

# Policy and Sustainability Committee

10.00am, Thursday, 9 July 2020

## Transport Infrastructure Investment – Capital Delivery Priorities for 2020/21

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| Executive/routine<br>Wards<br>Council Commitments | Executive<br>All<br><a href="#">15</a> , <a href="#">16</a> , <a href="#">17</a> , <a href="#">19</a> |
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### 1. Recommendations

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- 1.1 It is recommended that the Committee:
- 1.1.1 notes the breakdown of the allocation of the capital budget for 2020/21 shown in Appendix 1;
  - 1.1.2 approves the programme of proposed works for 2020/21, as detailed in section three of the report, and in Appendices 5, and 6;
  - 1.1.3 notes the use of external consultants to carry out Principal Bridge Inspections and design work as detailed in 4.41 - 4.48;
  - 1.1.4 notes that a report on the options for future infrastructure investment will be presented to the appropriate Committee in the autumn.

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## Transport Infrastructure Investment – Capital Delivery Priorities for 2020/21

### 2. Executive Summary

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- 2.1 This report seeks approval for the allocation of the Transport Infrastructure Capital budgets and programme of works for 2020/21. This includes carriageways, footways, street lighting and traffic signals and structures.
- 2.2 The carriageway and footway schemes listed in this report were selected for capital investment using a scheme of prioritisation which uses condition assessment scores, prioritisation criteria and weightings.
- 2.3 The budget allocation and lists of maintenance schemes in this report aim to ensure that the condition of roads and footways improve, whilst fulfilling the objective that the prioritisation reflects and supports the Council's Local Transport Strategy objectives and, in particular, the Active Travel Action Plan.
- 2.4 Road structures assets are maintained in accordance with national standards and Government legislation. Excessively high maintenance costs are avoided, as far as possible, by undertaking regular condition inspections and prioritising required work.
- 2.5 Delivery of the 2020/21 capital programme has been severely affected by the COVID-19 situation, with no delivery of capital renewal schemes in the first quarter of 2020/21. There will continue to be challenges in delivering capital renewal schemes in 2020/21 due to ongoing, Covid-19 related, restrictions.

### 3. Background

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- 3.1 This report seeks approval for the proposed capital investment programme for road and footway improvements for 2020/21.
- 3.2 The capital budget for 2020/21 was agreed at the Council meeting on [20 February 2020](#) as part of the capital investment programme. On [25 June 2020](#) Policy and Sustainability Committee received an update on Capital Budget 2019/20 out-turn and 2020/21 COVID-19 Forecast.

- 3.3 The Roads and Footway Capital Investment Programme for 2020/21 proposes the capital budget of £15.006m should be allocated across six different work streams: carriageways and footways, street lighting and traffic signals; road structures; other asset management; road operations and miscellaneous. The carriageway and footways work accounts for £7.047m or 47% of the available funding.
- 3.4 A methodology of prioritisation, approved by Transport and Environment Committee in [January 2016](#), is used to identify which projects should be included in this part of the programme.
- 3.5 The Council's carriageway and footway stock has a gross replacement cost of £2,260m. It is essential that the carriageways and footways are maintained to an acceptable standard. A new investment strategy for carriageways was agreed by the Transport and Environment Committee in [October 2015](#), which will ensure improvements in the carriageway condition throughout the city.
- 3.6 The Council's Bridge stock has a gross replacement cost of £1,340m. It is essential that these structures are inspected and adequately maintained to ensure that the road network can operate efficiently and safely.
- 3.7 Bridges are inspected at regular intervals and the work is prioritised based on these inspections. A Bridge Structure Condition Indicator (BSCI) is calculated for the whole bridge and critical load bearing members, in line with national guidance, and a score is developed. These scores are used to help prioritise work.
- 3.8 An inspection programme was undertaken for retaining walls, greater than 1.5m, in 2017/18 to obtain condition data, bringing this into line with the bridge stock.
- 3.9 In addition, a 10% capital budget commitment has been made to cycling improvements (this has already been "top-sliced" from the original budget). This is in line with the Council commitment to allocate a percentage of the Transport budget to improve cycling facilities throughout Edinburgh.

## 4. Main report

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### Capital Budget Provision 2019/20 – 2021/22

- 4.1 The current and projected capital allocation for Infrastructure for 2018 to 2021 is shown in Appendix 1. This outlines how the proposed budget will be allocated across the six elements of the programme in 2020/21.

### Carriageway Investment

- 4.2 The carriageway and footway element of the capital programme is based on a scheme of prioritisation which uses condition assessment scores, prioritisation criteria and weightings to determine which projects should be prioritised for investment.
- 4.3 The condition of Edinburgh's roads is assessed annually as part of the Scottish Roads Maintenance Condition Survey (SRMCS), an independent survey of road

conditions in all 32 Scottish local authorities. The survey provides each local authority with a Road Condition Index (RCI) which identifies the percentage of roads in need of maintenance.

