

## Urban Traffic Management & Control Capital Programme 2022/23

Date: 04 May 2022

Report of the UTMC Manager

Report to the Chief Officer (Highways and Transportation)

Will the decision be open for call in?  Yes  No

Does the report contain confidential or exempt information?  Yes  No

### **What is this report about?**

#### **Including how it contributes to the city's and council's ambitions**

- One of the key aspects of the Best Council Plan is Sustainable Infrastructure. The Best Council Plan states objectives of 'improving the resilience of the city's infrastructure', 'promoting a...more resource efficient, low carbon economy' and 'improving transport connections... reliability'. The schemes proposed within this report contribute to achieving those objectives by upgrading infrastructure to a more efficiently maintainable standard that uses less energy and introducing technology to prioritise buses through traffic signals. Such improvements provide a safer and more efficient service for Leeds City Council customers and enable greater benefits to be realised from wider investment programmes.
- The purpose of the report is to seek approval to implement a programme of works to prepare and deliver critical traffic signal asset renewal, telecoms infrastructure upgrades, traffic signal control strategy upgrades and the introduction of bus priority at various sites across the LCC network during the 2022-23 financial year, as detailed in Appendix A. The works will be funded from the City Region Sustainable Transport Settlement (CRSTS), Department for Transport Signal Maintenance Fund and a S106 developer contribution.

### **Recommendations**

- a) The Chief Officer (Highways and Transportation) is requested to:
  - i) Review and approve the prioritised list of proposed schemes set out in Appendix A for delivery as part of the 2022/23 Urban Traffic Management & Control (UTMC) Capital Programme.
  - ii) Give authority to incur expenditure of an expected £2,425,000 (inclusive of all works costs, fees and legal costs) which will be funded by way of £2,075,000 from the City Region Sustainable Transport Settlement (CRSTS), £250,000 from the Department for Transport Traffic Signals Maintenance Fund and £100,000 from a S106 developer contribution.
  - iii) Approve the injection of £2,075,000 from the CRSTS, £250,000 from the Department for Transport Traffic Signal Maintenance Fund and £100,000 for the A63/Ninlands Lane junction from a S106 developer contribution into the UTMC Capital Programme 2022/23.

## Why is the proposal being put forward?

1. The purpose of the report is to seek approval for the 2022-23 programme of UTMC works, funded from various sources, and to authorise the detailed development, consultation, preparation and delivery of the component schemes.
2. UTMC works are not included in the Council's annual Capital Programme allocation of funds. However, the 5-year City Region Sustainable Transport Settlement is expected to provide an annual allocation of funds intended for the maintenance and upgrade of traffic signals infrastructure. This is further supported by a successful bid to DfT for additional funding through the Traffic Signals Maintenance Fund as well as a S106 developer contribution.

### Wards Affected:

Have ward members been consulted?  Yes  No

## What impact will this proposal have?

### General Refurbishment

3. The accepted industry view on traffic signal equipment is that it has an expected lifespan of approximately 15 years. In addition, older models of controller equipment become unmaintainable due to unavailability of spares. Older equipment can also be more unreliable, leading to longer down time in the event of failure. In Leeds, the average age of traffic signal controllers is approximately 10 years, which is above the West Yorkshire average and will increase if no action is taken. An ongoing programme of refurbishment is necessary to modernise the controller stock and replace any on-street equipment that has been identified as in poor condition following periodic inspections.
4. New equipment has a far lower energy footprint (e.g. LED lamps compared to halogen), is more flexible in terms of monitoring and control - being Internet Protocol (IP) capable - and can be more easily adapted to introduce innovative new technology and features such as bus priority. It is estimated that converting all remaining LCC traffic signal asset from halogen to LED will save approximately 400 tonnes of CO<sub>2</sub> per year as well as providing a significant financial saving. The proposed programme continues the work of previous programmes of delivering a fully LED and IP asset, contributing to the Council's carbon neutral objective.
5. Sites are selected for refurbishment based primarily on age with other factors such as obsolescence also considered. Sites may also be brought forward, for example, if refurbishment supports a wider transport investment programme in the surrounding area. The proposed list of sites is set out in Appendix A and includes the A63/Ninlands Lane junction that is funded from a S106 developer contribution.
6. As part of the refurbishment of signals, this programme, unlike previous years where focus has been primarily on asset renewal, will also seek to upgrade the control strategy where possible to improve the efficiency of control and minimise delay to all users. All pedestrian facilities will be upgraded in line with the previously published 2021 report *Traffic Signal Operation at Standalone Crossings*. Upgrading the control strategy will also facilitate improved performance of bus priority.

