Coventry City Council

Public report
Cabinet Report

Cabinet 8 March 2016

Name of Cabinet Member:
Cabinet Member for Public Services – Councillor Lancaster

Director approving the report:
Executive Director - Place

Ward(s) affected:
All

Title:
2016/17 Transportation and Highway Maintenance Capital Programme

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Is this a key decision?
Yes
Following on from the success of the capital programme delivered in 2015/16, This report sets out a large programme of £11.2m for transportation and highway maintenance schemes which will affect all wards across the City, and in many cases seeks approval to construct/ implement them.

Executive summary:

This report brings together an integrated capital programme for the maintenance and enhancement of the City's highways and transport infrastructure. All sources of funding are considered including the West Midlands Strategic Transport Plan, Corporate Capital Resources, Section 106 and other specific grants. This approach will ensure that opportunities for 'joining up' schemes to get the best value for money can be identified. As a consequence it has been possible to present a larger maintenance programme than last year.

The basic principles for this year's maintenance and integrated transport programme are:

1. Continue the programme of rectifying damage and maintaining the City's roads, through a prioritised programme based on road condition surveys.

2. Continue to invest in preventative/proactive maintenance.

3. Carry out packages of complementary schemes to support the continued growth of the city, such as road safety, traffic management schemes and Public Realm works, which where possible will be linked to maintenance projects to maximise savings and the efficiency of implementation.

4. Provide a programme of footway improvements funded from the Whitefriars Housing Group as part of a £1.4m investment which will be delivered over the next financial year.

Recommendations:

1. Approve the 2016/17 capital programme of schemes for maintenance and integrated transport as detailed in table 3 below.

2. Approve the schemes designated 'A' for construction in 2016/17 as indicated in table 3, and delegate authority to the Cabinet Member for Public Services, to approve the schemes not designated 'A' in table 3.

List of Appendices included:

Appendix 1 – Description of all Maintenance, Integrated Transport & Challenge Fund schemes.

Appendix 2 – Breakdown of the Structural Maintenance Programme, including Swanswell Challenge Fund

Appendix 3 – Breakdown of the Road Maintenance Programme including verges

Appendix 4 – Proposed Safety Schemes Programme

Appendix 5 – Proposed Traffic Management Programme

Appendix 6 – Proposed Intelligent Mobility programme.

Background papers:

None

Other Useful Papers:

Budget Report 2016/17 (City Council)
http://democraticservices.coventry.gov.uk/ieListDocuments.aspx?CId=130&MId=10702&Ver=4

Has it or will it be considered by scrutiny?
No

Has it, or will it be considered by any other council committee, advisory panel or other body?
No

The City Council's five year capital programme was approved by Full Council on 23rd February 2015.

Will this report go to Council?
No

Report title:
2016/17 Transportation and Maintenance Capital Programme

1. Context (or background)

1.1 This report sets out a detailed capital programme of all Highway Maintenance and Integrated Transport schemes which are due to be carried out during 2016/17. The report sets out individual allocations and the various sources of funding in table 3, and sets out the specific details of each project in appendices 1 to 6.

2. Options considered and recommended proposal

2.1 In 2014, the Department for Transport (DfT) consulted on revising its approach to the Highway Maintenance Block allocation formula.

2.2 Following this, DfT announced its revised needs based formula for the Highways Maintenance Block, however, it also announced that the Highway Maintenance budget would be top sliced to provide funds for which local authorities would have to bid for:

- An incentive fund, dependent on the Authority's efficiency and approach to highways asset management. This fund is allocated based on an assessment of data provided by Local Authorities, which determines their band rating and subsequent percentage share of the available funding. Authorities will fall into one of three bands In 2016/17 Coventry will receive its full percentage of allocated funding based on its current assessment at band 2. In order to retain the maximum percentage of funding Coventry is currently working towards band 3

- A Challenge Fund for major maintenance projects: tranche 1 was awarded in 2015 (see 2.4); trance 2 to be bid for in future years.

2.3 The Highways Maintenance allocation is awarded via the West Midlands Integrated Transport Authority (WM ITA). Coventry's allocation in 2016/17 based on the revised formula is £2.535m. The ITA has made it clear that these resources are released on the condition that they are spent on highway maintenance schemes in accordance with the authorities' Highways Asset Management Plan (HAMP) and the Highways Maintenance Efficiency Programmes (HMEP).

2.4 Coventry City Council was successful in the two bids submitted to the Challenge Fund. A joint West Midlands bid based on road condition and a second bid for substantial works to Swanswell Viaduct on the ring road. The monies received from these bids will be used to fund works as described in appendix 1

2.5 Changes have been made to the capital funding available for transport improvement schemes from 2015/16 onwards. At a national level the allocation of the Integrated Transport Block (ITB) to Transport Authorities has been reduced and the money moved into Growth Deal funding, which is awarded through the Local Enterprise Partnerships on a competitive basis. Under the devolution agenda, the Growth Deal funding at a national level is also absorbing the previous national budget for Major Transport schemes, which previously had to be bid for directly through the DfT.