- 4.4 The RCI consists of three categories of deterioration: Red, Amber 1 and Amber 2, with roads in the red category being in the worst condition. Roads in the Amber condition indicate that further investigation is required to establish if preventative treatment is required. Roads in the red category have deteriorated beyond preventative maintenance and will require more robust treatments in order to prolong its future.
- 4.5 As part of the modelling work for the Transport Asset Management Plan (TAMP), alternative scenarios for capital investment were developed. These scenarios were predicated on a more preventative approach, aimed at roads that are in the Amber condition categories. Investment on these roads require less expensive treatments (e.g. surface dressing, micro asphalts), which improve the condition of the carriageway or footway and delay the need for more expensive resurfacing or strengthening treatments. Owing to the cheaper cost of the treatments required on Amber condition roads, more roads can be treated each year.
- 4.6 To ensure continued effectiveness and value for money, it is proposed to bring forward a further report on the options for future transport infrastructure investment. This will take account of the reconsideration of the Council's capital budget priorities and the potential for increased costs as a result of COVID-19.
- 4.7 Whilst all active travel and streetscape improvements are very welcome and provide better finished schemes, most of the improvements are being funded from the capital renewals budget. This means that fewer renewal schemes can be delivered each financial year.
- 4.8 Work is ongoing to better align the capital renewal and active travel programmes as far in advance as possible in order to secure funding from other sources. By maximising the use of external funding, this will reduce the pressure on the capital renewals budget.
- 4.9 Appendix 3 shows how funding will be distributed throughout the carriageway network in order make best use of the available funding.
- 4.10 The UK Pavement Management System (UKPMS) is the national standard for management systems for assessing the condition of the local road network and for planning the type of investment that is required.
- 4.11 The UKPMS is used for systematic collection and analysis of condition data, i.e. Scottish Road Maintenance Condition Survey. The UKPMS analyses specific types of defects i.e. cracking, texture, profile and rutting, to select which roads should be considered for preventative, resurfacing or strengthening treatments. Appendix 4 shows the criteria used to determine the appropriate treatment required.

- 4.12 A prioritisation weighting of 5% to carriageway schemes that have an existing on-road cycle lane continues to be applied. This will promote carriageway renewal schemes heavily used by cyclists.
- 4.13 Edinburgh is the only local authority in Scotland to include such a weighting. This further enforces the Council's commitment to active travel.

#### **Footway Investment**

- 4.14 The footway element of the capital programme is based on a scheme of prioritisation which uses condition assessment scores, prioritisation criteria and footfall weightings to determine which projects should be prioritised for investment.
- 4.15 The prioritisation system for the capital programme is designed to ensure that the strategic road and footway network is maintained in line with the Local Transport Strategy and the Active Travel Action Plan.
- 4.16 It is proposed to maintain the allocation of £0.3m for Local Footways in 2020/21. This will allow resurfacing works to be carried out on rural and residential footways that would be unlikely to feature in a capital programme of works, due to their low prioritisation score.
- 4.17 It is also proposed to treat local footways with surfacing procedures i.e. slurry sealing. This is a preventative treatment and will allow a far greater number of footways to be treated each year.
- 4.18 Whilst the aim of the footway improvement schemes is to improve the surface condition, footway schemes will also result in improved facilities for walking in Edinburgh's streets.

#### **Co-ordination**

- 4.19 Appendix 5 details the capital investment schemes that are planned for delivery in 2020/21.
- 4.20 Any proposed scheme on arterial routes or in the city centre will be considered by the City-Wide Traffic Management Group to determine whether the works can be carried out and what conditions could be put in place (phasing, off peak working, etc) to minimise disruption.

#### **Public Realm**

- 4.21 The Roads and Footways Capital Programme also supports public realm projects identified by the Streetscape Delivery Group and Transport Planning.
- 4.22 Several carriageway and footway renewal schemes will contribute to public realm improvements, through use of high specification materials such as natural stone slabs and setts, as well as improvements in design and layout, utilising the Street Design Guidance. In 2020/21 this will include the High Street, Queensferry High Street and carriageway and footway schemes in World Heritage Site (WHS) and Conservation areas.

## **Street Lighting and Traffic Signals**

- 4.23 In common with many other authorities across the UK, Edinburgh has a large number of street lighting columns that are over 30 years old and require replacement. Where individual columns fail a structural test, they are replaced on a one for one basis. Where the number of columns requiring urgent replacement in any particular street exceeds 40%, it is more efficient and practical to renew the lighting stock of the whole street and this forms the basis of the street lighting programme. The test-failed street lighting columns are prioritised in the programme with the worst columns being replaced first. The budget for street lighting works in 2020/21 is £1.449m. The programme of Street Lighting works is shown in Appendix 6.
- 4.24 On [27 October 2015](#), the Transport and Environment Committee approved, in principle, the business case for the roll out of Light Emitting Diode (LED) lanterns across the city and the report was referred to Council on [19 November 2015](#) where the prudential borrowing was approved.
- 4.25 [On 23 January 2018](#), the Finance and Resources Committee approved the award of the contract for these works.
- 4.26 The business case supported the roll out of 54,000 energy efficient street lighting lanterns over a three-year programme, and the introduction of a Central Management System, at a total cost, including financing, of £40.132m. The forecast energy, Carbon Reduction Commitment and maintenance savings/cost avoidance over 20 years resulting from this project is £54.157m.
- 4.27 Work to roll out energy efficient street lighting lanterns started in October 2018. Over 50% of this programme has already been completed to date and works will continue post Covid-19 working restrictions.
- 4.28 Edinburgh's traffic signal assets are maintained by in-house staff with assistance from Siemens Intelligent Traffic Systems, the current maintenance contractor. Each asset is electrically and mechanically inspected on an annual basis with preventative maintenance taking place as part of the inspection process.
- 4.29 The average age of the traffic signals asset is in excess of 25 years and is prioritised for replacement using ten separate criteria, with higher weighting placed on age, condition and availability of pedestrian facilities.

## **Other Asset Management**

- 4.30 It is proposed to invest £0.3m in other asset renewals. This programme of asset replacement or renewals is carried out in conjunction with footway schemes that are included in the carriageway and footway programme and involves the replacement of street furniture, street lighting and traffic signals. In the case of street lighting, where the lighting columns on a footway improvement scheme are more than 30 years old (i.e. exceeds their design life), it is more efficient to replace the lighting columns at the same time as the footway works.

