset (£'000)

The level of investment required to maintain our roads infrastructure in its current condition (steady state) is estimated at £30.11m per year; this equates to an annual investment of 0.66% of the total asset value.

- 1.6 The pie charts below illustrate and compare the annual level of investment required to maintain the asset in its current condition against the current level of investment. It should be noted that the current investment only includes the additional budget allocation for the current year that can be attributed to works that will improve the condition of the asset and not cyclic or reactive maintenance budgets or budget allocations reported in previous years ASOR's.



Steady State Investment - £30.11m

Current Investment - £11.16m

- 1.7 It can be seen that current investment falls significantly short of the level required to maintain existing condition. This is true for each of the asset groups. The overall shortfall is approximately £18.95m per annum.
- 1.8 The COVID-19 pandemic has had major implications on the delivery of our planned programmes of work, data gathering exercises and the use of publicly reported data. These all contribute to the development and presentation of the ASOR.

2. Asset Condition and Investment Options

- 2.1 The ASOR contains details of current asset condition and investment options for all of the road infrastructure asset categories. The following sections summarise the current condition indicators and preferred investment options for each of the main asset categories.

2.2 Carriageways

- Carriageway condition has improved over the past few years – 71% of carriageways in acceptable condition compared to Scottish average of 64%.
- Current level of investment remains below the steady state value. We are effectively managing the condition by undertaking shorter term preventative treatments which extend the life of the surface but do not address any underlying structural issues.
- Without a significant increase in investment in carriageway assets, the risk remains that severe winter weather will lead to considerable

accelerated deterioration, with attendant disruption and increased costs of reactive repairs.

- An increase in investment to just over £19 million per annum, sustained over a five year period, would improve condition, reducing the ongoing cost of maintenance to £10.6 million per annum. This represents the lowest cost option over the 20-year life of the asset.

2.3 Footways

- Footways are vital for nearly all journeys, but are particularly important for the most vulnerable in society who may not have easy access to private or public transport. Footway condition has improved over the past few years which is illustrated by the reduction in settled claims.
- Footways do not deteriorate at the same rate as carriageways as they are not subjected to the damage caused by large vehicles. Whilst investment in footways is currently below the steady state value, the use of early intervention thin surfacing treatments and reactive repairs undertaken in accordance with our inspection and repair policy help ensure they these are kept safe and fit for use.
- Given the importance of footways for active travel, continued investment is essential and a sustained investment of circa. £2 million per annum is the best value over the 20-year life.

2.4 Cycleways

- Over the past few years, there has been significant investment in new cycleway infrastructure. Condition surveys, undertaken for the first time in 2019, indicate that 94% of the primary cycle network is in good or fair condition which is reflective of the relatively young age of the asset.
- We continue to develop our cycle network with funding secured to expand the “City Ways”. These projects will provide safe, high quality cycle routes linking our neighbourhoods’ with the City Centre.
- New assets require less maintenance funding in the early years, but as time progresses and the assets age, an increasing level of investment will be required. At present, the modelling suggests that an investment of £55,000 per annum is sufficient to maintain the asset in the existing good condition.

2.5 Street Lighting

- Over 38% of Glasgow’s 72,000 street lighting columns remain beyond their Expected Service Life (ESL). This has remained steady in the last year due to the ongoing renewal programme and it is estimated that a further 2,000 columns deemed to be most at risk will be replaced this year.
- The Risk Management Strategy has been implemented to ensure those columns most at risk of failure are prioritised for replacement.
- There are considerable issues associated with ageing cabling, particularly overhead cables, which cannot be addressed with the current funding.
- Investment of around £10 million per annum over 14 years is required to address the issues and achieve a good asset condition.

2.6 Traffic Signals

- There are nearly 900 traffic signal installations in Glasgow with around 53% assessed as being in need of replacement.
- Significant investment of £4.6m per year for 5 years (£23 million) is needed to replace the ageing installations and provide modern low energy LED lights along with fully compliant tactile paving and indicators.

2.7 Structures

- The Council is responsible for maintaining 395 bridges and other structures throughout the city. Overall condition is rated as 'Fair', but the most critical elements are rated as 'Poor' which indicates that there is risk of deterioration if maintenance work is not undertaken. Maintenance priorities are targeted to ensure structures remain safe, but with current levels of funding, many structures cannot be fully refurbished.
- The top priority remains the strengthening of the Shieldhall Overpass. However, since the last ASOR, further design work has now refined the costs which are now estimated to be £4.8 million.