2.6 In Coventry the ITB is received from the West Midlands ITA on a percentage basis split between all the Metropolitan Districts and Centro. For the period 2016/17 the total West Midlands Allocation was £17.618m, the same as 2015/16. Following a top sliced 'Technical Development Budget' of £0.09m to support on-going joint projects and

contracts, the allocation was split 25% to Centro and 75% to the Districts pro-rata'd per capita (resulting in £1.58m for Coventry).

The distribution of the regional Integrated Transport budget is as follows in Table 1:

Table 1 – West Midlands funding allocation

Budget Heading	2016/17 Allocation (£m's)	Notes
ITA Minor Schemes	4.382	Centro Infrastructure works
Local District Allocation	13.146	£1.58m for Coventry
LTP-Technical Development	0.090	For regional monitoring, Asset Management Plans, etc
Total	**17.618**	

2.7 Table 2 sets out the available capital resources for transport schemes (such as Corporate Capital Resources, Whitefriars Right to Buy Capital receipts and Section 106 funds received as part of the planning process).

Table 2

Funding Source	2016/17 Allocation (£m's)
LTP Integrated Transport	1.580
LTP Maintenance (Roads and Structures)	2.535
Corporate Capital Resources	2.500
Subtotal of Core Funding	**6.615**
Section 106	1.422
Whitefriars Housing Group contribution	1.409
Challenge Fund - West Midlands Network Renewal	0.982
Challenge Fund - Swanswell Viaduct	0.238
Coal Board Contribution	0.155
Growth Bid Funding – Dynamic Routing	0.400
Total	**11.221**

2.8 In 2015, a new high level transport strategy was consulted on and adopted by the West Midlands Integrated Transport Authority (WM ITA). The strategy covers Coventry and the other districts within the ITA and is known as the 'West Midlands Movement for Growth' strategy. This replaces the strategy contained in the previous Local Transport Plan (LTP3). Highways Maintenance and Integrated Block funding will continue to be received and distributed by the WM ITA. It is anticipated that in mid-2016, Centro and WM ITA will be dissolved and the statutory functions, including those relating to funding, will be absorbed into a new West Midlands Combined Authority. It is anticipated that the main policies and strategies adopted by WM ITA relevant to the discharge of funding, including the West Midlands Movement for Growth strategy will remain in place.

2.9 As a substantial proportion of the funding for this programme is received as part of the WM ITA process, allocations received must therefore deliver schemes which contribute towards the objectives, outcomes and targets in the West Midlands Strategic Transport Plan. The WM ITA will monitor and assess the types of schemes district authorities are planning and whether they meet the relevant objectives.

2.10 As a continuation to the 2015/16 programme, there is an emphasis on making the best use of existing infrastructure rather than creating new. Consequently, a significant maintenance programme will focus on ensuring that the worst affected roads and pavements across the City are properly repaired and preventative maintenance is carried out. This is a key theme in the West Midlands Strategic Transport Plan and is driven by the City Council's Highways Infrastructure Asset Management Policy and Strategy (January 2016).

2.11 Highways Operations have delivered a programme of footway and network improvements in Whitefriars areas (former housing authority roads and footpaths that are publicly maintainable) to a value approaching £2m in 14/15 and £1.7m in 15/16. Delivery will continue in 16/17 funded through the Right to Buy Capital. A board was established in 14/15 with senior officers from Coventry City Council and Whitefriars to monitor this spend which occurs on an annual basis. This funding runs alongside the Capital Programme and continues to be monitored closely by the Board.

2.12 It is proposed to continue delivering improvements to the Broad Lane/Banner Lane junctions utilising Section 106 funding from the Bannerbrook development, the balance will be used for walking and cycling improvements in the vicinity. We will also use Section 106 funds to deliver a traffic scheme at Skipworth Road.

2.13 In compiling the programmes contained within this report, an underlying principle has been to maximize value for money by looking for opportunities to integrate projects wherever possible. As well as saving money, this minimizes disruption to the travelling public, businesses and residents.

2.14 Following negotiations with the Coal Authority, we have been successful in securing a one off contribution towards the repair and resurfacing of Wall Hill Road, this alongside existing funding will allow works to be undertaken in 2016

2.15 Coventry has been very successful in developing and securing new funding for innovative transport solutions that use emerging technology to improve transport information. We will be working on a number of transport innovation projects which will be delivered with local partners and small and medium sized enterprises and will support continued economic growth in this area. We will continue the work already started in 2015/16 looking at the merging of transport, digital communications and sensing technologies to provide improved mobility for people and freight.