## **Road Operations**

- 4.31 All footway reconstruction schemes incorporate dropped crossings at all junction points, if not already existing. Further to this, an allocation of £0.02m is given to Road Operations to install dropped crossings at various locations throughout the city on footpaths that are not included in the capital list of footway schemes.
- 4.32 It is proposed to allocate £0.2m for drainage repairs. This will be used to repair failed gully tails and frames throughout Edinburgh.
- 4.33 A further £0.5m will be allocated for Bus Stop Maintenance. This will allow Road Operations to carry out extensive repairs in and around bus stops that have deteriorated as a result of the continuous, repetitive, wear.
- 4.34 Finally, it is proposed to allocate £0.5m for a Carriageway Enhancement Programme. This would allow Road Services to renew carriageways, outwith the surfacing programme, that are too extensive for revenue repairs, to be holistically surfaced. It would, therefore, negate the need for them to be considered for capital investment and significantly increase the life of the asset. Roads surfaced through this process will need only very minimal, if any, revenue repairs over a period of many years.

## **Inspection, Design and Supervision**

- 4.35 Inspection, design and supervision is a large element of work that is required when delivering the capital carriageway and footway schemes. It is proposed to allocate £2.00m from the carriageway and footway budget, for this work. The inspection, design and supervision budget will be closely monitored and, if the costs are lower than expected, then the funding will be re-allocated and used to bring forward additional carriageway and footway schemes.
- 4.36 The majority of the schemes selected for investment will be designed by Transport's in-house design teams. However, if required, external professional services may be procured to assist with the delivery of the capital investment programme.

## **Neighbourhood Environmental Projects**

- 4.37 A further element of the programme is top-sliced each year for the Neighbourhood Environment Programme (NEP) to enable the Council to respond to the local issues identified by council officers, elected members and Neighbourhood Networks. It is proposed to continue the allocation of £0.6m in 2020/21.

## **Cycling Improvements**

- 4.38 The Council has a commitment to allocate a percentage of the Transport revenue and capital budgets to improve cycling facilities throughout Edinburgh. This was introduced in 2012/13, when 5% was allocated with a commitment to increase this by 1% each year, up to 10%. 10% of capital budgets will be allocated for cycling related improvements in 2020/21.

- 4.39 The 10% budget commitment will enable the Council to deliver new cycling infrastructure, including the creation of links between existing off-road routes and upgrading the facilities that are available on-road.

### **Bridges**

- 4.40 There are 352 bridges and road structures in the city with a span greater than 1.5m. This includes road bridges, foot bridges, underpasses, tunnels and gantries on the road network. The bridges and road structures receive a General Inspection (GI) over a two-year cycle. This is a visual inspection from ground level of parts of the bridge that are readily accessible.
- 4.41 In addition to the GI, a Principal Bridge Inspection (PBI) is required to be undertaken at six-year intervals which entails the inspecting engineer being within touching distance of every part of the bridge. There may also be the need for intrusive inspections including testing of materials and specialist support such as divers to inspect parts of the structure.
- 4.42 Recently, additional funding was made available which allowed a Risk Based PBI Programme to be introduced, which can reduce the PBI interval for some structures from six to twelve years. A total of 142 bridges were prioritised in 2016/2017 over a six-year period. After three years 77 inspections have been completed. Following this initial programme, the rest of the structure stock will require a Principal Inspection to be undertaken.
- 4.43 From the GIs and PBIs, bridges are given scores based on their condition and individual parts of the structure that require to be repaired are highlighted. These scores are used to develop the programme of work, together with other factors such as volume of use, location, relationship with other parties and other work in the vicinity.
- 4.44 The scores for all bridges are totalled and averaged and this helps provide an indication of the condition of the Bridge Stock.
- 4.45 There are 68km of retaining walls with a retained height over 1.5m associated with the road network. A total of 866 walls were inspected in 2018, and condition scores have been calculated in a similar manner to the bridges. An inspection and repair programme is being developed.
- 4.46 Over the past twenty years an assessment programme was undertaken to establish the load carrying capacity of the bridge stock, identifying bridges that require strengthening or where interim control measures were required. The results of the assessments are required to be reviewed, particularly where the loading regime has changed, or structural deterioration has reduced the structural capacity. Accordingly, a programme of Structural Reviews will be produced in 2020/2021 to prioritise the structures that should be reviewed.
- 4.47 The projects being delivered in 2020/21 are: Balerno Bridge refurbishment, low height bridge signage, Cramond Brig investigations and structures preventative maintenance.

## **Street Design Guidance**

- 4.48 This Committee approved Edinburgh's new [Street Design Guidance](#) at its meeting on [25 August 2015](#). This Guidance sets out the City of Edinburgh Council's design expectations and aspirations for streets within the Council area.
- 4.49 The guidance will be embedded in the design process for all carriageway and footway schemes detailed in this report.
- 4.50 Implementation of the ESDG through renewals projects will often entail extending footway areas. These extensions will usually be modest in scale and typically benefit pedestrians and/or cyclists by, for example:
- 4.50.1 reducing crossing distances and vehicle turning speeds; or
  - 4.50.2 providing formalised loading and parking areas, enabling clearer and safer on-road cycle lanes.
- 4.51 In some circumstances small areas of footway may also be converted to either carriageway, cycle lane or cycleway to improve conditions for cycling or buses.
- 4.52 Cumulatively, these changes can create significant change and benefit over time, helping to create streets that work better for everyone. Most of the changes have little or no negative implication for any road user.
- 4.53 Practice has varied as to whether such changes are taken through a formal Redetermination process. When minor changes are, it introduces a significant delay into the design and construction process without good reason. Small but worthwhile changes are often not made in order to avoid these delays. Typically, there is no material impact on the capacity of streets for vehicle movement or parking; furthermore, objections are extremely rare.