2.8 Clyde Tunnel

- The Clyde Tunnel and its approaches require significant investment to address necessary repairs to operational infrastructure and structural issues.
- The funding Glasgow receives for the operation and maintenance of the Clyde Tunnel is the same amount per kilometre as for a standard stretch of local road. Due to the operational and regulatory requirements of the Tunnel this equates to annual shortfall of approximately £820,000.
- The ASOR identifies the key prioritised investment needs for the Tunnel. The top priority is the replacement of the ageing CCTV and incident detection system. The latest costs estimates put this at £150,000 and proposals are being developed to have this upgraded within the next year
- Officers have engaged with officials from Transport Scotland who have indicated a willingness to gain an understanding of the potential impacts of any closure or partial closure of the tunnel on the surrounding road network. Officers will continue to engage to seek to find acceptable solutions to the funding shortfall and mitigate the risks to the Council.

3. Customer Satisfaction

3.1 Customer satisfaction levels have not been able to be recorded in 2020. The annual household survey has not been able to be carried out due to the COVID-19 pandemic and the associated Government lockdown restrictions that were implemented. Publicly reported data, such as pothole reports and traffic signal faults, has also been affected by the pandemic and numbers are lower for 2020, likely due to the reduced number of people driving, commuting etc.

3.2 There is currently no data to allow benchmarking of customer satisfaction with other authorities. SCOTS has developed a standard questionnaire for roads

authorities to use. Depending on the number of authorities participating, this may allow some customer satisfaction benchmarking in 2021.

4. Carbon Reduction

4.1 Several investment options and initiatives in the different asset categories have carbon reduction benefits:

- We are aiming to reduce the environmental impact of road surfacing operations. Much of the material removed is already recycled back into road materials and officers are actively pursuing the use of new 'warm mix' asphalts which significantly reduce the carbon footprint, potentially reduce disruption and improve road worker safety whilst having no negative effect on long term durability.
- LED streetlights consume significantly less energy than traditional incandescent lamps. All column replacements will include the installation of new LED lanterns. This will improve the efficiency of the lighting network and contribute towards the Council's sustainability agenda by reducing energy consumption and carbon emissions. However, it is worth noting that due to continually increasing energy costs, the reduction in energy consumption is not expected to lead to a reduction in energy costs. In fact, it is predicted that energy costs will continue to rise for the foreseeable future.
- Investment in LED traffic signals will similarly reduce energy consumption.

5. Climate Adaptation

5.1 Flood risk and climate change present a significant environmental risk to the City. Climate change has implications for the road drainage systems, with higher intensity storms predicted to become more frequent. August 2019 was the wettest on record for Glasgow and saw the number of blocked gully reports increase to 489 compared to 160 in August 2018.

5.2 The Council is making significant investment in reducing flood risk and increasing drainage capacity. Three City Deal programmes have a reduction in flood risk and increased drainage capacity as an objective including the City Centre Avenues, Canal & North Gateway Smart Canal and MGSDP. The MGSDP City Deal project alone is a £47.5m investment across 14 sites where a range of interventions as part of surface water management plans including upsized watercourse channels, basins, surface water sewers, below ground storage and raingardens are being delivered.

5.3 The condition of the existing road surface water drainage assets is largely unknown. It is therefore difficult to predict future investment needs. Inventory data collection is now being undertaken as part of our gully review (stage 1 is scheduled for completion in March 2021) and will be used to inform future investment needs. In addition work to scope out how best to predict future investment needs, based on best practice from around the UK, was delayed due to the COVID pandemic and will be undertaken in the coming year.

However, based on average scheme costs in the past few years, it is estimated that investment of £500,000 per annum is needed to address the issues that are identified.

6. Policy and Resource Implications

Resource Implications:

Financial: Investment options are detailed within the report.

Legal: None.

Personnel: None.

Procurement: None.

Council Strategic Plan:

Investment in road infrastructure supports economic growth, supports the delivery of a vibrant and sustainable low carbon city and improves accessibility for the city's most vulnerable people. This report is aligned to CSP priority numbers 54 and 66.

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2017-2022?

Generally supportive but specifically outcome 10.

What are the potential equality impacts as a result of this report?

An EQIA screening has been undertaken. The preferred investment options presented within the report are expected to have a positive impact, particularly on those with physical disability and sensory impairment.

Please highlight if the policy/proposal will help address socio economic disadvantage:

The preferred investment options presented within the report are expected to have a positive impact.

Sustainability Impacts:

Environmental:

Depending on the scenario presented, investment in road infrastructure assets could impact on carbon emissions.

Social, including opportunities under Article 20 of the European Public Procurement Directive:

Depending on the scenario presented, investment in roads infrastructure could generate jobs and improve accessibility.

Economic:

Depending on the scenario presented, investment in roads infrastructure could lower maintenance costs, mitigate public liability claims and encourage economic growth.

7. Recommendation

- 7.1 It is recommended that Committee notes the issues and investment options detailed in the Annual Status & Options Report 2020 (Appendix 1) as this information feeds into both the Council's budget setting process and capital programme.