2.16 The funding for the 2016/17 Intelligent Mobility programme is supported by funds secured from Growth Deal, Europe and national UK funding competitions (such as those run through InnovateUK). We have been awarded £2.5m from Growth Deal for the iVMS/Dynamic Routing project, £400k of which will be spend by Coventry City Council directly (which is included in Table 2) the remaining £2.1m will be paid to collaborating partners. As well as delivering the projects where funding has already been secured, Coventry will work with other partners, including the WM ITA to identify and secure funding for new projects.

2.17 Table 3 sets out the proposed capital programme for Integrated Transport and maintenance schemes for 2016/17. Each line represents either a programme of works or an individual scheme. Specific details of these programmes and schemes are provided in appendices 1 to 6 of this report.

2.18 In addition to making the best use of existing infrastructure, as outlined above, wherever possible we will seek to reduce ongoing revenue expenditure through the removal of

unnecessary infrastructure. This achieves two objectives: decluttering to improve the look of the city and reducing the ongoing maintenance.

2.19 Approval is sought for those schemes and scheme programmes (as detailed in the appendices) marked with an A in Table 3.

2.20 External funding is being sought wherever possible to support the programme. The Coventry & Warwickshire First Wave Growth Deal Cabinet Report, Sept 2014 outlines a £4M package for unlocking development sites, comprising of £1M Growing Places and £3M Growth Deal. The £4M is allocated to Coventry & Warwickshire LEP and will be subject to a bidding process. We will be bidding for funds from this £4M to deliver further city centre public realm improvements, including enhancements around Greyfriars Lane and Pepper Lane to support the continuing redevelopment of Cathedral Lanes.

Transportation Capital Programme 2016/17 **Table 3**

	Maintenance	£000s	£000s	£000s	£000s	£000s	£000s	£000s	£000s	£000s	Approval
		CCR's	**LTP IT Block**	**LTP Maint**	**Sec 106**	**WHG**	**Challenge Fund**	**Coal Board**	**Dynamic Routing**	**Total**	
1	Planing and Patching	781	0	0	0	0	0	0	0	781	A
2	Resurfacing	378	0	341	0	0	982	155	0	1856	A
3	Re-tread	200	0	400	0	0	0	0	0	600	A
4	Surface Treatments	351	0	450	0	0	0	0	0	801	A
5	Footway Improvement Schemes	700	0	300	24	1409	0	0	0	2433	A
6	Verges	0	0	125	0	0	0	0	0	125	A
7	Vehicle Safety Fence	0	0	69	0	0	0	0	0	69	A
8	Structures	0	0	550	0	0	238	0	0	788	A
9	Drainage Surveys / Maintenance	90	0	300	0	0	0	0	0	390	A
	Sub Total	**2500**	**0**	**2535**	**24**	**1409**	**1220**	**155**	**0**	**7843**	
	Integrated Transport										
10	Intelligent Mobility & Age Friendly Programme	0	300	0	0	0	0	0	400	300	A
11	Safety Schemes	0	250	0	0	0	0	0	0	250	A
12	Vulnerable Users	0	200	0	0	0	0	0	0	200	A
13	Scheme Development and Monitoring	0	100	0	0	0	0	0	0	100	A
14	Traffic Management	0	230	0	215	0	0	0	0	445	A
15	Contribution to Wider Programme	0	500	0	0	0	0	0	0	500	-
	Other Schemes										
16	Bannerbrook Park	0	0	0	1009	0	0	0	0	1009	-
17	Skipworth Road	0	0	0	174	0	0	0	0	174	
	Sub Total	**0**	**1580**	**0**	**1398**	**0**	**0**	**0**	**400**	**2978**	-
	Grand Total	**2500**	**1580**	**2535**	**1422**	**1409**	**1220**	**155**	**400**	**11221**	**-**

3. Results of consultation undertaken

3.1 The West Midlands Strategic Transport Plan 'Movement for Growth' replaces the Local Transport Plan (LTP 3). The WM ITA consulted with the public and key stakeholders and adopted the plan in July 2015. In addition, many of the specific larger schemes within the programme have or will be consulted on widely as individual schemes.

3.2 In all cases, no scheme will be implemented without appropriate consultation being undertaken to ensure that all interested parties are involved in the process and that anticipated funding is secure.

4. Timetable for implementing this decision

4.1 The programme of schemes will be implemented throughout the 2016/17 financial year. The exact timing of individual schemes will depend on how well developed they are, and feedback from consultation. It is anticipated that all budgets described in the programme will spent by the end of March 2017.

