



Cabinet Member Report

Decision Maker:	Cabinet Member for City Management
Date:	3 March 2021
Classification:	For General Release
Title:	Planned Preventative Maintenance (PPM) programme for 2021/22 in respect of Highways, Public Lighting & Bridges and Structures
Wards Affected:	City wide
Policy Context:	The planned programmes support the ‘City for All’ vision in delivering a well-managed, high quality sustainable streetscape whilst protecting and enhancing Westminster’s unique heritage.
Financial Summary:	The overall gross expenditure in respect of the proposed PPM work contained in this report is £13,286,000 for which financial approval is sought. The net expenditure is £12,786,000 and is fully contained within the council’s approved capital programme for 2021/22. Income totalling £500,000 is made up from Contributions from Statutory Undertakers in respect of work on the pipe subway network.
Report of:	Kevin Goad – Director, City Highways
Report author:	Dan Perks – Operations Manager (email: dperks@westminster.gov.uk)

1. Executive Summary

- 1.1 This report seeks approval for the proposed 2021/22 annual programme of Planned Preventative Maintenance (PPM) work in respect of Highways, Public Lighting & Bridges and Structures.
- 1.2 The report also seeks approval to undertake all the initial designs and approximately 50% of the detailed design of the schemes in the 2022/23 programme.
- 1.3 A glossary of terms used in this report can be found at **Appendix F**.

2. Recommendations

- 2.1 That the detailed proposals for the **Highways PPM programme** for 2021/22 at an estimated gross cost of **£7,723,000** as detailed in Section 5.1 and Appendix A be approved.
- 2.2 That the detailed proposals for the **Bridges and Structures PPM** programme for 2021/22 at an estimated gross cost of **£1,285,000**, as detailed in Section 5.2 be approved.
- 2.3 That the detailed proposals for **Public Lighting PPM** programme for 2021/22 at an estimated gross cost of **£4,278,000**, as detailed in Section 5.3 and Appendix E, be approved.
- 2.4 That the gross capital expenditure of **£13,286,000 (net capital expenditure of £12,786,000)** for 2021/22, comprising of £11,736,000 from the annual PPM programmes for the City Council's Highways, Public Lighting & Bridges and Structures; £400,000 from the Low Carbon Streets Capital Programme, £400,000 from the Deep Drainage Capital Programme and £250,000 from the Asset Inventory Update Capital Programme line, be approved.
- 2.5 That the Cabinet Member for City Management delegates to the Director, City Highways the authority to make changes to the programmes agreed in recommendations **2.1 to 2.4**, subject to the proviso that the overall budget is not exceeded and that the Cabinet Member is consulted on any significant changes.

3. Reasons for Decision

- 3.1 All assets deteriorate over time and any work aimed at maintaining the durability of the asset is classed as programmed maintenance. Such work prolongs the life of the asset and/or maintains structural capacity and is therefore considered as capital expenditure.
- 3.2 Each year the City Council's regular inspection and testing programmes determine the current condition of the various highway assets (Carriageways, Footways, Lighting and Bridges & Structures) and identifies the forward

investment needs that will keep the highway network in a safe and reliable condition.

3.3 Provision has been made in the capital programme for this expenditure to enable these programmes of work to be implemented together with preparation of forward programmes of work for 2022/23.

3.4 The proposed Planned Preventative Maintenance programme set out in this report will ensure that the City Council's highway assets remain safe and effective and support the City for All agenda.

4. Background, Including Policy Context

4.1 The transport infrastructure in the City of Westminster is of local and national importance and in order to fulfil its potential, it is crucial that the highway network is adequately maintained. This includes not just carriageways and footways, but also bridges, street lighting, drainage, signage and other highway infrastructure assets.

4.2 To ensure that the City Council's highway network is efficiently maintained it is applying asset management principles and techniques adopting the standards set out in the National Codes of Practice – Well Managed Highway Infrastructure – which provides guidance on the efficient, effective and economic delivery of highway maintenance services and include advice on all new and emerging issues and technical developments.

4.3 The work needed to ensure effective maintenance can be split into three general headings:

- **Inspection and Testing** – Information gathering to determine asset condition and performance.
- **Routine and Reactive (ad-hoc) Maintenance** – Routine maintenance comprises of cyclic maintenance activities such as gully cleansing, bulk lamp change and clean etc. Reactive (ad-hoc) maintenance usually arises from the identification of defects from the inspection regime.
- **Programmed Maintenance** – Programmed maintenance is planned preventative maintenance which prolongs the life of an asset or maintains structural capacity and is therefore considered to be capital maintenance.

4.4 The Planned Preventative Maintenance (PPM) programmes identified in this report are classified as programmed maintenance and therefore funded from capital expenditure. The proposed programmes of work for Highways, Public Lighting and Bridges & Structures are set out in Section 5 below.

5. Proposed Planned Preventative Maintenance (PPM) Programme

5.1 Highways (Footways, Carriageways and Drainage)

- 5.1.1 The City Council's annual prioritised PPM programme for footways and carriageways is developed using its Value Management (VM) process which assess scheme priorities using the following weighted criteria - engineering condition; defect history; visual appearance and network hierarchy. The Highway Inspectors make an assessment of the engineering condition and visual condition of all Westminster's footways and carriageways at least once a year as part of their routine inspection regime. Each street has its own network hierarchy category assigned to it and data on the defect history of a street is taken from the CONFIRM asset management system.
- 5.1.2 The proposed 2021/22 PPM programmes contained at the back of this report have been developed with the application of the VM process described above along with the results of the extensive consultation undertaken with Ward Members, Amenity Societies, highway inspectors and key stakeholders through the annual 'Highway Nominations' process.
- 5.1.3 Officers will arrange for a response to all nominees in April 2021 so that they know the outcome of the nominations they have submitted.
- 5.1.4 The Footway and Carriageway programmes contained in this report in Appendix A are the proposed programmes for 2021/22 and the provisional programme for 2022/23. The 2022/23 programme will also be used as the reserve list for the 2021/22 programme.
- 5.1.5 The Minor Works programme in the PPM programme for footways and carriageways is to allow early intervention to areas of defective carriageway and footway which are in poor condition but over a relatively small area and would therefore not normally qualify for the main PPM programme. Targeting early intervention of some defects should result in a reduction of the number of reactive jobs that are currently being found on the network and produce an overall improvement in network condition. It is proposed to continue with the Minor Works programme line in 2021/22.
- 5.1.6 The Highways Review Panel (HRP) set up in in 2017 comprising of councillors, officers, representatives from the council's Service Provider and a number of 'lay members' from various amenity societies across Westminster, did not meet in 2020 due to the COVID-19 pandemic. The meeting normally convenes twice a year in May and October, the purpose of the HRP is for officers to communicate to Members and the lay members of the panel the process officers apply to develop the programme of PPM schemes and any changes being proposed. The primary remit of the lay members of the panel is to scrutinise these processes, particularly the Value Management scoring prioritisation and provide feedback.
- 5.1.7 It is hoped to reconvene the HRP meetings in the second half of 2021.

- 5.1.8 The 21/22 and 22/23 programmes of work have been checked on site for rigour and cross checked with planned utility works and major public realm schemes such as the Strand/Aldwych proposals to avoid any potential conflicts for network space. We will work closely with the team delivering the Oxford Street District works to ensure co-ordination with their activities and in some cases that may mean in-year changes to the programme. Early consultation and co-ordination with key stakeholders is in place to ensure that the proposed programmes are deliverable as part of the approval process.
- 5.1.9 To support the council's response to the climate emergency officers have included **£400k** of funding for Low Carbon Streets. Details on this are provided in section 6 of this document.
- 5.1.10 The following table sets out the proposed PPM expenditure for Highways for 2021/22. Appendix A provides the detailed list of schemes in the 2021/22 programme and includes the source designation. There are numerous data sources which have been included as part of the programme development such as the value management score and nominations received from stakeholders e.g. Amenity Societies.
- 5.1.11 The proposed PPM expenditure for Highways, including the 2021/22 and initial designs for the 2022/23 programme is summarised in the following table.

