Director Decision Session **March 2021**

Report of the Director of Economy & Place

Annual Maintenance Report 2021/22

Summary

1. The maintenance teams are responsible for the management of key assets such as the cities roads, footways, traffic lights, street lighting and the city walls.

2. Maintenance can be split into reactive maintenance and proactive maintenance, the proactive approach focuses on prolonging the life span of the council's assets. Whereas reactive maintenance is designed to respond to an immediate defect and make safe for continued use.

3. This report provides a review of the processes used to assess the condition of the highway assets and the recommended proactive and reactive interventions to be made in the financial year 2021/22 and seeks approval for the annexed programmes.

Background

4. The Total budget for 2021/22 was approved by Members 25 February 2021 at budget council, which reflect the proposals that were reported to Executive on 11th February 2021. Annex 1 provides detail of the budgets approved at Budget Council and shows the value of slippage from previous years which relates to schemes previously approved and identifies the real funding for 2021/22 which is available for new schemes.

5. The table below highlights the level of CYC and LTP investment in the highways service over the last five years.

16/17	17/18	18/19	19/20	20/21
£'000				
£4027	£5750	£6095	£9340	£9027

6. This report focuses on the Transport, Highways and Environment List from page 361 budget report, and how the following lines from that report will be invested over the following year.

- Highway Schemes
- Highways - Tadcaster Road
- Drainage Investigation and Renewal
- York City Walls
- Ward Committees
- National Cycle Network Route 65 Repairs
- Street Lighting
- Highway Drainage
- Fordlands Road Flood Defences
- Stonegate Natural Stone Renewal
- Non Illuminated Signage
- Knavesmire Culverts
- River Bank Repairs
- Flood Alleviation Schemes incl Germany Beck

7. The budget lines identified above are subdivided into the following categories and allocations:

- Carriageway programme
- Footway programme
- Slurry Sealing
- Pre-patching/surface dressing programme
- Large patching programme
- Micro Patching
- Pot Hole Repair
- Previous Years Work
- Capital Ward committee scheme
- Capital drainage programme
- Capital drainage investigation
- Capital Gully Repair Engineering Works
- Capital street lighting replacement columns
- Capital City Walls Restoration
- Capital City Walls R&R
- Tadcaster Road
- Traffic Signal Asset Renewal
- Flood Alleviation Schemes incl Germany Beck
- Fordlands Road Flood Defences

- Stonegate Natural Stone Renewal
- National Cycle Network Route 65 Repairs

Highways Investment

8. In order to produce the programs of highway works for each year, information is drawn from a number of sources:

- Highways Inspectors undertake an annual visual proactive condition survey of all our roads and footways, this in addition to their monthly inspections for reactive maintenance.

- Visual condition inspections carried out with vehicle mounted Digital cameras, which survey of all our roads and footways annually (Gaist)

- Skid resistance is captured annually using UKPMS (United Kingdom Pavement Management System) which is visual and machine surveys (SCANNER).

- SCRIM – Skid Coefficient Surveying, analysis, and data for forward work's needs.

- National Street Gazetteer- Monthly submission, data reviews, creation and adjustment of new and existing streets data.

- The public highway is inspected annually by GAIST to produce five condition categories with grade 1 (very good), grade 2 (good), grade 3 (fair), grade 4 (poor) and grade 5 (very poor).

- The conditional survey data is available for public viewing at: https://cyc.maps.arcgis.com/apps/webappviewer/index.html?id=6e02c41a806e46879e7dc215f1275afb

9. Notwithstanding previous levels of investment the current funding levels are not sufficient to keep all our assets in their current condition. Therefore ensuring we get best value out of the available funding is critically important requiring the service to determine at what point intervention is made. All assets are important, and we have a statutory duty to ensure that the highway is safe. We also endeavour to make sure our road network is resilient and can support economic growth and local communities in York. However, we have to work within an overall budget and therefore, during a time of diminishing resources and increasing customer expectations, we need to prioritise investment effectively. The methodology used to prioritise investment varies between the asset groups but in all cases, the approach

to deciding where to spend our money is primarily risk based. Consideration is also given to the extent of the work required, whether or not the existing arrangement is meeting the needs of highway users, the impact on other highway assets and the practicalities of future maintenance.

10. Having assessed the investment needs for each asset group, we consider this in the wider context of the whole highways service as we endeavour to undertake the right repairs at the right time in the lifecycle of all our assets.

