

Director Decision Session

4 May 2022

Report of the Corporate Director of Place

Annual Maintenance Report 2022/23

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 2022/23 and seeks approval for the annexed programmes.
4. The council has identified a five year investment programme of £38.1m for Highway related expenditure. This includes £11.0m of assumed funding from Department for Transport (DfT) and £27.1m of CYC prudential borrowing. The council is therefore investing 2½ times the investment from Government on Highways.

Background

5. The Total budget for 2022/23 was approved by Members 17 February 2022 at budget council, which reflect the proposals that were reported to Executive on 7th February 2022. 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 2022/23 which is available for new schemes.
6. **Highway Infrastructure Asset Management Plan (HIAMP)** - Asset management has been widely accepted by central and local government

as a means to deliver a more efficient and effective approach to management of highway infrastructure assets through longer term planning, ensuring that standards are defined and achievable for available budgets. It also supports making the case for funding and better communication with stakeholders, facilitating a greater understanding of the contribution highway infrastructure assets make to economic growth and the needs of local communities. The Highway Infrastructure Asset Management Plan (HIAMP) is available: - [HIAMP_v7.pdf \(york.gov.uk\)](#)

7. This report focuses on the Transport, Highways and Environment List 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

The lining programme is currently in development and will follow this report. Ward Cllrs will be engaged when the first draft of the programme is complete . From the financial year 2023/24 the lining programme will form part of this annual report.

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

- Carriageway programme
- Footway programme
- Slurry Sealing
- Surface dressing programme
- Large patching programme
- Pot Hole Repair

- Previous Years Work
- Capital Ward committee scheme
- 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

9. The budget approved by Council was based on an expected allocation from Department for Transport, at the present time the 2022/23 allocation is unknown. The funding from DfT will be used for eligible Highway Expenditure but it will be for Executive to determine whether this will result in additional allocation being invested in maintenance or if the base budget will remain the same and CYC funding reprioritised.

	Allocated £'000	Assumed £'000	Difference £'000
Potholes	1,260	0	+1,260
Structural Maintenance (Needs)	1,260	1,827	-567
Structural Maintenance (Incentive)	315	380	-65
Sub Total Maintenance	2,835	2,207	+628

10. Within the highways capital schemes from 2021/22 there was £1.64 million of unallocated funding that was added to the 2021/22 programme after the annual highway maintenance report. This was due to additional funding that DfT had provided over and above that assumed in the budget process. This has been used to fund the purchase land (£250K) near Haxby relating to the Haxby Station Project (Executive 30th Sept 2021) and £500k to cover the Hostile Vehicle Measures (Executive 13th January 2022).
11. The remaining £890k was agreed to be used to deliver various highway schemes across cycle margin repairs, concrete road joint repairs and rubber replacement speed cushions (£600k) highways works at Danesgate (£190k), street lighting safety improvements (£65k) and £35k relating to unadopted roads condition surveys.
12. Any slippage of these will be dealt with at year end close down of 2021/22.

Highways Programme

13. 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 (a surveying company) to produce five condition categories with grade 1 (very good), grade 2 (good), grade 3 (fair), grade 4 (poor) and grade 5 (very poor).
14. The conditional survey data is available for public viewing at the following link: [FF](#) On clicking the link, York Maps will open. To open the 2020/2021 survey information – click on street care on the left had side of the screen and a sub menu appears. By putting a tick in the box for 'Highways Annual Condition Survey 2020 Carriage' The detail appears for the 2020/2021 surveys. The Footway information is also a tick box that can be selected.
15. 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.

16. 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.
17. 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. Furthermore defects in the cycling margin are prioritised particularly for reactive maintenance. 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 in accordance with the HIAMP.

Treatments

18. 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.
19. 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.
20. 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.
21. 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

22. 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. The Council have trialled recycled and low carbon materials which are approved for use on the highway. These can be more expensive but the trial will evidence long term effectiveness.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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 2022-23. 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 £1.75M which is for all footways and carriageway reactive repairs, see Annex 12.

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

Traffic Signal Asset Renewal (TSAR)

30. £1.2M is allocated from the Maintenance budget of £6,997k 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.
31. 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

32. 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.
33. £2m of CYC capital funding has been targeted towards the scheme to support £0.5m of funding previously targeted to provide flood protection measures for Fordland's Road.
34. £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 is 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 whole life funding costs for the project (£4.871m) will be completed from external funding from the Environment Agency.