Highways	
Description	Estimated Cost
Carriageway Improvements	
Core carriageway schemes (including cycle friendly gullies+skid resistance)	£2,265,000
Capitalisation of CAT 2 repairs	£195,000
Client fees (Inc. Compliance and Audit)	£178,000
Design (incl. TTO's)	£295,000
Topo, Coring, Cellar Surveys for 22/23 programme	£136,000
SUB-TOTAL	£3,069,000
Minor Works Programme	
Carriageway & Footway works	£800,000
Client fees (Inc. Compliance and Audit)	£44,000
Design (incl Technical Analysis of ACS)	£130,000
SUB-TOTAL	£974,000

Highways (Continued)	
Description	Estimated Cost
Footway Improvements	
Footway Improvement Programme (includes footway strengthening, mastic asphalt conversion & Damaged Paving)	£1,525,000
Capitalisation of CAT 1 repairs	£145,000
Client fees (Inc. Compliance and Audit)	£135,000
Design	£198,000
Topo, Coring, Cellar Surveys for 22/23 programme	£95,000
SUB-TOTAL	£2,098,000
Surface Water Management Programme	
Drainage Improvement Sites	£339,000
Standing Water Re-profiling	£50,000
Strategy and Drainage Inventory	£10,000
Deep Drainage Projects	£400,000
Client Fees (Inc. Compliance and Audit)	£25,000
SUB-TOTAL	£824,000
Street Nameplates Programme	
Street nameplates	£75,000
Client Fees (Inc. Compliance and Audit)	£4,000
SUB-TOTAL	£79,000
Asset Management	
Asset Management (Including Life Cycle Planning)	£90,000
Value Management for 2021/22 programme development	£24,000
Annual Condition Surveys for 21/22 programme	£75,000
SCRIM survey	£10,000
Network Condition Assessment/Analysis for 21/22 programme	£80,000
SUB-TOTAL	£279,000
Low Carbon Streets	
Low Carbon Streets	£400,000
SUB-TOTAL	£400,000
Highways Total	£7,723,000

5.1.12 The total (gross) costs of the Highways PPM programmes in the table above is **£7,723,000** for which financial approval is sought. The current Highways budget provision in the approved capital programme is **£7,723,000** comprising of **£6,923,000** from the approved Highways PPM programme, **£400,000** from the approved Highways Capital Programme for 'Deep Drainage' and **£400,000** from the approved Highways Capital Programme for 'Low Carbon Streets'

Surface Water Management Programme

5.1.13 The surface water management programme is made up of the following areas of work:-

- **Drainage Improvement Sites** – A long list of prioritised drainage improvement sites has been provided in Appendix D. This programme line mainly covers work to reconstruct gullies either because they are damaged and in need of repair.
- **Deep Drainage Sites** – Some schemes will necessitate large scale excavations where pipe connections between a gully and the main sewer have collapsed and need replacing.
- **Standing Water re-profiling** – A number of sites across the city suffer from standing water after heavy rainfall. This can be due to incorrect pavement levels in the carriageway or footway or the need to provide extra gullies.
- **Drainage Strategy & Inventory** – Long term plans and improvements to the drainage service rely on having an accurate inventory and condition data which can be used to inform and validate strategies to improve the service.

5.1.14 It is recommended a total spend of £824,000 (inclusive of all fees) is approved to undertake the improvement work identified above in 21/22.

Changes to the Highway Programmes

5.1.15 The estimates given in Appendices A to E for each street are provisional and will be subject to change following completion of the individual scheme detailed designs. Any significant changes to these estimates will be discussed with the Cabinet Member for City Management and there may be a need to vary the length or type of treatment within each street to ensure that the overall budget is not exceeded.

5.1.16 Changes to the programmes may also be needed during the year as a result of major statutory undertaker work or building operations. In these circumstances it is recommended that the Director, City Highways has the delegated authority to make changes on the basis that the overall budget will not be exceeded and subject to consultation with the Cabinet Member for City Management. Reserve schemes have been provided in the appendices which will be brought forward as and when these situations arise.

5.2 Bridges & Structures

5.2.1 The maintenance identified in this section of the report refers to the City Council's stock of highway structures – bridges, footbridges, tunnels etc. The work identified has been derived by prioritising the outstanding items of work in the current structures 'Workbank'. The Workbank holds a forward plan of capital schemes for delivery over the next 5 to 10 years through either the annual rolling programme of PPM covered by this report, or through other sources of funding such as the City Council's wider Capital Programme or grant funding from Transport for London.

5.2.2 The Workbank and prioritisation process assimilates information and trends from a number of different sources such as the results from the annual inspection programmes, life cycle planning outputs and the general day to day knowledge and understanding of needs associated with managing the highway structures stock.

5.2.3 The annual programme of Planned Preventative Maintenance for Bridges & Structures can be divided into two broad headings:

Structural - This is essential to ensure the integrity and load carrying capacity of the Bridge/Structure is maintained.

Non-Structural - such work includes:

- Renewal of Mechanical and Electrical equipment
- Renewal of Lighting
- Major Repainting / Corrosion Protection
- Renewal / Replacement of drainage systems etc.

5.2.4 The programme of prioritised Programmed Maintenance for Bridges & Structures in 2021/22 for which financial approval is sought is as follows:

Bridges and Structures PPM 2021/22	
Description	Estimated Cost
Structural	
Harrow Road Eastbound - Parapet concrete repairs, joint replacement and cladding works - CARBON EFFICIENT SCHEME	£120,000
Parliament Street Pedestrian Subway – Refurbishment of 2 No. staircases - CARBON EFFICIENT SCHEME	£150,000
Pipe Subway - Access Improvements - (Marble Arch, Northumberland Avenue and Temple ladders)	£35,000
Pipe Subway - Kingsway Access Deep Level Improvements	£63,500
Pipe Subway Brickwork Repairs	£55,000
Sub-Total	£423,500

Bridges and Structures (Continued)	
Description	Estimated Cost
Non-Structural	
Pipe Subway - Utilities Bracket Improvements - Immediate Works - Phase 2 of 4	£78,000
Strand Underpass - Full OVD - CCTV Upgrade including the SOS Telephones	£40,000
Strand Underpass - Pump Replacement	£50,000
Charing Cross Emergency Lighting & Signage/ Alarm	£90,000
Carbon & Sustainability	£25,000
Asbestos Surveys	£15,000
Pipe Subway - LED Lighting Upgrade - Phase 3 of 6 - Full network	£102,000
Pipe Subway - Piccadilly and Cranbourne Handrails and Hop overs	£62,000
Pipe Subway - Ventilation feasibility	£31,000
Sub-Total	£493,000
Other costs (split between lines as detailed below)	
Client Costs (including Compliance & Audit costs)	£80,500
Design & Management Costs	£98,000
Risk & Contingency	£53,000
Asset Management – Improvements to BridgeStation	£32,000
Assets of Unknown Origin	£105,000
Sub-Total	£368,500
Bridges and structures Total	1,285,000

- 5.2.5 The total (gross) costs for the above proposed programmes of work is estimated at **£1,285,000** for which financial approval is sought.
- 5.2.6 The costs associated with the Pipe Subway Network total **£500,000** (including all fees and risk & contingency). All these costs are fully funded by the Utility Companies who house their plant and equipment in the Pipe Subways. The City Council is able to recharge their costs to maintain the Pipe Subway network to the utility companies under the London County Council General Powers Act 1958.
- 5.2.7 The total income in 2021/22 is expected to be **£500,000**, the overall net cost to the city council is therefore **£785,000** for which provision of **£785,000** exists within the current capital programme.
- 5.2.8 A simple narrative of the requirements of each scheme in the programme of work is provided below.

Pipe Subway Works – Various Works

- 5.2.9 Westminster is responsible for maintaining a 4.5mile network of underground tunnels in the borough which contain various utility services e.g. gas, water, electricity, communications cables etc. As mentioned in 5.2.6 above, the costs to maintain the pipe subway network is fully recoverable from the utility services. In 2021/22 financial approval is sought of **£500,000** (Inclusive of risk and contingency etc. The works required are described in more detail in the narrative below.
- 5.2.10 These costs are fully rechargeable to the utility companies with equipment in the affected pipe subway.

Pipe Subway Network

- 5.2.11 Work proposed in the Pipe Subway Network in 2021/22 is as follows:
- Replacement of highly corroded fall arrest beam and access ladders at Marble Arch and Installation of missing access ladders at Victoria Embankment and replacement of defective ladders at Northumberland Avenue.
 - Replacement of both deep level access platforms and ladders along with new handrails in the Kingsway Pipe Subway. Existing access platforms and ladders are heavily corroded and have no fall arrest system in place.
 - Brickwork repairs across the network and further investigations into causes of cracking in the brickwork to develop the most cost effective repair methodology.
 - Feasibility study into issues of poor ventilation within all pipe subways, to establish links between high value repairs due to corrosion of steelwork from lack of ventilation and what ventilation improvements are possible.
 - New handrails to prevent falls in Cranbourne Street and in Piccadilly, including replacement of corroded steps over utility services in Piccadilly Circus Pipe Subway.
- 5.2.12 The total cost of implementing all of the above is **£500,000 (including risk & contingency and fees)**. The costs are 100% reimbursable from the utility companies occupying the pipe subway network.