11. Therefore each road and footway is assessed and given a ranking (score) based on a range of criteria, including footways and roads that are in the poorest condition the service considers factors such as traffic levels, footfall, bus frequency, the proximity of schools, doctors surgeries (etc.) to help us prioritise those routes. This then informs the decision about how the funding will be spent on those routes that are in the worst condition in terms of maintenance schemes.

Treatments

12. To achieve best value we undertake a range of interventions which include but not limited to the following: Reconstruction, Resurfacing, Micro Surfacing, Surface Dressing, Footway Reconstruction including modular and asphalt, Footways resurfacing and Slurry Sealing.

13. Surface dressing and thin surfacing such as micro asphalts. These all involve laying a thin layer over the top of the existing road to seal the surface and restore grip, extending the life of the road. They will also rectify surface defects like cracks and potholes, either as part of the treatment process or through pre-patching works done to the more significant defects in advance of the surface treatment.

14. Resurfacing usually involves removing and replacing the existing road surface (although it is sometimes possible to lay the new surface on top of the old). Resurfacing differs from a surface treatment by using a thicker layer of material; usually at least 30mm thick and sometimes 100mm or more if several layers of the road are replaced. Resurfacing restores the road surface to a new condition, removing surface problems and most unevenness.

15. Reconstruction (Rebuilding) involve digging down to repair or replace some or all of the foundation layers of the road and then putting a new surface back on top. Limited areas of reconstruction are sometimes used to solve localised problems as part of a resurfacing scheme

16. The majority of our footway surfaces are made of asphalt. The rest of the footway network is surfaced with a range of different materials including

paving slabs of various sizes and different styles of block paving. These can be grouped under the general term of ‘modular paving’ These modules could be slabs or blocks and might be made of concrete or natural stone. There are a few other materials as well – for instance there are a few footways made of in-situ concrete – but the vast majority of the footway network has either an asphalt surface or a modular surface.

17. Footway surface treatments include slurry seals and micro asphalts. Both involve laying a thin layer over the top of the existing footway to seal the surface and extend its life. They will also rectify surface defects like cracks and potholes, either as part of the treatment process or through pre-patching works done to the more significant defects in advance of the surface treatment. Micro asphalt is a thicker two-coat process and can regulate out some dips in the footway.

18. Resurfacing involves removing the existing footway surface, whether it is asphalt or modular, and replacing it with a new surface. On an asphalt footway, resurfacing usually involves replacing all the asphalt – usually 75mm to 100mm thick.

19. In modular footways, it involves removing the modular paving and either relaying it and replacing broken units or replacing it with a suitable thickness of asphalt.

20. Reconstruction involve digging down to repair or replace the foundation layers of the footway and then putting a new surface back on top. Limited areas of reconstruction are sometimes used to solve localised problems as part of a resurfacing scheme.

21. Further assessments will be undertaken this year to identify the impacts that have arisen from the long spells of flooding and sub-zero temperatures during the winter 2021.This could lead to certain sections of the network accelerating up the ranked scheme list, sections may require intermediate or basic maintenance prior to any long term program intervention. For this work we have a budget allocation of £1.225M which is for all footways and carriageway reactive repairs, see Annex 12.

22. A programme of work for 21/22 is proposed in the following annexes:

- Annex 2 Large Patching Proactive Programme
- Annex 3 Carriageway Proactive Programme
- Annex 4 Footway Proactive Programme

- Annex 5 Street Lighting Replacement Programme
- Annex 6 Street Lighting Steel Replacement Programme
- Annex 7 Street Lighting Concrete Replacement Programme
- Annex 8 City Walls Structural Conservation Programme
- Annex 9 Tadcaster Road
- Annex 10 Drainage Proactive Programme
- Annex 11 Surface Dressing Proactive Programme
- Annex 12 Reactive Maintenance Programme
- Annex 13 Delivery Performance for the financial year 20/21

23. A review of the delivery performance for the financial year 20/21 can be viewed at annex 13 attached to this report which also details the schemes which will be carried forward into 21/22.

Traffic Signal Asset Renewal (TSAR)

24. £1.2M is allocated from the Maintenance budget of £7,957 to Traffic signal asset renewal. The city's traffic signal estate is monitored in terms of condition and age, resulting in a recorded 'general condition' score for each location. The asset is also evaluated in terms of whether the equipment is deemed as 'life-expired' by the maintenance contractor. The TSAR programme of works is then formed by prioritising those junctions with the worst overall condition score, therefore reducing the down time of the asset and reducing the risk of irreparable failure.