5. Comments from Executive Director, Resources

5.1 Financial implications

The core funding for the Transportation and Maintenance Capital Programme totalling £6.615m is set out in Table 2 and this was approved by Cabinet on 23 February 2016. This programme is supplemented by additional Section 106 funding and Whitefriars Right to Buy receipts. This report sets out a strategic integrated highways and transportation programme that explicitly recognises all sources of funding and implements a strong emphasis on robust project and programme management.

5.2 Legal implications

The Council is under various statutory duties relevant to this report which includes:

(a) Maintaining the City's adopted highway network and associated structures;
(b) Maintaining the City's traffic management infrastructure;
(c) Managing the City's road network to secure the expeditious movement of traffic;
(d) Promoting/encouraging safe, integrated, efficient and economic transport facilities and services in conjunction with the ITA;
(e) Investigating road accidents and introducing measures to prevent their recurrence;
(f) Producing a definitive map recording all public rights of way in the City;
(g) Acting as a 'risk management authority' in respect of highway drainage for the purposes of the Flood and Water Management Act 2010

The Council also has various statutory powers which allow it to improve or add to the existing highway/traffic management infrastructure.

Any major contracts will be let so as to comply with EU/UK procurement rules.

The core funding for the Transportation and Maintenance Capital Programme is set out in Table 2 above and totals £6.615m. As indicated this is complemented by other specific sources of funding from contribution under planning agreements under Section 106 of the Town and Country Planning Act 1990. Funding from planning obligations may only be used in accordance with the terms of the relevant agreement/undertaking under which the developer funding was provided.

6. Other implications

6.1 How will this contribute to achievement of the council's key objectives / corporate priorities (corporate plan/scorecard) / organisational blueprint / LAA (or Coventry SCS)?

The programme will help to address Sustainable Community Strategy (SCS) objectives such as poor air quality, climate change by encouraging more sustainable forms of transport such as walking, cycling and public transport promoting the City Councils 'Age Friendly' aspirations

Schemes such as Public Realm works and the significant maintenance programme will help to address the SCS priority of making streets and open spaces more attractive and enjoyable places to be as well as the SCS transport priority of encouraging more walking and cycling.

6.2 How is risk being managed?

For each programme/scheme, there are nominated project sponsors and managers who will be held accountable for delivery. The governance arrangement will be for the capital programme to be overseen by a board comprising the Assistant Director (Planning, Transport and Highways), service manager (project sponsor) and financial officers. The project managers collectively form the capital programme team which will ensure that the programme is delivered on time, to budget and to an appropriate standard. The findings and recommendations of the board will be reported to the responsible cabinet member/s via established briefing and reporting mechanisms as appropriate. In addition summary updates are provided to Cabinet as part of the quarterly budgetary control process.

To manage physical risks, the Construction and Design Management (CDM) process is also used for all appropriate schemes (larger schemes which meet certain criteria) to ensure that risks are designed out and that construction takes place by an approved contractor in a safe way.

6.3 What is the impact on the organisation?

The programme will be delivered using existing resources where possible.

6.4 Equalities / EIA

An equality impact assessment was carried out during the formulation of the West Midlands Strategic Transport Plan.

6.5 Implications for (or impact on) the environment

The programme will have a beneficial impact on the environment as many schemes are designed to encourage sustainable forms of travel such as walking, cycling and public transport, as well as schemes to reduce congestion and improve the public realm.

6.6 Implications for partner organisations?

The implementation of the programme will have a positive impact on businesses and the general population of the City through improvements to road maintenance and the wider transport network. The Coventry and Warwickshire Local Enterprise Partnership (LEP) has identified transport as a high priority to support economic growth.

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Description of Maintenance and Integrated Transport Schemes

Highways Maintenance Block

As a result of the programme of permanent repairs and preventative maintenance undertaken over the last five financial years, the deterioration of the road network has continued to reduce significantly and, it's resilience to the effects of winter weather is greatly improved.

The programmes of works, as shown in table 3, are aimed at continuing the significant improvement to the classified and unclassified carriageway network. The opportunity will also be taken to link the implementation of road maintenance and integrated transport projects together to lower costs and minimise disruption.

This year we will continue with the successful footway overlay and footway slurry seal programmes, to complement the footway reconstruction programme. Overlay and slurry seal, maximise value for money and introduce a theme of preventative maintenance into the programme.

It is important to note that exact limits for the extended footway programme are not provided in this report, due to volume of extra preparation work. A summary of the treatments proposed for use over the 2016/17 financial year are listed in appendix 3. As discussed in the report there is also an extra £1.409m provided by Whitefriars Housing Group for footways and highway network improvements this year.

Footway Treatments

Footway Reconstruction: A scheme of work which will often include excavation of kerb lines, relaying or renewing of kerbs, replacement of slabs or tarmac and sub-base layers. This restores the treated area to 'as new' condition.