Harrow Road Bridge (Eastbound) Parapet Repairs

- 5.2.13 The concrete forming the parapets of the Harrow Road (Eastbound) is in poor condition. Steel reinforcement inside the concrete is corroded and expanded cracking the concrete causing it to break off which in turn is causing a risk to motorists. It is proposed to operate this project as a Carbon Efficient scheme using the learnings from the Kings Street Carbon Efficient trial scheme in 2020.

- 5.2.14 Financial approval of **£142,500** (inclusive of all fees, risk & contingency etc.) is sought in 2021/22 to implement this scheme.

Parliament Street Pedestrian Subway Improvements

- 5.2.15 The 'Treads' on both staircases of the Parliament Street Pedestrian Subway are nearing the end of their life and need replacing. The scheme will be operated as a carbon efficient project using the learnings from the 2020 Kings Street carbon efficient trial scheme.
- 5.2.16 Financial approval of **£203,000** (inclusive of all fees, risk & contingency etc.) is sought in 2021/22 to implement this scheme.

Strand Road Underpass

- 5.2.17 The Strand Underpass is a road tunnel taking a single lane of traffic from Waterloo Bridge under the Strand/Aldwych onto the Kingsway. The road underpass has various systems which need to be in a good condition to allow the safe operation of the underpass including, lighting, ventilation, drainage, fire alarms etc.
- 5.2.18 The existing pump and control panel installed in 2005 used to drain the underpass is nearing the end of its operational life and in need of replacement. Financial approval of **£59,000** (inclusive of all fees, risk & contingency etc.) is sought in 2021/22 to replace the pumps and control panel.
- 5.2.19 The Strand Underpass is equipped with an Over-height Vehicle Detection (OVD) system. Occasionally over-height vehicles enter the tunnel, despite triggering the over-height warning signs, and cause damage to ceiling of the underpass. In order to be able to claim for the damages it is essential that the tunnel has good quality CCTV to evidence the damage and the vehicle responsible for the damage.
- 5.2.20 Financial approval of **£54,500** (including all fees and risk & contingency) is sought in 2021/22 to improve the CCTV coverage in the underpass and upgrade the SOS phones.

Charing Cross Pedestrian Subway – Lighting & Signage Upgrades

- 5.2.21 The Fire Risk Assessment (FRA) for the pedestrian subway at Charing Cross station highlighted the need for improved emergency lighting and better evacuation signage in the subway.
- 5.2.22 Financial approval of **£107,000** (including all fees and risk & contingency) is sought in 2021/22 to carry out the above work.

Carbon Neutral PPM Schemes

- 5.2.23 The council declared a Climate Emergency in September 2019 and announced its aspirations to be Carbon Neutral as an organisation by 2030.

- 5.2.24 A trial of a Carbon Efficient footway replacement scheme in Kings Street took place in 2020 to understand what a new Carbon Efficient delivery or operating model for highway schemes looks like. The learnings from the King Street trial will be fed back to other highway services including Bridges & Structures with the intention of steadily transitioning of all schemes in the PPM programme over the next 5 to 7 years to the new carbon efficient operating model.
- 5.2.25 In order to assist with the integration of the carbon efficient operating model into the Bridges & Structures PPM programme, financial approval of **£29,500** (Including all fees and risk & contingency is sought, particularly with respect to developing the Bridges & Structures carbon strategy and baselining our activities to measure our carbon reduction effectiveness).

Asbestos Surveys

- 5.2.26 Financial approval of **£14,000** (inclusive of all fees, risk & contingency etc.) is sought in 2021/22 to update and re-survey certain structures in the Bridges & Structures stock for asbestos and any changes in condition. The last survey was conducted in 2005 and needs updating.

Asset Management

- 5.2.21 Financial approval of **£38,000** (including all fees and risk & contingency) is sought in 2021/22 to make improvements and implement initiatives that help with planning the capital investment programmes for PPM. These initiatives are essential if the council is to undertake maintenance optimally and achieve value for money. These initiatives typically involve improvements to the Bridge Management System (Bridgestation) and updating Life Cycle Plans etc. the results help inform the forward programme of capital maintenance.

Assets of Unknown Origin

- 5.2.22 Every year the City Council has to deal with assets that are either within the public highway or adjacent to the public highway which have no known ownership. Often these assets have been neglected and require work to repair or make safe. It is usually the City Council that has to step in and deal with these assets as part of its obligation under the Highways Act 1980 to maintain a network which is in safe operating condition.
- 5.2.23 Typical examples of such assets recently have been the brick arch in Headfort Place and the stone walls in Princes Gate, Police Call Box in Piccadilly etc. These assets are often legacy structures which still remain after adjacent buildings have long since been demolished and no clear ownership remains or the time taken to establish ownership is likely to be lengthy and work is required urgently.
- 5.2.24 Financial approval of **£105,000** is sought in 2021/22 to deal with these assets of unknown origin and where necessary make safe and repair if it is deemed appropriate for public safety reasons.

5.3 **Public Lighting**

- 5.3.1 In developing the annual programme of Planned Preventive Maintenance (PPM) for Public Lighting, recognised and established Asset Management principles and techniques have been applied with a view to prolonging the life of the asset and/or maintaining structural capacity and meet the city for all objectives ensuring that public lighting is efficiently managed and that its residents and visitors can enjoy safe and well-lit streets.
- 5.3.2 The programme of proposed schemes, which is presented in more detail in **Appendix E**, has been through a prioritisation process using the City Council's Lighting Value Management Model (LVMM). This process considers a range of factors e.g. structural integrity, lighting efficiency and performance, social locations and road hierarchy.
- 5.3.3 The following table summarises the proposed 2021/22 annual programme of PPM for Public Lighting together with the estimated costs against each budget heading of the overall programme.

Lighting	
Description	Estimated Cost
Lighting Improvements	£1,649,000
Aged Expired Equipment	£385,000
Cherished Column Replacement	£82,000
Load Testing	£212,000
Structurally Critical Columns	£450,000
Illuminated Sign Replacement	£150,000
Asset Inventory Update	£250,000
Lighting PPM Total	£ 3,178,000
Electrical work	
Gas replacements	£1,100,000
PPM Lighting Total	£ 4,278,000

- 5.3.4 The total cost for the above proposed PPM programmes of work is estimated at **£4,278,000** (Inclusive of all fees, risk and contingency and design costs), for which financial approval is sought. Provision for this expenditure exists within the approved capital programme for 2021/22 with £4,028,000 in the approved PPM programme line and £250,000 in the Asset Inventory Capital Programme line.

Lighting Improvements

- 5.3.5 A works programme that comprises of 'whole street' improvements to meet the Westminster Lighting Standard requiring replacement of all Columns and/or Lanterns. A 'Value Management' prioritisation process is used based on an aggregated score of structural risk, lighting deficiency; and visual condition of the column, lantern and electrics. In addition, the process takes account of other 'Local' factors including, accident black-spots, low lighting levels, high crime area, prime site/important streets, area of significant pedestrian use and complaints.
- 5.3.6 The Value Management process has been revised to include the recent visual inspection Guidance Note 22 Asset Management Toolkit: Minor Structures (GN22), providing street and asset level column condition. This aligns with the risk-based approach of Well Managed Highway infrastructure. We will also undertake a site-based audit of existing assets and attachments due to a historic lack of as-built information from previous contracts to allow an inventory with which to accurately inform the LVMM process

Age Expired

- 5.3.7 A key part of the annual PPM programme is 'Age Expired Equipment'. It is essential to replace equipment that has become 'age expired' or beyond economical repair. The current approach is to replace assets in line with asset life included within 'life cycle' planning. So, as an example: for an asset that has an 'asset life' of say 40 years this would assume a replacement programme of 2.5% of the stock each year. Similarly, for an 'asset life' of say 20 years this would assume a replacement programme of 5% of the stock each year.
- 5.3.8 The 'Lighting Improvement' and 'Age Expired Equipment' programmes are closely aligned to prioritise lighting improvements towards those streets where assets are at or reaching end of life.

Cherished Columns

- 5.3.9 A specific 'Cherished Column' replacement programme, included to deal with 'age expired heritage columns' many of which are protected as 'listed' items of street furniture and therefore protected in law and are of significant historic value.

Load Testing

- 5.3.10 To ensure that the structural risk is understood and managed an annual programme of load testing was introduced following the catastrophic failure of a lamp column in Cavendish Square on 5 January 1998.
- 5.3.11 Non-destructive load testing is a vital asset management tool to understand the structural condition of columns and their life expectancy. Other, more specialised, testing is also undertaken on some cherished equipment, including magnetic crack detection testing and thickness testing.