25. Where the life-expired assets are no longer in line with current industry standards or government guidance, the replacement asset is designed to fulfil current standards. This often means that the new junctions are not an exact like for like replacement, but instead sometimes also represent a general improvement in safety or other factors.

Flood Alleviation Schemes including Germany Beck

26. The Germany Beck Flood Alleviation Scheme is currently in development to reduce the impact of flooding to properties in the Fordland's Road community in Fulford. The scheme will also remove the risk of flooding to Fordland Road maintaining a vital access route into the area and to further enhance the flood risk management improvements to the A19. The design

and approval of a solution are currently being delivered, the holistic scheme will incorporate a culvert pumping station to isolate high river Ouse flood flows and through pump Germany Beck flood flows maintaining low levels in the watercourses during periods of flooding.

27. £2m of CYC capital funding has been targeted towards the scheme to support £436k of funding previously targeted to provide flood protection measures for Fordland's Road.

28. £1.5m CYC capital funding has been made available to work with the Environment Agency Flood Alleviation Programme and support the delivery of wider outcomes in the city. A formal paper will be developed to endorse the targeting of funding but this recommended to be split between the Germany Beck Flood Alleviation Scheme (£1m) and improvements to the defences at Peckitt Street/Tower Gardens (£0.5m). The funding package to deliver the works will be completed from external funding from the Environment Agency and S106 funding.

Ward Investment Programme

29. Highways invest an annual contribution of £250k into local initiatives which has been very popular with members since it was introduced. It provides a good way for involving members in the prioritisation of local works, and has offered funding opportunities for projects that would not have otherwise been possible given budget constraints.

Street Lighting

30. There are approximately 23,000 street lights of various heights and construction of which 21,600 are steel and 1400 concrete columns. A substantial percentage of the steel columns are age expired, and all remaining concrete columns are expired.

31. For this year's column replacement programme see Annex 5.

32. The Council have invested capital funding in the street lighting service to carry out a risk based street lighting column replacement programme. The service has replaced 4340 concrete columns over the last five years. The replacement new steel columns have a 35 year life expectancy and they are all fitted with an energy efficient LED lanterns. There remains 1400 concrete columns to replace on the programme, and with the current level of funding this will take approximately a further 4 years to remove all concrete columns from the inventory. This year there is 50% over programming in the concrete replacement programme due to the number of steel replacement columns required.

33. See Annex 7 for this year's concrete column replacement locations.

34. Additional to the concrete column replacement is the management of steel column failure, Street lighting columns all have manufacturer's recommended serviceable life in years. There remains a number of City of York council's steel street lighting assets which are past this service date and therefore they are being managed on an annual program of structural testing for these steel assets. Over the last five years the service has replaced 1184 steel columns due to structural failure identified at test stage.

35. The steel Column structural failure replacements are being replaced on an individual basis. This programme is a reactive programme based on the annual testing reports. This replacement programme is different to the concrete column replacement programme where all the assets in the streets are changed.

36. See annex 6 structural test replacement for this year's steel replacement locations.

37. There are a small number of the steel columns which have been historically repaired, these repairs render the columns unsuitable for structural testing at the points of the column which are prone to deteriorate. These assets are inspected visually.

38. In addition to the street lighting structures are none illuminated steel sign posts, these have manufacturer's recommended serviceable life in years at date of manufacture. The team are capturing the number of assets in the public highway and assessing their condition on an annual program of structural testing.

Drainage Investment

39. The highway drainage asset is critical to ensuring the controlled removal of water from the carriageway to allow customers to use it safely. The impact that failure of the drainage assets can have on our highway, including wider transport infrastructure and private property is significant.

40. The Highways Act 1980 empowers highway authorities to construct and maintain drainage systems to remove surface water from the highway. More recently, the Flood and Water Management Act 2010 gives local authorities a role for the management of local flood risk.

41. The biggest challenge in managing our highway drainage and local flood risk is in some cases the location and condition of highway drainage assets are far from understood which presents real challenges in making the case for significant investment. Highway drainage assets across York have

therefore had targeted investment where problems are known to exist. This makes proactive drainage project much more difficult and therefore our approach to maintaining highway drainage assets is largely reactive. This is costly and does not address the issue of needing to understand where to invest to halt the deterioration.