## **Consultation**

- 4.54 It is important to carry out consultation on capital renewal schemes to ensure that the correct design approach is implemented, and the correct solution is achieved on the ground.
- 4.55 Consultation will take place on the 2020/21 capital renewal schemes that have been selected for investment with Living Streets, Spokes, Lothian Buses and Edinburgh World Heritage. It is proposed to continue this consultation throughout the year.
- 4.56 Internal consultation will also take place with Active Travel, Road Safety, Public Transport and Locality Roads Teams.

## **Capital Delivery**

- 4.57 It is clear that the Covid-19 situation has had, and will continue to have, an effect on delivery of capital renewal schemes.
- 4.58 It is the aim of the design and delivery teams to deliver all of the schemes listed in this report in 2020/21. However, this may not be possible due to unforeseen circumstances when more work is started on the network.

- 4.59 Any scheme that is not delivered in 2020/21 will be re-prioritised for delivery in a future financial year.

## **5. Next Steps**

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- 5.1 The capital investment programme will continue to be reviewed regularly to ensure that any adjustment is made to the programme as soon as possible.
- 5.2 The assessment of the condition of the city's roads is measured annually by the Scottish Road Condition Measurement Survey (SRCMS). This survey shows the percentage of roads that should be considered for maintenance intervention. Edinburgh's Road Condition Index (RCI) has improved from 42.3% in 2005/6 to 33.5% in 2017/19. This is an improvement from 36.4% in 2016/18. A continual gradual improvement in Edinburgh's RCI will be a measure of the success the Council's road maintenance policies.
- 5.3 A report on the options for future infrastructure investment will be presented to the appropriate Committee in the autumn.

## **6. Financial impact**

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- 6.1 The cost of improvement works, listed in Appendix 1, will be funded from the approved capital allocation for roads and footway investment.
- 6.2 The report outlines total expenditure plans of £15.006m for infrastructure investment. If this expenditure were to be funded fully by borrowing, the overall loan charges associated with this expenditure over a 20-year period would be a principal amount of £15.006m and interest of £12.749m, resulting in a total cost of £27.755m based on a loans fund interest rate of 4.386%. This represents an annual cost of £0.925m.
- 6.3 The slippage and acceleration from 2019/20 will be included in the Revised Capital Budget which will be subject to external audit.
- 6.4 The loan charges outlined above are allowed for within the current long-term financial plan. However, this will be subject to the review of the Capital and Revenue Budget positions in October 2020.
- 6.5 It should be noted that the Council's Capital Investment Programme is funded through a combination of General Capital Grant from the Scottish Government, Developers and Third-Party Contributions, capital receipts and borrowing. The borrowing required is carried out in line with the Council's approved Treasury Management Strategy and is provided for on an overall programme basis rather than for individual capital projects.
- 6.6 The loan charge estimates above are based on the assumption of borrowing in full for this capital project.
- 6.7 The reconsideration of the Council's capital budget may have an impact on the Transport Infrastructure Investment programme. This will be included in the

options for future investment report which will be presented to the appropriate Committee in the autumn.

## **7. Stakeholder/Community Impact**

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- 7.1 There are no significant compliance, governance or regulatory implications expected as a result of approving the recommendations in this report.
- 7.2 The investment in the city's roads, footways, gullies and street lighting improves the accessibility and safety of the road and footway network and therefore has a positive impact for all users, particularly older people and those with a disability.
- 7.3 There are no significant sustainability implications expected as a result of approving the recommendations in this report.

## **8. Background reading/external references**

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- 8.1 [Carriageway and Footway Investment Strategy 2016](#)

## **9. Appendices**

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|------------|--|
| Appendix 1 | Capital Budget Allocation  |
| Appendix 2 | Road Condition Index   |
| Appendix 3 | Full Investment Strategy – Annual Options Report                     |
| Appendix 4 | SRMCS Defect Criteria for Treatment Types                            |
| Appendix 5 | Proposed Capital Delivery Programme – April 2020 – March 2021        |
| Appendix 6 | Proposed Capital Street Lighting Programme – April 2020 – March 2021 |

## Capital Budget Allocation

### Current and Predicted Capital Allocation

|           | 2019/20       | 2020/21       | 2021/22       |
|-----------|---------------|---------------|---------------|
| <b>£m</b> | <b>17.085</b> | <b>15.006</b> | <b>14.585</b> |

### Proposed Budget Allocation for 2018/19

|   |           |                |
|---|-----------|----------------|
| <u>Carriageways &amp; Footways</u>                                  | <u>£m</u> |                |
| Budget for Carriageway Works  | 4.233     |                |
| Budget for Setted Carriageways                                      | 1.000     |                |
| Budget for Footway Works  | 1.514     |                |
| Budget for Local Footways   | 0.300     |                |
| Active Travel & Public Realm  | 1.430     |                |
| TOTAL   |           | -8.477         |
| <u>Street Lighting &amp; Traffic Signals</u>                        | <u>£m</u> |                |
| Street Lighting   | 1.449     |                |
| Traffic Signals   | 0.100     |                |
| TOTAL   |           | -1.549         |
| <u>Road Structures</u>  | <u>£m</u> |                |
|   | 0.800     |                |
| TOTAL   |           | -0.800         |
| <u>Other Asset Management</u>                                       | <u>£m</u> |                |
| Asset replacement <sup>1</sup>                                      | 0.300     |                |
| TOTAL   |           | -0.300         |
| <u>Road Operations</u>  | <u>£m</u> |                |
| Drop crossings  | 0.080     |                |
| Drainage improvements   | 0.200     |                |
| Bus Stop Maintenance  | 0.500     |                |
| Surface Enhancements  | 0.500     |                |
| TOTAL   |           | -1.280         |
| <u>Miscellaneous</u>  | <u>£m</u> |                |
| Budget for Inspection, Design & Supervision costs, including TTRO's | 2.000     |                |
| NEP - (£50,000 per Partnership)                                     | 0.600     |                |
| TOTAL   |           | -2.600         |
| <b>TOTAL SPEND</b>  |           | <b>-15.006</b> |

<sup>1</sup> Other asset replacement within schemes i.e. footway schemes involving street lighting replacement of columns over 30 years old, street furniture, sign renewal etc.