- 5.3.12 Records from previous testing programmes help build up ‘deterioration profiles’ of the asset types and life characteristics.
- 5.3.13 The application of GN22 will also include testing and inspections of our flashing beacon and illuminated signposts, to gauge their condition and incorporate into replacement programmes. GN22 provides a step-by-step column assessment as part of a risk-based approach that aligns with the code of practice well-managed highway infrastructure
- 5.3.14 Following identification of issues hidden by embellishment kits around the bases of lighting columns, an accelerated programme of kit removals, testing and removable kit installation is now in place.

Structurally Critical Columns

- 5.3.15 Any column found to be structurally unsafe or at risk, following analytical assessment (load testing) and specialist investigation during the current financial year, is replaced under the budget for ‘Structurally Critical Columns’.
- 5.3.16 Part of this budget is also to be used to further develop the City Council’s risk management strategy for lighting columns and to develop improved deterioration modelling to ensure that best value is achieved.

Illuminated Signs Replacement

- 5.3.17 The Council will focus on de-illumination of signs as part of the 20mph speed limit put in place in 2020 where road safety audits confirm the de-illumination in line with current traffic sign regulations, reducing energy usage and carbon
- 5.3.18 Where illumination of sign is still required, change to externally illuminated LED signs. We will look to replace existing externally sign lights using traditional light sources with LED lights, followed internally illuminated signs with retro-reflective signs and LED sign lights to allow expected future changes to illumination requirements to be implemented easier.

Asset Inventory Update

- 5.3.19 It is vital that the City Council gets its highways inventory up to date to assist with future contract arrangements. Having an up to date inventory will support the City Council’s Smart Cities agenda as well as the ambition to go carbon neutral by 2030. It will also support any future contract re-let by ensuring that prospective suppliers can price the City Council’s requirements accurately minimising future financial risks. As per 5.3.6 this will include site-based audit of existing assets and attachments.

Gas street lighting electrification programme

- 5.3.20 Westminster City Council are the custodians of an historic catalogue of Cherished and Listed lighting furniture with some 300 assets dating back to 1807, our records show that 139 of these are listed. While these assets are of historical value, they are costly to maintain and there is a sole supplier for the

equipment related to gas lighting who have been unable to commit to delivery dates leaving some lights out for a lengthy period.

- 5.3.21 Along with delays and costly repairs, a large carbon impact of gas usage and very poor lighting levels fail to meet the City of All's objectives to make the city cleaner and greener and encourage vibrant communities by providing adequate lighting during the evenings.
- 5.3.22 Surveys were undertaken in 2019/20 to show gas supply mains locations and lighting designs to meet current lighting standards, to meet expectations following community and police requests to improve lighting on several of these roads due to crime and anti-social behaviour. Following surveys, designs, and manufacturer costs has estimated budgets to undertake gas removal, full electrification and LED "gas effect" lanterns of £2,990,000 is advised. In several locations, existing surrounding lighting also allows for some gas lights to be removed completely. Financial approval for works in 2021/22 of **£1,100,000** of this funding is required to continue with Gas electrification including a number of gas pipe removals from the carriageway.
- 5.3.23 This capital bid continues the programme of replacement of gas supply to an electric service in keeping with the rest of the City Council's lighting stock. The City Council acknowledges the historical value of these assets and as such has explored solutions that offer a warmer light to preserve the look of the areas that have these assets. This funding will enable us to continue this work rollout.
- 5.3.24 For listed lanterns, Historic England have agreed with our process for using a gas effect LED lantern to replicate the current aesthetics of the gas lanterns and have confirmed that only planning consent from the council's planning department is required i.e. Listed Building Consent is not required. Colleagues in Planning will be invited to review and agree trial replica sites with which to assess these to progress planning consent and listed lantern conversion during 2021/22 and 2022/23.
- 5.3.25 The City Council had already replaced some gas supplied columns with electric due to long lead-ins of gas repairs and in accordance with our duties under the highways act but this funding will enable us to carry out a proactive programme of works.

Parks and Gardens

- 5.3.26 The City Council have instigated the migration of Parks and Gardens lighting assets into Contract B's asset management system and maintenance regime. Budget provisions of £250,000 for Parks and Gardens to collect Inventory data, undertake inspections in line with GN22, undertake electrical tests of assets in line with BS7671, ensure private cable networks are mapped and correctly labelled on site and to ensure these assets are bought up to Westminster City Council specification.

5.3.27 Financial approval of the remaining **£120,000** budget for 2021/22 is currently required due to delays with Covid-19 during 2020/21. No further funds are required at this stage.

Isolated Pitches & Market Electrics

5.3.28 With the growth, development and changing nature of markets and isolated pitches, the power demands have also increased beyond the design capabilities of the local network. In addition, it has been sometime since these power facilities have been upgraded to modern standards. Too often in recent years these power sources have failed causing problems to traders and the public alike.

5.3.29 The budget is for investigation and improvements to the existing infrastructure already in place only, to bring up to current electrical safety standards, and the council's current electrical management infrastructure.

5.3.30 Financial approval of £1,100,000 was provided in 2019/20 and this work will continue into 2021/22 due to delays with Covid-19 with **£270,000** for Market electrical improvements and **£370,000** of Isolated Pitch improvements required. No further funds are required at this stage.

LED/CMS rollout

5.3.31 The rollout supports the City for all vision in delivering a lit night-time environment to meet current lighting standards, reducing energy and carbon emissions by an expected 30-40%. The rollout will also reduce maintenance activity. This funding is already secured and work will continue this year.

Protective coatings to Lamp Columns

5.3.32 Following a review, it is recommended that painting of highway assets will instead be a reactive process identified as part of regular inspections already undertaken by the service provider.

5.3.33 Whilst the re-painting of highways assets may give some additional protection to the asset, and as this works is only re-painting the first 2m of the asset and not it's full height, this does very little to prolong the life of the asset. As part of a risk-based approach under the Well managed highway code of practice, funds are better utilised.

5.3.34 This budget is recommended to be re-distributed to the other PPM elements

6. Highways Carbon Reduction Strategy

6.1 In September 2019 the Leader of the Council declared a climate emergency and announced the council's aspirations to be Carbon Neutral by 2030. During 2020, City Highways have been developing a strategy to help meet that target by looking at its services, and in the first instance looking specifically at the annual PPM programme in particular.

- 6.2 A small Carbon Working Group was set up in March 2020 which included colleagues from the Council's Highways Service Provider (F M Conway) to review the services the council provides to maintain and improve the public highway and how to jointly reduce carbon across all aspects of the 'Highways' service over the next 10 years.
- 6.3 Research evaluated as part of that exercise suggested that one of the main carbon contributors within the construction process is the use of diesel, typically from on-site plant and machinery and their transportation on diesel lorries to and from site. The issue of transportation also extends to people, be it office-based staff tasked with designing/planning/visiting, or site operatives and managers travelling to and from site. Minimising diesel consumption and reducing travel is seen as a key part of the carbon reduction strategy when delivering construction projects on the public highway.
- 6.4 In order to maximise the learning on the logistical and financial implications of operating a carbon 'efficient' scheme, the group agreed it would initially trial a relatively simple footway improvement scheme in King Street, St James's (an approved scheme in the 2020/21 PPM programme). The main purpose of the trial site was to understand to what extent diesel can be eliminated from the project by moving to electric powered plant and tools and minimising travel and the logistics involved in keeping electrically powered plant and equipment charged and operational on site. It is also important to understand the cost implications of working to a new carbon efficient operating model.
- 6.5 Where it wasn't possible to eliminate diesel completely from the project completely, other sources of carbon friendly fuels were investigated such as HVO (Hydrotreated Vegetable Oil) or 'Green Diesel'. The Carbon Footprint for the King Street scheme was compared against a similar scheme using traditional plant and materials to measure the Carbon savings that are possible.
- 6.6 It is accepted that initially there will inevitably be some inefficiencies to begin with when transitioning to the Carbon Efficient operating model over the next 5 to 10 years and eventually to a carbon neutral model or as close to as it possible.

King Street Carbon Efficient Scheme

- 6.7 The 6-week scheme to replace the paving slabs in King Street was planned to reduce carbon by:-
- Using All electric plant and equipment
 - Using low carbon concrete paving slabs
 - Fully electric welfare units on site
 - 100% of arisings from site re-cycled
 - Use of HVO powered lorries servicing site
 - Minimising people travel by working from home or using carbon friendly modes of transport where travel cannot be avoided.