Footway Overlay: A process where a further layer of tarmac is added to the existing tarmac surface. To do this a chase or 'key' is cut or planed behind the kerb or edging to allow the new surface to finish flush with existing edge levels.

Footway Slurry Seal: A process where a bituminous slurry mixture is spread across the existing tarmac. The process is thin, up to 10mm, so there are no level problems. This process is used on sites where early signs of deterioration are evident and hence is an excellent preventative maintenance treatment.

Carriageway Treatments

Carriageway Planing and Patching: This method of repair is best suited to those roads where there are larger (greater than 10 square metres) areas of deterioration, often at junctions and turning heads or where there are problems with old utility reinstatements. The process entails removing the top 40mm (or whatever is appropriate) and inlaying new material. Typical cost is £32.00 per square metre. This treatment has the added advantage of forming part of the preparation process for future preventative maintenance surface treatment schemes. Roads which have been planed and patched are very suitable for surface dressing or micro asphalt the following year. The sites listed for the Plane and Patch programme do not represent a full commitment to the budget allocated. This is because there is a reactive element to this operation, which gives the flexibility of carrying out large permanent repairs to roads which may deteriorate quickly for any reason. It is worth noting that for many of these sites, once the patching operation is completed will be suitable for preventative maintenance treatments in 2016 and 2017.

Carriageway Resurfacing: This treatment is split into two types, inlay and overlay. Best value is achieved with overlay and, where possible, this is the preferred approach.

Inlay*:* This is an inherently expensive approach and will be used only where absolutely necessary, usually where there has been a structural failure in the base layers. It is recognised that there are a few locations where a deeper repair is essential. The costs of this approach can be over £38.50 per square metre.

Overlay: For roads where the deterioration is confined to the upper layers of the carriageway, a good solution is to overlay. Similarly to footway overlay an extra layer of tarmac is laid over the existing surface. To maintain kerb height it is usually necessary to plane out adjacent to the carriageway edges. The advantage of this approach is that it increases the thickness of tarmac, thereby strengthening the carriageway and reducing the amount of material that has to be taken away. Henley Road is an example of a recent overlay scheme. For carriageways in poor repair, pre-patching is necessary. It is more expensive than Retread (see below), but is used in different traffic loading conditions i.e. on routes where HGV usage is higher often B and C Roads. Typical costs are £30.00 per square metre.

Retread: For carriageways that are beyond patching and where an overlay is not an option (because of drainage, levels or traffic loading), retread will be considered. It is a process that breaks up and recycles the existing surface, reusing the bituminous material to form a new base layer. This saves on transport and disposal costs, which is better both financially and environmentally. Cost is typically £30.00 per square metre including final surfacing, and the process is typically used on more lightly trafficked roads which generally form part of the unclassified network.

Surface Treatments*:* All of the above processes extend the life of a carriageway by a number of years and this life can be extended further by the application of surface dressing (tar and chips) or other thin layer systems such as a Micro-Asphalt. The importance of this surfacing is that it waterproofs the road surface and prevents the ingress of water. In winter, water significantly contributes to deterioration. On freezing, water expands and can cause weaker surfaces to break up.

This year will be the seventh year of the preventative maintenance programme, which has been very successful. The value of this approach can be seen from the fact that surface dressing costs of around £4.50 per square metre and Micro-Asphalt is typically £8.50 per square metre, compared to over £30.00 per square metre for resurfacing.

<u>Drainage Surveys/Maintenance</u>

Capital maintenance schemes include the renewal of piped systems where pipes have failed, the laying of new highway drains or relining of existing drains. These works address capacity or damage issues which are usually evidenced by flooding on or adjacent to the Highway. The Council procured a Drainage CCTV Term Contract in 2011 (currently in the process of being re-tendered, award due in 2016), and this is proving particularly useful in surveying the Highways drainage network and continuing to build an asset register, in line with the requirements of the Flood and Water Management Act.

<u>Verges</u>

This programme allows for the protection of verges, typically through the use of bollards in accordance with the adopted verge policy. It may also include provision of lay-bys or simply re soiling existing verges, if new protective measures are in place. The trial of grass-grid type materials has been successful and their use will continue. This will allow vehicle over-run whilst maintaining a green look.

Vehicle Safety Fences

The 2016/17 budget is set at an appropriate level to maintain the existing safety fence asset. This allows for the testing and replacement of time expired safety fencing or fencing which no longer meets national specifications.

Structures

The LTP Maintenance (roads and bridges) element is used to provide a programme of capital maintenance across the city's 308 structures which comprise road bridges culverts, footbridges, retaining walls, sign gantries, and subways. Schemes cover a wide range of maintenance works, including strengthening, waterproofing, repair of structural elements, and replacement of movement joints. This work provided a new parapet to meet current standards and allowed the removal of the temporary concrete barrier which had been on site for several years. The programme also includes detailed structural inspections and assessments of substandard structures. Details of the programme are set out in Appendix 2.