## Road Condition Index

The current RCI percentages for Edinburgh's carriageway network are:

| Category             | U-R   | Length (m) | Width (m) | Area (sqm) | Red   |            | Amber 1 |            | Amber 2 |            | Green |            |
|----------------------|-------|------------|-----------|------------|-------|------------|---------|------------|---------|------------|-------|------------|
|                      |       |            |           |            | RCI % | Area (sqm) | RCI %   | Area (sqm) | RCI %   | Area (sqm) | RCI % | Area (sqm) |
| Principal (A) Roads  | Urban | 126800     | 10.6      | 1344080    | 6.29  | 84543      | 6.11    | 82123      | 18.15   | 243951     | 69.45 | 933464     |
|                      | Rural | 28800      | 9.6       | 276480     | 2.20  | 6083       | 2.17    | 6000       | 18.24   | 50430      | 77.39 | 213968     |
| Classified (B) Roads | Urban | 41200      | 9.9       | 407880     | 4.25  | 17335      | 5.69    | 23208      | 16.84   | 68687      | 73.22 | 298650     |
|                      | Rural | 11900      | 8.8       | 104720     | 2.83  | 2964       | 1.72    | 1801       | 11.77   | 12326      | 83.68 | 87630      |
| Classified (C) Roads | Urban | 77700      | 9.7       | 753690     | 5.93  | 44694      | 5.59    | 42131      | 18.72   | 141091     | 69.76 | 525774     |
|                      | Rural | 42400      | 6.6       | 279840     | 3.57  | 9990       | 3.87    | 10830      | 16.70   | 46733      | 75.86 | 212287     |
| Unclassified Roads   | Urban | 1072000    | 7.2       | 7718400    | 6.66  | 514045     | 7.35    | 567302     | 20.81   | 1606199    | 65.18 | 5030853    |
|                      | Rural | 44600      | 4.7       | 209620     | 9.94  | 20836      | 6.93    | 14527      | 24.94   | 52279      | 58.19 | 121978     |

**Overall Road Condition Index: 33.5%**

## Full Investment Strategy - Annual Options Report

### Next 4 years spend based on projected carriageway allocation.

| Year 1                  | £4,569,000        |                 |                   |
|-------------------------|-------------------|-----------------|-------------------|
| Category                | Red               | Amber 1         | Amber 2           |
| A Road (Urban)          | £350,000          | £372,000        | £540,000          |
| A Road (Rural)          | £10,000           | £22,000         | £200,000          |
| B Road (Urban)          | £146,000          | £22,000         | £147,000          |
| B Road (Rural)          | £10,000           | £10,000         | £40,000           |
| C Road (Urban)          | £134,000          | £45,000         | £263,000          |
| C Road (Rural)          | £10,000           | £11,000         | £111,000          |
| U Road (Urban)          | £550,000          | £403,000        | £1,000,000        |
| U Road (Rural)          | £80,000           | £18,000         | £75,000           |
| <b>Treatment Totals</b> | <b>£1,290,000</b> | <b>£903,000</b> | <b>£2,376,000</b> |

| Year 2                  | £5,282,000      |                   |                   |
|-------------------------|-----------------|-------------------|-------------------|
| Category                | Red             | Amber 1           | Amber 2           |
| A Road (Urban)          | £50,000         | £372,000          | £640,000          |
| A Road (Rural)          | £10,000         | £22,000           | £200,000          |
| B Road (Urban)          | £46,000         | £22,000           | £147,000          |
| B Road (Rural)          | £10,000         | £10,000           | £40,000           |
| C Road (Urban)          | £30,000         | £45,000           | £263,000          |
| C Road (Rural)          | £10,000         | £11,000           | £111,000          |
| U Road (Urban)          | £550,000        | £574,000          | £1,946,000        |
| U Road (Rural)          | £80,000         | £18,000           | £75,000           |
| <b>Treatment Totals</b> | <b>£786,000</b> | <b>£1,074,000</b> | <b>£3,422,000</b> |

| Year 3                  | £5,282,000      |                   |                   |
|-------------------------|-----------------|-------------------|-------------------|
| Category                | Red             | Amber 1           | Amber 2           |
| A Road (Urban)          | £50,000         | £372,000          | £640,000          |
| A Road (Rural)          | £10,000         | £22,000           | £200,000          |
| B Road (Urban)          | £46,000         | £22,000           | £147,000          |
| B Road (Rural)          | £10,000         | £10,000           | £40,000           |
| C Road (Urban)          | £30,000         | £45,000           | £263,000          |
| C Road (Rural)          | £10,000         | £11,000           | £111,000          |
| U Road (Urban)          | £550,000        | £574,000          | £1,946,000        |
| U Road (Rural)          | £80,000         | £18,000           | £75,000           |
| <b>Treatment Totals</b> | <b>£786,000</b> | <b>£1,074,000</b> | <b>£3,422,000</b> |