- 6.8 The King Street trial scheme was compared to a similar scheme carried out at Marlborough Hill in St John's Wood. Both Schemes were completed in October/November 2020 and the carbon reduction impact is still being evaluated, detailed reports are being prepared on the success and challenges encountered and how successful we were with this initial attempt at running a Carbon Efficient site. Some key headlines emerging from the trial however are that: -
- Carbon reduced by an 75% compared against traditional scheme (Final figure is still being calculated).
 - 8,000 miles of diesel journeys saved on the project
 - Significant reduction in noise levels from the use of electric plant and equipment
 - Less air pollution
 - Legacy EV Charging points
- 6.9 The first attempt at operating a carbon efficient PPM scheme naturally exposed a number of challenges and difficulties the main challenges encountered were: -
- Obtaining an adequate electric supply – More EV charging points across the city will help with this challenge.
 - The lack of availability of electric plant such and small excavators
 - Lack of availability of low carbon materials, e.g. Low carbon concrete
- 6.10 With most the Council's staff and the Council's Service Provider's staff working from home during most of 2020 because of COVID-19, it had the unexpected benefit of demonstrating that staff could work adequately from home and not have to travel to the office to carry out their duties, reducing non-essential travelling will help significantly in reducing carbon emissions.
- 6.11 Furthermore, in order to operate sites electrically, electrical infrastructure is required to be put in place in advance of the site work to provide power supplies and keeping plant and equipment etc. charged. Once the site works are complete however, that infrastructure can be used to provide additional Electric Vehicle (EV) Charing points, at the King Street Trial site, 2 EV Charging points were created as a legacy.
- 6.12 As might be expected, the cost of operating a Carbon efficient site is currently higher compared to a scheme delivered in the more traditional manner and there are number of reasons for this, not least the fact that at the moment electric plant in particular is more expensive compared to their conventional equivalents, and the transition to a new operating model will of course be less efficient to begin with as the site team adjust to a new way of working. Officers are actively seeking grants such as the Carbon Offset Fund to help offset the higher costs.
- 6.13 The Highways Carbon Working Group will evaluate the results from the King Street trial in more detail and over the coming months use the 'learnings' to deliver more carbon efficient schemes in the 2021/22 PPM programme.

- 6.14 Ideally officers would like to deliver 5 or 6 footway schemes in the West End in 2021/22 using the King Street model, and deliver the whole of the carriageway resurfacing programme using the 'Green Diesel' HVO fuel as an alternative to diesel. Additionally, the Bridges and Structures team are planning to deliver two schemes in the 2021/22 PPM programme using the carbon efficient model. To support this officers have included capital funds to support this and have made a bid for a contribution from the carbon offset fund.
- 6.15 Over the next 5 years the intention is for the PPM programme to steadily transition across to the carbon efficient model until eventually the entire programme is delivered to the new carbon operating model. In addition to the PPM programme, the Carbon Working Group are also looking to roll out carbon measures for delivering routine and ad-hoc maintenance schemes on the public highway and major Public Realm projects.

7. Financial Implications

- 7.1 The total gross expenditure in 2021/22 required to implement the annual works programmes for Programmed Maintenance of the City Council's Highways, Bridges & Structures and Public Lighting programmes, as set out paragraphs 2.1 to 2.4 of this report is **£13,286,000** for which financial approval is sought.
- 7.2 Taking into consideration, income statutory undertakers for work on the pipe subways totalling £500,000, the overall net cost to the City Council in 2021/22 will be **£12,786,000**
- 7.3 Budget provision of **£12,786,000** for PPM across Highways, Lighting and Bridges and Structures is contained within the current approved capital programme.

Description	Estimated Cost (Gross)	Estimated Cost (Net)
Highways		
Carriageway Improvements	£3,089,000	£3,089,000
Minor Works Programme	£974,000	£974,000
Footway Improvements	£2,098,000	£2,098,000
Surface Water Management programme	£824,000	£824,000
Street Nameplate Replacement programme	£59,000	£59,000
Asset Management	£279,000	£279,000
Low Carbon Streets	£400,000	£400,000
Sub-total highways	£7,723,000	£7,723,000
Bridges & Structures		
Structural Schemes	£423,500	£270,000
Non-Structural Schemes	£493,000	£251,000
Client Costs (including Compliance & Audit costs)	£80,500	£46,000
Design & Management Costs	£98,000	£73,000
Risk & Contingency	£53,000	£8,000
Asset Management – Improvements to BridgeStation	£32,000	£32,000
Assets of Unknown Origin	£105,000	£105,000
Sub-total Bridges & Structures	£1,285,000	£785,000
Public Lighting		
Lighting Improvements	£1,649,000	£1,649,000
Aged Expired Equipment	£385,000	£385,000
Cherished Column Replacement	£82,000	£82,000
Load Testing	£212,000	£212,000
Structurally Critical Columns	£450,000	£450,000
Illuminated Sign Replacement	£150,000	£150,000

Description	Estimated Cost (Gross)	Estimated Cost (Net)
Asset Inventory Update	£250,000	£250,000
Gas Lighting Replacement	£1,100,000	£1,100,000
Sub-total Lighting	£4,028,000	£4,278,000
Total Expenditure	£13,286,000	£12,786,000

Note: All figures quoted in the table above are inclusive of Works, Design, Client Costs and Risk and Contingency.

Revenue Implications

- 7.4 The revenue impact of funding the Capital Programme through borrowing will be met from the corporate budget provision for debt charges. However, City Management and Communities will be charged the depreciation cost for these assets, which are dependent on their useful life.
- 7.5 The PPM programmes are considered such that they will have no negative impact regarding revenue maintenance costs in the future.

8. Legal Implications

- 8.1 The City Council, as local highway authority, has a duty under the Highways Act 1980 to ensure the effective maintenance and management of the Council's highway and highway assets (including lighting), and guarantee that they remain legally safe and effective.
- 8.2 The Director of Legal Services has considered this report and is satisfied programmes set out in this report help discharge the City Council's duty in this respect.

9. Staffing Implications

- 9.1 There are no staffing implications arising from this report.

10. Business Plan Implications

- 10.1 The works programmes presented in this report have been developed using recognised good practice and Value Management techniques and Asset Management principles. This approach has been employed on Westminster's Highway Infrastructure assets for more than ten years.

11. Outstanding Issues

- 11.1 Changes to the proposed programmes of work may be needed during the year, due to major statutory undertakers' work or building operations. A recommendation has been included seeking approval to delegate to the Director for City Highways the authority to make changes to the programmes

subject to the proviso that the overall budget is not exceeded and that the Cabinet Member for Environment & Highways is consulted on any changes.

12. Consultation

- 12.1 The 2021/22 forward programmes have been developed following consultation with the Highways Review Panel and exercises with Ward Members, Amenity Societies, highway inspectors and key stakeholders.
- 12.2 The results of the consultation have been reviewed and, where justified, included in the list of scheme proposals contained in this report.
- 12.3 In respect of the individual schemes Public Notices will be used to advertise the proposed works in a given location and would give the outline details of works. In addition, a letter-drop to affected households will be made outlining details of the scheme with a plan and contact details of appropriate contractor/client officers.

13. Crime and Disorder Act 1998

- 13.1 It is recognised that good street lighting has a deterrent effect on street crime and burglaries etc. All street lighting improvement schemes within the capital programme, take into account the need for better lighting. The Lighting against Crime programme is specifically targeted at crime hot-spots identified using information relating to crime and developed in liaison with the police. The change to the use of white light sources is having beneficial effects on the quality of the night-time CCTV and for individuals to be able to recognise friend or foe more easily.

14. Health and Safety Issues

- 14.1 All works undertaken will be closely monitored and carried out to the requirements of the Health & Safety at Work Act 1974 and the Construction (Design and Management) Regulations 2015.

15. Impact on Health and Wellbeing

- 15.1 The proposals identified in this report are considered to have a minimal impact on the health and wellbeing of the community. Whilst some low-level negative impacts may be experienced during the construction phase (associated with dust and noise nuisance), overall the works are expected to produce benefits for the community associated with the highway improvements.
- 15.2 If you have any queries about this Report or wish to inspect any of the Background Papers please contact: Andy Foster on 07885 399763 or email afoster1@westminster.gov.uk.

16. EQUALITIES IMPLICATIONS

- 16.1 Under the Equalities Act 2010 the council has a “public sector equality duty”. This means that in taking decisions and carrying out its functions it must have

due regard to the need to eliminate discrimination, harassment, victimisation and any other conduct prohibited by the 2010 Act;

- to advance equality of opportunity between persons who share a relevant protected characteristic (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation) and those who do not share it; and to
- foster good relations between persons who share a relevant protected characteristic and those who do not share it.