Ward Investment Programme

35. 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.
36. Street Lighting –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.
37. For this year's column replacement programme see Annex 5.
38. 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.

39. See Annex 7 for this year's concrete column replacement locations.
40. 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. This year @2700 due to test with an estimated failure of 3 % of those tested.
41. 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.
42. 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.
43. 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

44. 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.
45. 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.

46. 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.
47. 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.
48. 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.
49. 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.
50. The schemes identified for this year's programme have been highlighted in Annex 10

Tadcaster Road Investment

51. 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.

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

City Walls Investment

53. 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.
54. 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.
55. The location of the programmed works for 2022/23 can be viewed in Annex 8
56. The development of the city walls conservation and asset management plan is due for delivery shortly.

Highways Structures

57. Completed schemes in 2021/22 and proposed schemes for 2022/23.
58. Work carried out in 2021/22 was the organisation of vegetation removal at Ouse Bridge, a Special Inspection at New Earswick Link Road, an options report for Traffic Management requirements for the proposed major maintenance works at Lendal Bridge and the Principal Inspections of Lendal, Skeldergate and Millennium Bridges.
59. Team have also been carrying out design work for Rawcliffe Ings (joint replacement and kerb drain refurbishment) and Millfield Railway (bearing replacement and joint replacement). Team have developed a replacement/revised layout weight restriction signage scheme for Strensall Bridge and undertaken a provisional signage layout at

Bishopthorpe Bridge. NYCC have undertaken the General Inspections for all CYC's bridge assets.

60. Planned work to be carried out by team in 2022/23 are the Principal Inspections of 3 No. railway structures (Bondhill Ash Road Bridge, Creighton Bridge and Strensall Footbridge), CYC currently organise the Principal Inspections of about 25 of their structures at a nominal 6 year interval. Team can provide estimates for any future PI's as and when required.
61. Team schemes for 2022/23 are Millfield Railway joint and bearing replacement, Rawcliffe Ings joint and kerb drain replacement and Millennium Bridge movement monitoring.
62. Potential work will be the Principal Inspection of Piccadilly Bridge and design work for the major maintenance works at Lendal Bridge.
63. Schemes that require attention are a spall and water seepage at Skeldergate Bridge, routine cleaning of drains at Scarborough Footbridge and ramps, possible new asset at Carr Drain (possible confined space) and timber repairs at Dauby Lane Footbridge.
64. Team wants to close out the undeserved low Bridge Condition Index (BCI) scores due to elements not being accessed on a number of the General Inspections. General Inspections of all structures to be carried out by WSP (a consultancy) or NYCC (North Yorkshire County Council).
65. There are a number of ongoing AIP's:
66. Castle Gateway project - 1 new bridge over the River Foss adjacent to Castle Mills Bridge, AIP (Approval in Principle) not yet signed off (14/1/22) but a draft document has been commented upon.
67. York Outer Ring road
 - Clifton Moor Underpass – AIP approved on Thursday 20 January 2022.
 - Westfield Beck – AIP not currently in development. However a preference for a straight extension of the existing culvert.
 - Haxby Railway Bridge – Eastbound – AIP approved on Thursday 20 January 2022.
 - Haxby underpass east / west – existing. Modifications to the ends of the existing structures will require AIP and appropriate certification ie design and construction certificates.

68. Gap Analysis Reports for all CYC's bridge assets - Report for each of CYCs structures stating where we currently are regarding Principal Inspections, General inspections, assessed capacity, structural reviews and risk and compare this with where we need to be with respect to the Code of Practice for Well-Managed Highway Infrastructure.
69. The 22/23 budget for the Highways Structures programme was as follows:

Scheme	Budget £1,000s
Bridge Maintenance	515
Lendal Bridge	1,100
Total	1,615

70. The Lendal Bridge funding has been carried forward to 22/23 as the scheme would not be progressed in 21/22, so there is now £515k available in 21/22. The total spend in 21/22 is £128k (£68k comms + £60k actual spend).

Consultation

71. 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

72. 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

73. 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

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

Equalities

75. 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

76. 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

77. There are no crime and disorder issues.

Information Technology (IT)

78. There are no IT implications in this report.

Property

79. There are no property implications.

Other

80. There are no other implications in this report.

Risk Management

81. 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

82. 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

83. Director of Economy & Place is recommended to:

(i) Approve the allocation of budgets for 2022/23

(ii) Approve the implementation of the proposed programmes

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

Contact Details

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	Report Approved	√	Date	
Wards Affected: All Wards			All	✓
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