42. The drainage and flood risk team have commenced building our understanding of the drainage asset by undertaking a series of targeted inventory surveys in areas at risk of local flooding. We are working to co-ordinate maintenance activities across our teams and drainage assets whilst collecting on-the-go inventory and condition data for use in the future. This will improve the performance of this critical asset in the short term and begin to set the building blocks in place for future programmes of prioritised maintenance.

43. The Council is investing capital funding in the structural maintenance of our highway drainage system. Our teams are prioritising the known defective drainage assets across the City, targeting the cause of the drainage issues rather than just the symptoms. This investment will have a positive impact on the highway infrastructure, especially carriageways which often suffers from accelerated deterioration as a result of failing drainage systems.

44. We are improving our knowledge of drainage infrastructure across the City to develop capital schemes. These schemes will demonstrate evidence based decisions on drainage improvements, enabling us to bid for capital funding under the Department For Transport (DfT) Challenge Fund, and meet the requirements for the DfT Incentive Fund.

45. The schemes identified for this year's programme have been highlighted in Annex 10

Tadcaster Road Investment

46. In June 2020 the Council was successful in receiving 5M funding allocation via the DfT's Local Highways Maintenance Challenge Fund. The total allocation will equate to £6m including the Council's direct contributions on this section of the highway. The funding will allow the Council to carry much needed wholesale maintenance investment works on one of its core strategic routes. The scheme the Council plan to implement will include for carriageway and footway upgrade drainage repairs, replacement, and improvements.

47. The progress report for Tadcaster Road can be viewed in Annex 9

City Walls Investment

48. York City Walls are a key symbol of the city. The City Walls attract in excess of 1million users annually, and are enjoyed by residents and visitors. Protecting the integrity of this asset for users and for the image of the city is a critical objective.

49. The service appointed a Bar Walls manager in 2019. This appointment has allowed the service to commence a regular condition survey of York City Walls. The inspections have identified a number of priority locations which have been added to the priority programme. The programme has works planned across a number of financial years. Some of the identified areas require further monitoring to gather the evidence required to inform the restoration plan. Some of these monitoring sites may take up to a year to complete. The aim of this small delivery team is to remain flexible enough to direct resource to where the need is greatest.

50. The location of the programmed works for 2021/22 can be viewed in Annex 8

51. The development of the city walls conservation and asset management plan is due for delivery shortly.

Consultation

52. If Ward Councillors have concerns about the programme these can be raised with the team. Where possible existing schemes will complement agreed ward schemes. If issues arise these will need to be considered by Executive Member for Transport

Corporate Priorities

53. Through the proposed measures the Directorate of Economy & Place supports delivery of the Council Plan around most notably the outcomes around world class infrastructure, getting around sustainably and the essence of this report is about being an open and effective council.

Implications

Financial Implications

54. This report provides further breakdown of the budgets approved by Budget Council. The capital funding is shown in Annex 1. The highway maintenance service will be provided in accordance with the prescribed budgets.

Human Resources (HR) and other implications

55. There are not any HR implications due to the decreased capital budgets.

Equalities

56. This report has taken into consideration the impact of the Council's Equality Strategy when recommending the proposed budget allocation and highway maintenance operations. Equalities Impact Assessment (EIA) is addressed in the global budget saving assessment.

Legal

57. The Council has a statutory duty to carry out highway maintenance under Section 41 of the Highways Act 1980 and this report sets out the proposals and budgets to allow this to happen in the forthcoming financial year.

Crime and Disorder

58. There are no crime and disorder issues.

Information Technology (IT)

59. There are no IT implications in this report.

Property

60. There are no property implications.

Other

61. There are no other implications in this report.

Risk Management

62. In compliance with the Council's risk management strategy, the main risks that have been identified in this report are:

- Strategic Risks, arising from judgements in relation to medium term goals for the service
- Physical Risks, arising from potential underinvestment in assets
- Financial Risks, from pressures on budgets
- People Risks, affecting staff if budgets decline

63. Measured in terms of impact and likelihood the risk score for all of the above has been assessed at less than 16. This means that at this point the risks need only to be monitored, as they do not provide a real threat to the achievement of the objectives of this report.

Recommendations

64. Director of Economy & Place is recommended to:

(i) Approve the allocation of budgets for 2021/22

(ii) Approve the implementation of the proposed programmes

Reason: To ensure delivery of all highway maintenance services in an efficient and cost effective manner.

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	Report Approved	√	**Date**	
Wards Affected: All Wards			**All**	✓
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