16.2 The City Council is also required to have due regard to the need to take steps to take account of disabled persons' disabilities even where that involves more favourable treatment; to promote more positive attitudes toward disabled persons; and to encourage participation by disabled persons in public life. The 2010 Act states that "having due regard" to the need to promote equality of opportunity involves in particular having regard to:

- the need to remove or minimise disadvantages suffered by persons sharing a protected characteristic;
- take steps to meet the needs of persons sharing a protected characteristic that are connected with it;
- take steps to meet the needs of persons who share a protected characteristic that are different from those who do not; and
- encourage persons with a protected characteristic to participate in public life or any other activity in which participation by such persons is disproportionately low.

16.3 The courts have held that "due regard" in this context requires an analysis of the issue under consideration with the specific requirements set out above in mind. It does not require that considerations raised in the analysis should be decisive; it is for the decision-maker to decide what weight should be given to the equalities implications of the decision.

16.4 The equalities impacts of Planned Preventative Maintenance (PPM) programme for 2021/22 in respect of Highways, Public Lighting & Bridges and Structures have been considered and it is concluded that there are none.

BACKGROUND PAPERS

None

For completion by the **Cabinet Member for City Management**
I have <no interest to declare / to declare an interest> in respect of this report

Signed: _____ Date: _____

NAME: **Councillor Melvyn Caplan, Cabinet Member for City Management**

State nature of interest if any

.....
.....

(N.B: If you have an interest you should seek advice as to whether it is appropriate to make a decision in relation to this matter)

For the reasons set out above, I agree the recommendation(s) in the report entitled **Planned Preventative Maintenance (PPM) programme for 2021/22 in respect of Highways, Public Lighting & Bridges and Structures** and reject any alternative options which are referred to but not recommended.

Signed

Councillor Melvyn Caplan, Cabinet Member for City Management

Date

If you have any additional comment which you would want actioned in connection with your decision you should discuss this with the report author and then set out your comment below before the report and this pro-forma is returned to the Secretariat for processing.

Additional comment:

.....
.....
.....

If you do not wish to approve the recommendations, or wish to make an alternative decision, it is important that you consult the report author, the Director of Law, Strategic Director Finance and Performance and, if there are resources implications, the Strategic Director of Resources (or their representatives) so that (1) you can be made aware of any further relevant considerations that you should take into account before making the decision and (2) your reasons for the decision can be properly identified and recorded, as required by law.

Note to Cabinet Member: Your decision will now be published and copied to the Members of the relevant Policy & Scrutiny Committee. If the decision falls within the criteria for call-in, it will not be implemented until five working days have elapsed from publication to allow the Policy and Scrutiny Committee to decide whether it wishes to call the matter in.

Appendices

Proposed Annual Programme of Planned Preventative Maintenance (PPM)

Appendix A - Carriageways Improvement Programme

- **Appendix A1** – Core Carriageway Improvements Programme
- **Appendix A2** - Reserve List for Carriageways Improvements (22/23 Provisional Programme)

Appendix B – Footways Improvement Programme

- **Appendix B1** – Footway Improvements Programme
- **Appendix B2** – Provisional Footway Improvement Programme 21/22 (Reserve List for Carriageways Improvements in 22/23)

Appendix C – Minor Works Programme

Appendix D – Drainage Improvement Sites

Appendix E – Public Lighting

- **Appendix E1** - Lighting Improvement Programme 2021/22
- **Appendix E2** - Localised Lighting Schemes Programme (incl. Lighting Against Crime) 2021/22
- **Appendix E3** - Age Expired Lantern Replacement Programme 2021/22
- **Appendix E4** - Cherished Column Programme 2021/22
- **Appendix E5** - Lighting Improvement Programme 2022/23 (Reserve list for 21/22)

Appendix F – Glossary of Terms

Appendix A - Carriageways Improvement Programme

Appendix A1 – Core Carriageway Improvements Programme

The proposed annual programme of PPM for Core Carriageway Improvements Programme for 2021/22 is presented in the table below in priority order. These programmes of work have been developed with the application of the Value Management (VM) process, together with consultation with Ward Members, Amenity Societies, highway inspectors, key stakeholders.

Programme	Road Name	Location / Extents	Ward	VM Score	Rank	CMR Value
Core Carriageway	Strand	Duncannon Street to Burleigh Street (Eastbound)	St James	100	1	£174,000.00
Core Carriageway	Whitehall	Provision for PPM 20/21 scheme	St James	100	1	£261,000.00
Core Carriageway	Dean Street	Shaftsbury Avenue to Old Compton Street	West End	95	6	£23,000.00
Core Carriageway	Great Marlborough Street	Regent St to Poland Street	West End	95	6	£101,000.00
Core Carriageway	Park Street	South Street to Oxford Street	West End	95	6	£199,000.00
Core Carriageway	Bruton Street	Berkeley Square to New Bond Street	West End	90	34	£75,000.00
Core Carriageway	Chapel Street	from Transept (including junction) to Old Marlyebone Road	Bryanston	90	34	£125,000.00
Core Carriageway	Culross Street	Park Lane to Park Street	West End	90	34	£44,000.00
Core Carriageway	Lower Belgrave Street	Eaton Square to Buckingham Palace Road	Warwick	90	34	£109,000.00
Core Carriageway	North Row & Dunraven Street (to Green st)	Park Lane to Park Street & North Audley Street to Balterton Street	West End	90	34	£54,000.00
Core Carriageway	St Martins Lane	Garrick Street to St Martins Place	St James	90	34	£69,000.00
Core Carriageway	Porchester Terrace	Queensborough Passage to Bayswater Road	Lancaster Gate	90	34	£79,000.00
Core Carriageway	Blomfield Road	Warwick Avenue to Maida Vale	Little Venice	83.75	169	£140,000.00
Core Carriageway	Dart Street	Third Avenue to Bravington Road	Queens Park	83.75	169	£63,000.00
Core Carriageway	Montpelier Street	Brompton Road to Montpelier Sq	Knightsbridge	83.75	169	£69,000.00
Core Carriageway	Hormeoad Road	Fermoy Road to Great Western Road	Harrow Road	83.75	169	£82,000.00
Core Carriageway	Lanark Road	Elgin Avenue to Sutherland Avenue	Maida Vale / Little Venice	83.75	169	£81,000.00
Core Carriageway	Shirland Road	Bravington Rd to Fernhead Rd & Chippenham Rd to Sutherland Av.	Harrow Rd / Westbourne / Little Venice / Maida Vale	83.75	169	£234,000.00
Core Carriageway	Caird Street & Alperton Street & First Avenue	Full Length	Queens Park	77.5	207	£111,000.00
Core Carriageway	Droop Street	Third Avenue to Sixth Avenue	Queens Park	77.5	207	£79,000.00
Core Carriageway	Sixth Avenue	Ilbert Street to Harrow Road	Queens Park	77.5	207	£49,000.00
Core Carriageway	Wilton Terrace	Full Length	Knightsbridge	77.5	207	£44,000.00

Appendix A2 – Reserve List for Carriageways Improvements (22/23 Provisional Programme)

The below reserve list schemes are subject to re-evaluation and re-assessment during the 2021/2022 period. Note also that approximately 45% of the 22/23 programme will be designed in 21/22 (Initial & Detailed Design) to allow time to plan and coordinate works more effectively.

Programme	Road Name	Location / Extents	Ward	VM Score	Rank	CMR Value
Core Carriageway	Strand	Savoy Street to Trafalgar Square	St James	100	1	£225,000.00
Core Carriageway	Stratton Street	Piccadilly to Berkeley Street	West End	95	6	£63,000.00
Core Carriageway	Wardour Street	Shaftesbury Avenue to Oxford Street	West End	95	6	£130,000.00
Core Carriageway	Grosvenor Street	New Bond Street to Davis Street	West End	95	6	£81,000.00
Core Carriageway	Eccleston Place	Eccleston Street to Elizabeth Street	Warwick	90	34	£49,000.00
Core Carriageway	Dover St / Grafton Street / Hay Hill	Piccadilly to Albemarle Street and Berkeley Street	West End	90	34	£104,000.00
Core Carriageway	Stratford Place	Oxford Street to End	Marylebone High Street	90	34	£37,000.00
Core Carriageway	Great Cumberland Place	Seymour Street to Upper Berkeley Street	Bryanston	90	34	£93,000.00
Core Carriageway	Kendal Street	Connaught Street to Edware Road	Hyde Park	90	34	£105,000.00
Core Carriageway	Down Street	Piccadilly to Hertford Street	West End	90	34	£29,000.00
Core Carriageway	Yarmouth Place & Brick Street	Whole Length	West End	90	34	£83,000.00
Core Carriageway	Ebury Bridge Road	Cheylesmore House to Chelsea Bridge Road	Churchill	88.75	167	£63,000.00
Core Carriageway	Bell Street	Penfold St to Lisson Grove	Church Street	83.75	169	£125,000.00
Core Carriageway	Claverton Street	Grosvenor Road to Lupus Street	Churchill	77.5	207	£158,000.00
Core Carriageway	Norfolk Square	Whole Square	Hyde Park	77.5	207	£84,000.00
Core Carriageway	Fourth Avenue & Galton Street	Ilbert Street to Droop street	Queens Park	77.5	207	£77,000.00
Core Carriageway	Prince's Square + Dawson Place	Leinster Square to Dawson Place & No 28 to No 1 Kensington Gardens Sq J/W Queen's Mews	Lancaster Gate	77.5	207	£123,000.00
Core Carriageway	George Street & Stourcliffe Street	Forset Street to Seymour Place & George Street to Edgware Road	Bryanston	62.5	288	£92,000.00