| Year 4                  | £5,282,000      |                   |                   |
|-------------------------|-----------------|-------------------|-------------------|
| Category                | Red             | Amber 1           | Amber 2           |
| A Road (Urban)          | £50,000         | £372,000          | £640,000          |
| A Road (Rural)          | £10,000         | £22,000           | £200,000          |
| B Road (Urban)          | £46,000         | £22,000           | £147,000          |
| B Road (Rural)          | £10,000         | £10,000           | £40,000           |
| C Road (Urban)          | £30,000         | £45,000           | £263,000          |
| C Road (Rural)          | £10,000         | £11,000           | £111,000          |
| U Road (Urban)          | £550,000        | £574,000          | £1,946,000        |
| U Road (Rural)          | £80,000         | £18,000           | £75,000           |
| <b>Treatment Totals</b> | <b>£786,000</b> | <b>£1,074,000</b> | <b>£3,422,000</b> |

## SRMCS Defect Criteria for Treatment Types

Criteria to be used when selecting the appropriate treatment type on Edinburgh Carriageway Network:

|              | Strengthening                                     | A Roads |       | B Roads |       | C Roads |       | U Roads |       |
|--------------|---|---------|-------|---------|-------|---------|-------|---------|-------|
| Criteria No: | Defect  | Upper   | Lower | Upper   | Lower | Upper   | Lower | Upper   | Lower |
| 1            | Rut Depth (mm)                                    | Max     | 8     | Max     | 10    | NA      | NA    | NA      | NA    |
| 2            | Rut Depth %>10mm                                  | NA      | NA    | NA      | NA    | 100%    | 40%   | 100%    | 50%   |
| 3            | LPV (3m) (mm <sup>2</sup> )                       | Max     | 10    | Max     | 10    | NA      | NA    | NA      | NA    |
| 4            | LPV (3m) (mm <sup>2</sup> ) (>10mm <sup>2</sup> ) | NA      | NA    | NA      | NA    | 100%    | 40%   | 100%    | 50%   |
| 5            | Cracking (>4)                                     | 100%    | 30%   | 100%    | 40%   | NA      | NA    | NA      | NA    |

|              | Resurfacing                                      | A Roads |       | B Roads |       | C Roads |       | U Roads |       |
|--------------|--|---------|-------|---------|-------|---------|-------|---------|-------|
| Criteria No: | Defect   | Upper   | Lower | Upper   | Lower | Upper   | Lower | Upper   | Lower |
| 1            | Rut Depth (mm)                                   | 8       | 4     | 10      | 7     | NA      | NA    | NA      | NA    |
| 2            | Rut Depth %>8mm                                  | NA      | NA    | NA      | NA    | 100%    | 40%   | 100%    | 50%   |
| 3            | LPV (3m) (mm <sup>2</sup> )                      | 10      | 6     | 10      | 8     | NA      | NA    | NA      | NA    |
| 4            | LPV (3m) (mm <sup>2</sup> ) (>8mm <sup>2</sup> ) | NA      | NA    | NA      | NA    | 100%    | 40%   | 100%    | 50%   |
| 5            | Cracking (>4)                                    | 30%     | 10%   | 40%     | 20%   | 100%    | 40%   | 100%    | 40%   |

|              | Surface Dressing   | A Roads |       | B Roads |       | C Roads |       | U Roads |       |
|--------------|--------------------|---------|-------|---------|-------|---------|-------|---------|-------|
| Criteria No: | Defect             | Upper   | Lower | Upper   | Lower | Upper   | Lower | Upper   | Lower |
| 1            | Texture Depth (mm) | 0.5     | 0     | 0.5     | 0     | 0.5     | 0     | 0.3     | 0     |
| 2            | High Texture (mm)  |         | 1.5   |         | 1.5   |         | 1.5   |         | 1.5   |
| 3            | Rutting / LPV (3m) | NA      | NA    | NA      | NA    | NA      | NA    | 25%     | 0%    |
| 4            | Cracking (>1)      | 100%    | 50%   | 100%    | 50%   | 100%    | 20%   | 100%    | 20%   |