Integrated Transport Block

Safety Schemes

This allocation will be used in the development and implementation of road safety schemes in areas where there is a high incidence of recorded personal injury collisions (at least six in three years) and in areas where there is a perceived danger highlighted by local residents. The inclusion of a request for a perceived safety scheme is dependent on the average (mean) speed within a 30mph speed limit being greater than or equal to 28mph, or within a 20mph speed limit (or zone) greater than 20mph. In addition the allocation will be used to carry out route based road safety studies and schemes with specific focus on locations with a disproportionate numbers of vulnerable road user casualties including pedestrians, cyclists and motorcyclists.

Details of proposed programme are set out in Appendix 4.

Vulnerable Users

This allocation, which complements the safety schemes programme, will be used to carry out improvements for our most vulnerable road users including cyclists and pedestrians of all ages. The programme of introducing 20mph speed limits/zones across the city will continue and a general review of speed limits will be commenced.
As part of the initiative to make Coventry an 'Age Friendly City,' it will also fund pedestrian dropped kerbs, on-street advisory disabled bays and access protection markings. A contribution will be used to support the recording of the Rights of Way network and its maintenance.

Traffic Management

This budget will be used to carry out changes to the public highway to reduce congestion and make more efficient use of existing road space. Examples include Traffic Regulation Orders, residents parking schemes, signing and lining changes and other minor engineering works.

Details of the proposed programme are set out in Appendix 5.

Intelligent Mobility and Age Friendly Programme

This programme of activity continues to build on Coventry's track record of innovation being at the forefront of best practice. It incorporates a number of complementary funding streams which have been drawn together to support match funding opportunities for further grant applications.

Managing the programme in this way will improve the coordination of activities, with a grant funded programme running over approximately 3 years which will receive a total of circa £3.4m of grant, of which £2.1m will be allocated to project partners on some projects. On other projects project partners will receive their funding direct with a total estimated programme value across all partner activity estimated to exceed £20m over this period. Partners include Horiba-MIRA, JLR, Warwick Manufacturing Group, University of Warwick, Coventry University, Siemens, Visteon, RDM, Serious Games International, West Midlands ITA, Vodafone, Huawei, InfoHub and various European cities.

Details of the various projects are in the table below.

Hope	A collaborative European funded project where over the period 2015-2017 the Council will receive funding to help develop and test an innovative journey planning tool that support low carbon impact journeys
UK Autodrive	A collaborative InnovateUK funded project in which the Council will receive funding to facilitate and host trials of connected and autonomous vehicles within the city, working with various major industry partners. The project started in in November 2015 and will run for 3 years.
UK CITE	A collaborative InnovateUK funded project working with Highways England and industry to establish a globally unique Connected and Autonomous Vehicle real-world test environment and facility. Estimated start April 2016, running for approximately 2.5 years
iVMS/Dynamic Routing	A collaborative project funded by CW LEP which will deliver immediate traffic management efficiencies as well as develop new technologies to improve vehicle routing and network resilience. Started in December 2015 and running for approximately 2.5 years.
Catch!	A collaborative InnovateUK funded project in which the Council will receive funding to coordinate between various UK cities and recruit users of a travel App which will improve highway network management information. Started in January 2016 and running for 2 years.

The objective is to continue to bring together Intelligent Transport Systems and various sources of travel information to provide the most efficient highway operation and improve the ease of use of accurate travel information for the public. These projects have significant future benefits for improving the impact of transport on air quality and the ability of people to travel more freely.

An example which demonstrates the practical application of new technologies has been the testing of a new form of zebra crossing in the city centre, the new crossing point can communicate with partially sighted users to confirm to them that it is safe to cross once the crossing equipment has detected that the approaching traffic has stopped.

Works as a result of the route signing strategy, drawn up in 2015/16, will continue to ensure that all road signing is consistent and legible, with SMART technologies being used to provide upgraded Variable Message Signing to city centre car parks leading to reduced congestion. This will assist the review of directional signing and associated street clutter and make it easier for people to navigate around the city.

Works will continue to streamline UTMC technical systems and to make improvements to traffic signals

Details of the proposed programme are set out in Appendix 6.