Appendix B – Footways Improvement Programme

Appendix B1 – Footway Improvement Programme

The proposed annual programme for footway improvements for 2021/22 presented in the table below has been developed with the application of the VM process together with consultation with Ward Members, Amenity Societies, highway inspectors and key stakeholders, the programme of schemes includes the conversion of mastic asphalt to flagged paving schemes.

Programme	Road Name	Location / Extents	Ward	VM Score	Rank	CMR Value
Footway Improvements	Maida Vale	Abercorn Place to Carlton Hill (NE side)	Abbey Road	100	1	£157,000.00
Footway Improvements	Tothill Street	Broadway to Storeys Gate NS and Dean Farrar St to Storeys Gate SS	St Jamess	100	1	£150,000.00
Footway Improvements	Poland Street	Oxford Street to Broadwick Street	West End	100	1	£60,000.00
Footway Improvements	Hobart Place	Eaton Square to Hobart Place No.10	Knightsbridge	98	36	£49,000.00
Footway Improvements	Dover Street and Hay Hill	Piccadilly to Hay Hill and Dover St to Berkeley Square	West End	95	41	£96,000.00
Footway Improvements	Stratton Street	Mayfair Place to Berkeley Street	West End	95	41	£42,000.00
Footway Improvements	Eccleston Place	Ebury Street to Elizabeth Street	Warwick	95	41	£90,000.00
Footway Improvements	Erasmus Street	Cureton Street to Marsham Street	Vincent Square	95	41	£90,000.00
Footway Improvements	Rathbone Street	Rathbone Place to Charlotte Street	West End	95	41	£53,000.00
Footway Improvements	Chester Row	Bourne Street to Eaton Terrace	Knightsbridge	90	136	£56,000.00
Footway Improvements	Dean Stanley Street	Smith Square to Millbank (both sides)	St Jamess	90	136	£49,000.00
Footway Improvements	Nugent Terrace	Abercorn Place to Hill Road	Abbey Road	84	211	£55,000.00
Footway Improvements	Bristol Gardens	Formosa Street to Clifton Villas (south side)	Little Venice	84	211	£45,000.00
Footway Improvements	Northumberland Place	Talbot Road to Artesian Road	Bayswater	78	263	£91,000.00
Footway Improvements	Norfolk Square	both sides	Hyde Park	78	263	£108,000.00
Footway Improvements	Bloomfield Terrace	Pimlico Rd to St Barnabas St	Churchill	78	263	£76,000.00
Footway Improvements	St Mary's Terrace	St Mary's Mansions to St Mary's Square (NE side)	Little Venice	78	263	£59,000.00
Footway Improvements	Alderney Street	Charlwood street to Clarendon Street	Tachbrook	78	263	£150,000.00
Footway Improvements	Westbourne Park Road	St Stephens Gardens to Chepstow road	Bayswater	68	414	£49,000.00

Appendix B2 – Reserve List for Footway Improvements (22/23 Provisional Programme)

The below reserve list schemes are subject to re-evaluation and re-assessment during the 2021/2022 period. Note also that approximately 45% of the 22/23 programme will be designed in 21/22 (Initial & Detailed Design) to allow time to plan and coordinate works more effectively.

Programme	Road Name	Location / Extents	Ward	VM Score	Rank	CMR Value
Footway Improvements	Lupus Street	St Georges square to Pimlico Library & Claverton To Ranelagh	Tachbrook	100	1	£60,000.00
Footway Improvements	Wilton Road	Gillingham Street to Warwick Way	Warwick	100	1	£108,000.00
Footway Improvements	Beak Street	Lexington Street to Regents Street	West End	95	41	£84,000.00
Footway Improvements	Whitcomb Street	Pallmall East to Panton Street	St Jamess	95	41	£60,000.00
Footway Improvements	Randolph Avenue	Carlton Vale to Elgin Avenue	Maida Vale	90	136	£150,000.00
Footway Improvements	Portnall Road	Harrow Rd to Shirland Rd ES & Coomassie Rd to Shirland Rd WS	Queens Park	78	263	£156,000.00
Footway Improvements	Sutherland Place	Talbot Road to Artesian Road	Bayswater	78	263	£107,000.00
Footway Improvements	Kildare Terrace & Gardens	Talbot Road to Kildare Gardens	Bayswater	78	263	£117,000.00
Footway Improvements	Wellington Place	Wellington Road to St John's Wood High Street	Regents Park	58	780	£78,000.00
Footway Improvements	Old Queen Street	Dartmouth Street to Storey'S Gate	St Jamess	58	780	£72,000.00
Footway Improvements	Circus Road	Wellington Road to Cavendish Avenue – South Side	Regent's Park	58	780	£39,000.00

Appendix C – Minor Works Programme

The proposed programme includes both footway and carriageway schemes for 2021/22 and are presented in the table below. The purpose of the Minor Works programme is to allow intervention on defects which otherwise would not be significant enough to qualify for the main PPM works programme. Early intervention of some defects should result in a reduction of the number of reactive jobs and improve the overall condition of the network. The below list is an indication and subject to change upon further checks.

Programme	Road Name	Location / Extents	Ward	Type of Works	CMR Value
Minor Works	Artillery Row	Victoria Street to Greycoat Place	Vincent Square	Footway	£26,400.00
Minor Works	Eaton square	Lyall Street to South Eaton place -Main route (north side)	Knightsbridge	Footway	£32,000.00
Minor Works	Lanark Road	Elgin Mews North west side	Maida Vale	Footway	£15,000.00
Minor Works	Bouverie Place	Praed St to Star St	Hyde Park	Carriageway	£20,000.00
Minor Works	Bury Street	King Street to Ryder Street	St Jamess	Carriageway	£17,000.00
Minor Works	Catherine Street	Tavistock Street to Russell Street	St Jamess	Carriageway	£25,000.00
Minor Works	Deanery Street	Tilney Street to South Audley Street	West End	Carriageway	£28,000.00
Minor Works	Grittleton Road	Full Length	Harrow Road	Carriageway	£28,000.00
Minor Works	Spring Street	Sussex Gardens to Praed Street (50mm treatment)	Hyde Park	Carriageway	£30,000.00

Note: The construction budget of £800,000 has not been fully allocated to allow a flexible approach to react to footway and carriageway issues that occur throughout the year.

Appendix D– Surface Water Management

Appendix D – Drainage Improvement Sites

Item	Road Name	Ward	No. of Locations	Works Required
1	SEYMOUR PLACE	Bryanston And Dorset Square	6	Full Gully Replacement
2	VICTORIA STREET	St James's	1	Full Gully Replacement
3	GROSVENOR STREET	West End	1	Full Gully Replacement
4	CAVENDISH SQUARE	West End	3	Full Gully Replacement
5	ORSETT TERRACE	Bayswater	2	Full Gully Replacement
6	PARK STREET	Hyde Park	1	Full Gully Replacement
7	PICCADILLY	West End	1	Full Gully Replacement
8	OLD COMPTON STREET	West End	3	Full Gully Replacement
9	EBURY STREET	Churchill	4	Full Gully Replacement
10	GILLINGHAM STREET	Warwick	3	Full Gully Replacement
11	SUTHERLAND STREET	Churchill	1	Full Gully Replacement
12	BRUCKNER STREET	Queens Park	1	Full Gully Replacement
13	PRINCE CONCORST STREET	Knightsbridge & Belgravia	1	Full Gully Replacement
14	SHIRLAND ROAD	Harrow Road	1	Full Gully Replacement
15	OXFORD STREET	Marylebone High Street	1	Full Gully Replacement
16	LITTLE NEWPORT STREET	West End	2	Full Gully Replacement
17	CARBURTON STREET	Marylebone High Street	1	Full Gully Replacement
18	ST MARTINS PLACE	St James's	2	Full Gully Replacement
19	PORTLAND PLACE	Marylebone High Street	3	Full Gully Replacement
20	CLARENDON STREET	Warwick	1	Full Gully Replacement

Appendix E – Lighting Improvements Programme

Appendix E1 - Lighting Improvement Programme 2021/22

A Value Management prioritisation process is used to develop the list of schemes presented in the table below. The process is based on an aggregated score of structural risk, energy efficiency, local factors, performance rating, and efficiency management.