**Proposed Capital Delivery Programme****April 2020 – March 2021**

| Street                  | Surfacing Method  | Ward Number | Ward                   | Area (sqm) |
|-------------------------|-------------------|-------------|------------------------|------------|
| Bo'ness Road            | Surface Treatment | 1           | Almond                 | 9235       |
| Broomhouse Road         | Surface Treatment | 7           | Sighthill/Gorgie       | 5105       |
| Clermiston Road         | Surface Treatment | 6           | Costorphine/Murrayf'd  | 8120       |
| Frogston Road East      | Surface Treatment | 8           | Colinton/Fairmilehead  | 9340       |
| Frogston Road West      | Surface Treatment | 8           | Colinton/Fairmilehead  | 13000      |
| Kilgraston Road         | Surface Treatment | 15          | Southside/Newington    | 3400       |
| Mayfield Road           | Surface Treatment | 15          | Southside/Newington    | 16870      |
| New Liston Road         | Surface Treatment | 1           | Almond                 | 1665       |
| Oxgangs Road North      | Surface Treatment | 8           | Colinton/Fairmilehead  | 7310       |
| Scotstoun Avenue        | Surface Treatment | 1           | Almond                 | 3810       |
| Seafield Road East      | Surface Treatment | 14          | Craigeninny/Dudd'n     | 9570       |
| Stenhouse Drive         | Surface Treatment | 7           | Sighthill/Gorgie       | 6445       |
| Stirling Road           | Surface Treatment | 4           | Forth                  | 6425       |
| The Loan                | Surface Treatment | 1           | Almond                 | 3820       |
| Baird Road, Ratho       | Surface Treatment | 2           | Pentland Hills         | 1150       |
| Balgreen Avenue         | Surface Treatment | 6           | Costorphine/Murrayf'd  | TBC        |
| Barnton Grove           | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Avenue     | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Crescent   | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Dell       | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Drive      | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Gardens    | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Grove      | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Place      | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park View       | Surface Treatment | 1           | Almond                 | TBC        |
| Barnton Park Wood       | Surface Treatment | 1           | Almond                 | TBC        |
| Bellevue Crescent       | Surface Treatment | 11          | City Centre            | 2500       |
| Bo'ness Road            | Surface Treatment | 1           | Almond                 | 9235       |
| Broomhouse Road         | Surface Treatment | 7           | Sighthill/Gorgie       | TBC        |
| Buccleuch Street        | Surface Treatment | 15          | Southside/Newington    | TBC        |
| Calder Drive            | Surface Treatment | 2           | Pentland Hills         | TBC        |
| Calder Place            | Surface Treatment | 2           | Pentland Hills         | TBC        |
| Caledonian Crescent     | Surface Treatment | 7           | Sighthill/Gorgie       | 2665       |
| Caledonian Place        | Surface Treatment | 7           | Sighthill/Gorgie       | 1215       |
| Caledonian Road         | Surface Treatment | 7           | Sighthill/Gorgie       | 1090       |
| Church Hill Place       | Surface Treatment | 10          | Meadows/Morningside    | TBC        |
| Clovenstone Drive       | Surface Treatment | 2           | Pentland Hills         | TBC        |
| Clovenstone Gardens     | Surface Treatment | 2           | Pentland Hills         | TBC        |
| Coillesdene Drive       | Surface Treatment | 17          | Portobello/Craigmillar | 2100       |
| Colinton Road           | Surface Treatment | 10          | Meadows/Morningside    | 4000       |
| Craigeith Hill          | Surface Treatment | 5           | Inverleith             | TBC        |
| Craigeith Hill Crescent | Surface Treatment | 5           | Inverleith             | TBC        |
| Craigeith Hill Gardens  | Surface Treatment | 5           | Inverleith             | TBC        |
| Craigeith Hill Green    | Surface Treatment | 5           | Inverleith             | TBC        |

## APPENDIX 5

| Street                  | Surfacing Method          | Ward Number | Ward                   | Area (sqm) |
|-------------------------|---------------------------|-------------|------------------------|------------|
| Craighleith Hill Grove  | Surface Treatment         | 5           | Inverleith             | TBC        |
| Craighleith Hill Loan   | Surface Treatment         | 5           | Inverleith             | TBC        |
| Craighleith Hill Park   | Surface Treatment         | 5           | Inverleith             | TBC        |
| Craighleith Hill Row    | Surface Treatment         | 5           | Inverleith             | TBC        |
| East Trinity Road       | Surface Treatment         | 4           | Forth                  | TBC        |
| Ferry Road              | Surface Treatment         | 4           | Forth                  | TBC        |
| Firrhill Crescent       | Surface Treatment         | 8           | Colinton/Fairmilehead  | TBC        |
| Gilmerton Dykes Avenue  | Surface Treatment         | 16          | Liberton/Gilmerton     | TBC        |
| Gilmerton Dykes Drive   | Surface Treatment         | 16          | Liberton/Gilmerton     | TBC        |
| Gilmerton Dykes Loan    | Surface Treatment         | 16          | Liberton/Gilmerton     | TBC        |
| Hawkhill Avenue         | Surface Treatment         | 12          | Leith Walk             | TBC        |
| Hillwood Crescent       | Surface Treatment         | 1           | Almond                 | TBC        |
| Hillwood Gardens        | Surface Treatment         | 1           | Almond                 | TBC        |
| Hillwood Road           | Surface Treatment         | 1           | Almond                 | TBC        |
| Hillwood Terrace        | Surface Treatment         | 1           | Almond                 | TBC        |
| Marionville Avenue      | Surface Treatment         | 14          | Craighentiny/Dudd'n    | 4040       |
| Moredun Park Road       | Surface Treatment         | 16          | Liberton/Gilmerton     | TBC        |
| Mountcastle Drive South | Surface Treatment         | 17          | Portobello/Craigmillar | 5320       |
| Riccarton Avenue        | Surface Treatment         | 2           | Pentland Hills         | 2210       |
| Southhouse Gardens      | Surface Treatment         | 16          | Liberton/Gilmerton     | 200        |
| Templeland Road         | Surface Treatment         | 6           | Costorphine/Murrayf'd  | 3110       |
| Tyler's Acre Road       | Surface Treatment         | 6           | Costorphine/Murrayf'd  | TBC        |
| William Black Place     | Surface Treatment         | 1           | Almond                 | TBC        |
| Queensferry Street      | Carriageway Strengthening | 11          | City Centre            | 4811       |
| Haymarket Terrace       | Carriageway Strengthening | 11          | City Centre            | 11835      |
| Longstone Road          | Carriageway Strengthening | 7           | Sighthill/Gorgie       | 2788       |
| Balgreen Road           | Carriageway Strengthening | 7           | Sighthill/Gorgie       | 553        |
| Southfield Loan         | Carriageway Strengthening | 17          | Portobello/Craigmillar | 1541       |
| Dumbryden Gardens       | Carriageway Strengthening | 2           | Pentland Hills         | 2897       |
| Murrayburn Gardens      | Carriageway Strengthening | 2           | Pentland Hills         | 8556       |
| Gilmerton Dykes Street  | Carriageway Resurfacing   | 16          | Liberton/Gilmerton     | 3114       |
| Oxgangs Park & Rise     | Carriageway Resurfacing   | 8           | Colinton/Fairmilehead  | 2301       |
| Queensferry High Street | Carriageway Sets          | 1           | Almond                 | TBC        |