Appendix 2

2016/17 Highway Structures Programme

ROAD NAME	TERMINALS FROM	TO	Ward
Ringway Rudge Junction 7	Rudge/Meadow Street Culvert		St Michaels / Sherbourne
Butt Lane	Cul de Sac, Bridges x3		Bablake
Farcroft Avenue	Farcroft Culvert/Goldthorne Culvert		Woodlands
Lockhurst Lane/Holbrook Lane	Lockhurst Lane Viaduct		Radford / Foleshill / Holbrooks
Ringway Rudge/Hill Cross Junction 8	Holyhead Road over Bridges		St Michaels / Sherbourne
A444 Phoenix Way	Walsgrave Road/Caludon Road/Burlington Rd/Heath Road Over Bridges		St Michael's/Upper Stoke
A4114 Pickford Way	Pickford Way Footbridge		Bablake/Whoberley

Appendix 3

2016/17 Carriageway Resurfacing Schemes

ROAD NAME	TERMINALS FROM	TO	WARD
Acorn Street	Full Length		Lower Stoke
Aldermoor Lane	Round House Road	Ernsford Avenue	Lower Stoke
Ansty Road	Roundabout Clifford Bridge Road	Caludon Park Avenue	Wyken
Ansty Road	Norton Hill Drive	Roundabout Clifford Bridge Road	Wyken
Belgrave Road	Arch Road	Clifford Bridge Road	Wyken
Broad Lane	Coral Close	Central Lane Dunchurch Highway	Earlsdon
Broomfield Place	Sovereign Row	Railway Bridge	Sherbourne
Cox Street	Cope Street	Grove Street	St Michaels
Foleshill Road	Lockhurst Lane	Station Street East	Foleshill
Foleshill Road	Station Street	Churchill Avenue	Foleshill
Foleshill Road	Churchill Avenue	Slip Roundabout Phoenix Way	Foleshill
Foleshill Road	Roundabout at Phoenix Way	Carriageway	Foleshill
Foleshill Road	Eagle Street	Matlock Road	Radford / Foleshill
Ringway Hill Cross	Radford Road Roundabout	Anticlockwise Dual Carriageway	St Michaels
Ringway St Nicholas Roundabout	Foleshill Road Roundabout	Foleshill Road Roundabout	Radford
Ringway Swanswell Spur	Clockwise Dual Carriageway	Anticlockwise Dual Carriageway	St Michaels
Ringway Swanswell Spur	White Street	Central Lane Swanswell Ringway	St Michaels
Ringway Swanswell Spur	Central Lane Ringway	Hales Street	St Michaels
Wall Hill Road	Bridle Brook Lane	Watery Lane	Bablake
Winsford Avenue	Kendal Rise	Winsford Court	Whoberley

2016/17 Carriageway Retread Schemes

ROAD NAME	TERMINALS FROM	TO	WARD
Brackenhurst Road	Brownshill Green Road North	Brownshill Green Road South	Bablake
Canley Ford	Kenilworth Road	End	Earlsdon
Chadwick Close	Claverdon Road	End	Woodlands
Falstaff Road	Bushberry Avenue	Frisby Road	Woodlands
Handsworth Crescent	Full Length		Woodlands
Kendal Rise	Full Length		Whoberley

Melville Road	Full Length		Sherbourne
Over Street	Haddon Street	Tallants Road	Longford
Poplar Road	Full Length		Earlsdon
Ranby Road	Full Length		St Michaels
Rothesay Avenue	Full Length		Westwood

2016/17 Carriageway Micro Asphalt Schemes

ROAD NAME	TERMINALS FROM	TO	WARD
Abbotts Lane	Full Length		Sherbourne
Aldrich Avenue	Full Length		Woodlands
Alvestone Road	Heath Road	Burlington Road	Upper Stoke
Banks Road	Full Length		Radford
Briscoe Road	Butlin Road	Hen Lane	Holbrook
Carver Close	Full Length		Wyken
Cavendish Road	Full Length		Woodlands
Copt Oak Close	Full Length		Westwood
Emscote Road	Full Length		Lower Stoke
Fletchamstead Highway Slip Road	Phantom Coach PH	Sir Henry Parkes Road	Westwood
Fletchamstead Highway Slip Road	Phantom Coach PH	Sir Henry Parkes Road	Westwood
Grafton Street	Bramble Street	Binley Road	St Michaels
Ilford Drive	Full Length		Wainbody
Kirby Corner Road Service Road	Front of No 22	Front of No 2	Wainbody
Lowther Street	Swan Lane	Hammond Street	St Michaels
Lydford Close	Full Length		Upper Stoke
Macaulay Road	Full Length		Lower Stoke / Wyken
Malmesbury Road	Full Length		Holbrook
Manor House Drive	Side of car park	Quadrant Offices	St Michaels
Matlock Road	Full Length		Foleshill
Peveril Drive	Full Length		Wainbody
Pinner's Croft	Full Length		Upper Stoke
Poolside Gardens	Full Length		Wainbody
Redesdale Avenue	Batsford Road	Evenlode Crescent	Sherbourne
Rees Drive	Full Length		Wainbody
Shuttle Street	Full Length		Longford
Silverton Road	Full Length		Foleshill
Simon Stone Street	Full Length		Longford
Stanway Road	Full Length		Earlsdon
Stareton Close	Full Length		Earlsdon
The Shrubberies	Full Length		Wainbody
The Spinney	Full Length		Wainbody
Tomson Avenue	Radford Circle	Lawrence Saunders Road	Radford