Street	Ward	Existing Assets	Source	Proposed Improvements	Estimated Cost
BLENHEIM PASSAGE	Abbey Road	3	VM Score	Upgrade existing units to LED and replace existing columns	£10,973
BRAVINGTON ROAD	Queen's Park	32	VM Score	Upgrade existing units to LED and replace existing columns	£95,889
BROOK'S MEWS	West End	6	VM Score	Upgrade existing units to LED and replace existing columns	£116,204
DURWESTON STREET	Bryanston & Dorset Square	3	VM Score	Upgrade existing units to LED and replace existing columns	£12,841
FITZMAURICE PLACE	West End	2	VM Score	Upgrade existing units to LED and replace existing columns	£13,287
FORMOSA STREET	Little Venice and Westbourne	13	VM Score	Upgrade existing units to LED and replace existing columns	£48,761
HERTFORD STREET	West End	7	VM Score	Upgrade existing units to LED and replace existing columns	£135,926
MACCLESFIELD STREET	St James's	4	VM Score	Upgrade existing units to LED and replace existing columns	£27,851
OLD BURLINGTON STREET	West End	7	VM Score	Upgrade existing units to LED and replace existing columns	£42,931
ST JOHN'S WOOD TERRACE	Abbey Road and Regents Park	15	VM Score	Upgrade existing units to LED and replace existing columns St Ann's Terrace - Ordnance Road	£29,538
ST MARTIN'S LANE	St James's	12	VM Score	Upgrade existing units to LED and replace existing columns	£89,698

TRAFALGAR SQUARE	St James's	19	VM Score	Upgrade existing units to LED and replace existing columns	£161,352
All	All			Design, Auditing, Asset Management Costs	£495,186
All	All			Enabling works for 2022/23	£323,563
Localised Schemes				Incl Lighting Against Crime, noted below	£45,000
Total					£1,649,000

Appendix E2 - Localised Lighting Schemes Programme (incl. Lighting Against Crime) 2021/22

The schemes in the table below are for small ad-hoc schemes of a localised nature. A public concern is street crime and fear/perception of crime, where lighting has been shown to reduce this. Note that the full budget has not been allocated to allow for ad-hoc interventions that may be required throughout the year based on budget and if new nominations are received in adequate time.

Street	Ward	Existing Assets	Source	Proposed Improvements	Estimated Cost
VENICE WALK	Little Venice	16	VM Score & Nomination	Installation of LED units to enhance existing lighting levels	£18,502
TALBOT ROAD	Bayswater	3	Nomination	Enhance existing lighting levels between St Stephens Cres-Chepstow Road	£8,259
SUTHERLAND AVENUE	Westbourne	14	Nomination	Enhance existing lighting levels Harrow Rd-Shirland Road	£18,239
Total					£45,000

Appendix E3 - Age Expired Lantern Replacement Programme 2021/22

The various components of street lighting deteriorate at differing rates. Typically, columns have an assumed life of 40 years, whereas the assumed life of lanterns is 20 years. In line with the LED rollout, the age expired programme this year focuses on investing in heritage areas by replacement age expired functional lanterns on heritage columns to unify the streetscape.

Street	Ward	Existing Assets	Source	Proposed Improvements	Estimated Cost
WORONZOW ROAD	Abbey Road	14	VM Score & Nomination	Replace existing columns, reuse LED lanterns	£52,109
CHAGFORD STREET	Bryanston & Dorset Square	7	VM Score & Nomination	Replace existing columns, reuse LED lanterns	£22,096
TAUNTON PLACE	Bryanston & Dorset Square	5	Nomination	Upgrade existing units to LED and replace existing columns	£12,808
QUEENS GROVE	Abbey Road	12	Nomination	Replace existing columns, reuse LED lanterns	£33,282
BRYANSTON PLACE	Bryanston & Dorset Square	8	Nomination	Upgrade existing units to LED and replace existing columns	£25,918
SEYMOUR PLACE	Bryanston & Dorset Square	26	Nomination	Enhance existing lighting levels with infill columns	£51,818
WIMPOLE STREET	Marylebone High Street	12	Nomination	Conversion of existing functional lanterns to heritage large grey wornum LEDs	£36,981
HARLEY STREET	Marylebone High Street and West End	22	Nomination	Enhance existing lighting levels with infill columns	£43,182
STOURCLIFFE STREET	Bryanston & Dorset Square	6	Nomination	Enhance existing lighting levels with infill columns	£8,636
ST JOHN'S WOOD TERRACE	Abbey Road and Regents Park	10	Nomination	Enhance existing lighting levels with infill columns Ordnance Road-Townshend Road	£25,909
BOYLE STREET/CAOCH AND HORSES YARD	West End	2	Nomination	Enhance existing lighting levels with infill columns	£17,273
CONNAUGHT PLACE	Hyde Park	4	Nomination	Enhance existing lighting levels with infill columns	£20,357

PARK WEST PLACE	Hyde Park	4	Nomination	Enhance existing lighting levels with infill columns	£22,473
SARDINIA STREET	St James's	3	VM score & Nomination	Enhance existing lighting levels with infill columns	£25,908
WEST STREET	St James's	1	Nomination	Enhance existing lighting levels with infill column	£8,261
GREAT QUEEN STREET	St James's	3	Nomination	Enhance existing lighting levels	£12,536
Total					£385,000

Appendix E4 - Cherished Column Programme 2021/22

The cherished column replacement programme deals with unique street furniture that is of historic value. Many of Westminster's assets are protected as 'listed' items of street furniture and therefore protected by the law. The cherished column status allocated to this equipment helps protect not only the asset but the street scene of which it is an integral part.

Street	Ward	Existing Assets	Source	Proposed Improvements	Estimated Cost
ROYAL ALBERT HALL STEPS	Knightsbridge & Belgravia	22	Nomination	Upgrade of existing cherished lanterns to LED, carryover from 2020/21	£46,254
SUNDERLAND TERRACE	Bayswater	4	Nomination	Installation of LED units to enhance existing lighting levels, additional in fills between trees	£13,005
MANCHESTER SQUARE	Marylebone High Street	10	Nomination	Upgrade of existing cherished lanterns to LED, enhance existing lighting levels with infill columns	£22,741
Total					£82,000

Appendix E5 - Lighting Improvement Programme 2022/23 (Reserve list for 21/22)

The Lighting Improvement Reserve Schemes in the list below will be used should it not be possible to deliver schemes in the main programme. In addition to the below list the current LVMM process is changing and the below list is subject to change once the new LVMM process has been implemented and the LED roll out has progressed which may also impact the list for locations below.

Street	Category	Ward	Source	Proposed Improvement
AYLESFORD STREET	Age Expired	Tachbrook	VM	Column Replacement
BARRETT STREET	Age Expired	Marylebone High Street	VM	Column Replacement
CABBELL STREET	Age Expired	Bryanston & Dorset Square	VM	Column Replacement
DOWLAND STREET	Age Expired	Queen's Park	VM	Column Replacement
FERMOY ROAD	Age Expired	Harrow Road	VM	Column Replacement
KENSINGTON GARDENS SQUARE	Age Expired	Lancaster Gate	VM	Column Replacement
LANCELOT PLACE	Age Expired	Knightsbridge & Belgravia	VM	Column Replacement
LEINSTER GARDENS	Age Expired	Lancaster Gate	VM	Column Replacement
OSBERT STREET	Age Expired	Vincent Square	VM	Column Replacement
REGENCY STREET	Age Expired	Vincent Square	VM	Column Replacement

Appendix F – Glossary of Terms

Glossary of Terms

The report contains many abbreviations and the following table provides a summary of these together with their full titles:

Abbreviation	Full Title
ACS	Annual Condition Survey
CI	Condition Index
DVI	Detailed Visual Inspection
HRA	Hot Rolled Asphalt
LIP	Local Implementation Plan
LoBEG	London Bridges Engineering Group
PPM	Planned Preventative Maintenance
TfL	Transport for London
VfM	Value for Money
VM	Value Management