## **Telecommunications Infrastructure**

7. Work to modernise the UTMC telecoms infrastructure began with investment through recent funding programmes including Leeds Public Transport Investment Programme (LPTIP). This work introduced a private fibre network in the city centre that replaced older, failing, wireless technology. Upgrading telecommunications infrastructure is critical to delivering a more reliable, efficient network that is capable of enabling the Council to achieve its Transport Strategy objectives. For example, the traffic signal priority system for buses is operated centrally and relies on low latency, reliable telecoms to each site to provide useful priority. Significant further investment is required to address legacy telecoms issues across the wider network and the proposed programme builds on the work that has already begun.
8. The private fibre network that has been implemented in the City Centre provides a more reliable, secure, and future-proofed network and the works proposed in this report will connect infrastructure introduced through various wider programmes such as LPTIP and the City Centre Package (CCP). A secondary benefit of this work is that it enables telecoms circuits provided by third parties to be ceased and thus provides a saving to the Council. The proposed works are set out in Appendix A. This element of work is also supported by the DfT Traffic Signals Maintenance Fund award which will contribute to this modernisation programme.
9. In addition to the private fibre network, there is work ongoing by LCC Integrated Digital Services (IDS) to roll out the Leeds Full Fibre Network (LFFN) which aims to provide fibre circuits across the city through a third-party provider. This complements the UTMC private fibre network and will provide the opportunity to upgrade and share telecoms at CCTV sites across the city. Utilisation of these circuits for UTMC data (aside from CCTV) requires additional investment in the surrounding traffic signals infrastructure and the proposed programme will support that work. This work will be undertaken as and when the circuits are delivered.

## **Network Performance**

10. There are 676 traffic signal sites across Leeds and a significant number of those sites are controlled with Fixed-Time UTC plans. The performance of these plans degrades over time due to changes in traffic patterns that are exacerbated by changes to the layout of the road network that have taken place as part of wider investment schemes. Performance degradation contributes to increased delay for buses and can result in unnecessary waiting time for pedestrians as well as increased emissions from general traffic. This programme proposes that work is undertaken to optimise signal timings in areas of the network that have been particularly impacted by change, focusing on improving bus journey times, minimising pedestrian waiting times and improving reliability.
11. As part of LPTIP, various sites were installed with the facility to provide bus priority through the traffic signals. Since implementation, additional bus operators have begun to use the bus priority system. As part of the network performance element of work, it is proposed that bus priority is added and optimised for all active bus operators at the recently installed sites. Furthermore, at sites delivered in recent years but prior to the *Traffic Signal Operation at Standalone Crossings* report, it is proposed to revisit the pedestrian crossing operation to bring it in line with current policy.

## **What consultation and engagement has taken place?**

12. Subject to approval of the programme, Ward Members will be consulted prior to any works commencing in order to seek clarification of the impact of the works for all parties.

13. The Executive Board Member for Climate Change, Transport and Sustainable Development has been briefed on the proposed programme detailed within Appendix A. The progress of the overall programme will be monitored by the Chief Officer (Highways and Transportation) and Head of Service (Transportation) via a regular presentation/ update on a monthly basis.

### What are the resource implications?

14. The scheme proposals have no implications in terms of resources. All design and works resources have been identified within the 2022/23 UTMC Capital Programme.
15. The total estimated cost to deliver the schemes from the 2022/23 UTMC Capital Programme is £2,425,000, which is split into the following categories:-

Works	£2,100,000
Staff Fees	£325,000

16. The £2,425,000 is funded £2,075,000 from CRSTS, £250,000 from DfT Traffic Signal Maintenance Fund and £100,000 from a S106 contribution.