## APPENDIX 5

| Street                | Surfacing Method          | Ward Number | Ward                   | Area (sqm) |
|-----------------------|---------------------------|-------------|------------------------|------------|
| Bailie Grove          | Footway Surface Treatment | 17          | Portobello/Craigmillar | 376        |
| Baird Road            | Footway Surface Treatment | 2           | Pentland Hills         | 508        |
| Barony Terrace        | Footway Surface Treatment | 6           | Costorphine/Murrayf'd  | 1029       |
| Belford Gardens       | Footway Surface Treatment | 5           | Inverleith             | 1267       |
| Blackford Hill View   | Footway Surface Treatment | 15          | Southside/Newington    | 805        |
| Buckstone Circle      | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 1299       |
| Buckstone Close       | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 304        |
| Buckstone Court       | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 639        |
| Buckstone Crook       | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 288        |
| Buckstone Gate        | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 492        |
| Buckstone Green       | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 267        |
| Buckstone Hill        | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 44         |
| Buckstone Howe        | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 249        |
| Buckstone Lea         | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 805        |
| Buckstone Loan East   | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 1347       |
| Buckstone Neuk        | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 162        |
| Buckstone Place       | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 409        |
| Buckstone Rise        | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 380        |
| Buckstone Shaw        | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 527        |
| Buckstone Way         | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 36         |
| Christian Crescent    | Footway Surface Treatment | 17          | Portobello/Craigmillar | 1826       |
| Clermiston Gardens    | Footway Surface Treatment | 3           | Drum Brae / Gyle       | 659        |
| Clermiston Grove      | Footway Surface Treatment | 3           | Drum Brae / Gyle       | 1119       |
| Craighleith Drive     | Footway Surface Treatment | 5           | Inverleith             | 875        |
| Davidson Park         | Footway Surface Treatment | 5           | Inverleith             | 256        |
| Dolphin Road          | Footway Surface Treatment | 2           | Pentland Hills         | 1812       |
| Drylaw Crescent       | Footway Surface Treatment | 5           | Inverleith             | 925        |
| Easter Drylaw Grove   | Footway Surface Treatment | 5           | Inverleith             | 263        |
| Gardiner Road         | Footway Surface Treatment | 5           | Inverleith             | 1252       |
| Lennel Avenue         | Footway Surface Treatment | 6           | Costorphine/Murrayf'd  | 1022       |
| Longstone Avenue      | Footway Surface Treatment | 7           | Sighthill/Gorgie       | 369        |
| Mountcastle Gardens   | Footway Surface Treatment | 14          | Craightinny/Dudd'n     | 873        |
| Orchard Brae Gardens  | Footway Surface Treatment | 5           | Inverleith             | 1747       |
| Orchardhead Road      | Footway Surface Treatment | 16          | Liberton/Gilmerton     | 1710       |
| Oswald Road           | Footway Surface Treatment | 15          | Southside/Newington    | 523        |
| Pentland Terrace      | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 352        |
| Pilton Place          | Footway Surface Treatment | 4           | Forth                  | 885        |
| Ross Place            | Footway Surface Treatment | 15          | Southside/Newington    | 229        |
| Rutherford Drive      | Footway Surface Treatment | 16          | Liberton/Gilmerton     | 881        |
| Silverknowes Loan     | Footway Surface Treatment | 1           | Almond                 | 448        |
| South Gyle Road       | Footway Surface Treatment | 3           | Drum Brae / Gyle       | 694        |
| Swanston Road         | Footway Surface Treatment | 8           | Colinton/Fairmilehead  | 378        |
| Ulster Crescent       | Footway Surface Treatment | 14          | Craightinny/Dudd'n     | 950        |
| Victor Park Terrace   | Footway Surface Treatment | 6           | Corstorphine/Murrayf'd | 762        |
| Bellevue Road         | Footway Resurfacing       | 12          | Leith Walk             | 461        |
| East Claremont Street | Footway Resurfacing       | 12          | Leith Walk             | 1400       |
| Derby Street          | Footway Resurfacing       | 4           | Forth                  | 320        |
| Newhaven Road         | Footway Resurfacing       | 4           | Forth                  | 200        |
| Park Road             | Footway Resurfacing       | 4           | Forth                  | 200        |
| New Mart Road         | Footway Resurfacing       | 9           | Fountainbridge/C'hart  | 735        |

## APPENDIX 5

|                  |                     |   |                       |      |
|------------------|---------------------|---|-----------------------|------|
| Polwarth Gardens | Footway Resurfacing | 9 | Fountainbridge/C'hart | 201  |
| Stewart Terrace  | Footway Resurfacing | 7 | Sighthill/Gorgie      | 771  |
| Watson Crescent  | Footway Resurfacing | 9 | Fountainbridge/C'hart | 1649 |

**Proposed Capital Street Lighting Programme****April 2020 – March 2021**

| <b>Locality</b> | <b>Location</b>   | <b>Comments</b>                        |
|-----------------|---|--|
| City-Wide       | Various   | Structural Test-failed Column Renewals |
| City-Wide       | Various   | Cable Renewals                         |
| City-Wide       | Various   | Illuminated Bollards & Signs Renewals  |
| City-Wide       | High Street Closes,<br>Scotland Street, Great<br>Stuart Street, Douglas<br>Crescent | Heritage Lighting Renewals             |
| City-Wide       | Various   | Cabinet, Wall-box & Pillar Renewals    |