Funding Approval :	Capital Section Reference Number :-						
Previous total Authority to Spend on this scheme	TOTAL £000's	TO MARCH 2021 £000's	FORECAST				
			2021/22 £000's	2022/23 £000's	2023/24 £000's	2024/25 £000's	2025 on £000's
LAND (1)	0.0						
CONSTRUCTION (3)	0.0						
FURN & EQPT (5)	0.0						
STAFF COSTS (6)	0.0						
OTHER COSTS (7)	0.0						
<b>TOTALS</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Authority to Spend required for this Approval	TOTAL £000's	TO MARCH 2021 £000's	FORECAST				
			2021/22 £000's	2022/23 £000's	2023/24 £000's	2024/25 £000's	2025 on £000's
LAND (1)	0.0						
CONSTRUCTION (3)	2100.0			2100.0			
FURN & EQPT (5)	0.0						
STAFF COSTS (6)	325.0			325.0			
OTHER COSTS (7)	0.0						
<b>TOTALS</b>	<b>2425.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2425.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Total overall Funding (As per latest Capital Programme)	TOTAL £000's	TO MARCH 2021 £000's	FORECAST				
			2021/22 £000's	2022/23 £000's	2023/24 £000's	2024/25 £000's	2025 on £000's
CRSTS	2075.0			2075.0			
DfT Traffic Signals Maintenance	250.0			250.0			
S106	100.0			100.0			
<b>Total Funding</b>	<b>2425.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2425.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Balance / Shortfall =</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

### What are the legal implications?

17. Due to the UTMC Capital Programme affecting multiple wards and the value this report is eligible for call-in.

## What are the key risks and how are they being managed?

18. A key risk associated with the proposals are that inflation will reduce the volume of works that can be delivered. The progress of the scheme and associated cost pressures will be reported regularly to the Chief Officer (Highways and Transportation) and the scope of the programme reviewed to ensure schemes are delivered within the available funding.

## Does this proposal support the council's 3 Key Pillars?

Inclusive Growth       Health and Wellbeing       Climate Emergency

19. The programme will support the Best Council Plan 2020-25 objectives to 'promote sustainable and inclusive economic growth' by delivering infrastructure that improves level of service for walking, cycling and buses.
20. Pedestrian/cycle crossing upgrades will be delivered in line with the previously published *Traffic Signal Operation at Standalone Crossings* report. Safety timings will be increased to reflect a lower design walking speed based on studies suggesting that the mean walking speed for those aged over 65 years was 0.8m/s. Introduction of sensors that can place a demand for a crossing without having to press the button provides more inclusive infrastructure to users for whom pressing the button is difficult.
21. Conversion of halogen lamps to LED, increasing efficiency of signal operation and promoting more sustainable transport options through the proposed works contributes to the Council's Climate Emergency targets.

## Options, timescales and measuring success

### a) What other options were considered?

22. An alternative approach to these proposals would be to focus purely on critical asset renewal. This would maximise the volume of sites that can be converted from halogen to LED and reduce the average age of the asset more quickly. However, focusing on this at the expense of increased efficiency and improved level of service for sustainable transport modes would ultimately result in increased vehicle emissions that would undermine the carbon savings realised from converting halogen to LED.

### b) How will success be measured?

23. The success of the proposed scheme will be measured through the following KPIs, regularly reported to Chief Officer (Highways and Transportation):
- Reduction in energy consumption
  - Number of sites with active bus priority
  - Number of crossings operating in line with updated policy

### c) What is the timetable for implementation?

24. It is intended that the implementation of this programme of work be undertaken and completed within the 2022/23 financial year.

## Appendices

25. Appendix A: UTMC Proposed Programme 2022-23  
26. Appendix B: EDCI Screening

## **Background papers**

27. None.