Vardon Drive	Full Length		Wainbody
York Close	Full Length		Binley & Willenhall

2016/17 Carriageway Surface Dressing Schemes

ROAD NAME	TERMINALS FROM	TO	WARD
Belvedere Road	Full Length		Earlsdon
Brade Drive	Boswell Drive	A4600 Ansty Road	Henley
Brandfield Road	Full Length		Bablake
Brookside Avenue	Wildcroft Road	Greendale Road	Whoberley
Cameron Close	Windmill Hill	End of Road	Bablake
Dysart Close	Full Length		St Michaels
Eld Road	Full Length		Foleshill
Falconbridge Avenue	Full Length		Woodlands
Green Lane South	Daleway Road	Crossway Road	Wainbody
Hampton Road	Full Length		Foleshill
Houldsworth Crescent	Fallowfields	Nunts Lane	Holbrook
Huntindon Road	Mayfield Road	Belevedere Road	Earlsdon
Mulliner Street	Full Length		Foleshill
Nunts Lane	Penny Park Lane	Rockley Lane	Holbrook
Oxley Drive	Full Length		Wainbody
Pensilva Way	Full Length		St Michaels
Priors Harnall	Full Length		St Michaels
Rotherham Road	Beake Avenue	Blenheim Avenue	Holbrook
Southbank Road	Full Length		Sherbourne
Sturminster Close	Full Length		Wyken
The Barley Lea	Full Length		Lower Stoke
Tocil Croft	Full Length		Wainbody
Vauxhall Street	Full Length		St Michaels
Wolfe Road	Torrington Avenue	Charter Avenue	Westwood
Woodridge Avenue	Full Length		Woodlands

2016/17 Carriageway Plane and Patch Schemes

ROAD NAME	TERMINALS FROM	TO	WARD
Aberdeen Close	Various areas of patching		Woodlands
Ambler Grove	Various areas of patching		Lower Stoke
Appledore Drive	Various areas of patching		Woodlands
Ash Priors Close	Various areas of patching		Westwood
Bennetts Road North	Various areas of patching		Bablake
Brathay Close	Various areas of patching		Cheylesmore
Caithness Close	Various areas of patching		Woodlands
Carey Street	Various areas of patching		Longford
Cecily Road	Various areas of patching		Cheylesmore
Cloud Green	Various areas of patching		Wainbody
Crampers Field	Various areas of patching		Radford
Ebro Crescent	Various areas of patching		Binley & Willenhall
Fir Grove	Various areas of patching		Westwood
Fir Tree Avenue	Various areas of patching		Westwood
Forester's Road	Various areas of patching		Cheylesmore
Goode Croft	Various areas of patching		Woodlands
Hardwick Close	Various areas of patching		Woodlands
Harvesters Close	Various areas of patching		Wyken
Hemsby Close	Various areas of patching		Westwood
High Beech	Various areas of patching		Woodlands
Hockley Lane	Various areas of patching		Woodlands
Inca Close	Various areas of patching		Binley & Willenhall
Kanzan Road	Various areas of patching		Longford
Kimble Close	Various areas of patching		Whoberley
Kirby Road	Various areas of patching		Whoberley
Medina Road	Various areas of patching		Foleshill
Nordic Drift	Various areas of patching		Henley
Orton Road	Various areas of patching		Holbrook
Sapphire Gate	Various areas of patching		Lower Stoke
Shire Close	Various areas of patching		Longford
Springfield Road	Various areas of patching		Foleshill
St Martins Road service Road	Various areas of patching		Wainbody
Stepping Stone Road	Various areas of patching		Sherbourne
Sunbury Road	Various areas of patching		Cheylesmore
The Bentree	Various areas of patching		Lower Stoke
The Oaklands	Various areas of patching		Westwood
Theddinworth Close	Various areas of patching		Binley & Willenhall
West Avenue	Various areas of patching		Lower Stoke
Whaley's Croft	Various areas of patching		Radford
Widdecombe Close	Various areas of patching		Henley

Woodfield Road	Various areas of patching	Earlsdon
Wordsworth Road	Various areas of patching	Lower Stoke

2016/17 Footway Reconstruction/Overlay Schemes

ROAD NAME	TERMINALS FROM TO	WARD
Beanfield Avenue (phase 3 of 4)	See note	Wainbody
Berry Street	See note	St Michaels
Browns Lane (phase 1 of 2)	See note	Bablake
Castle Close	See note	Cheylesmore
Daventry Road	See note	Cheylesmore
Dillotford Avenue	See note	Cheylesmore / Earlsdon
Farcroft Avenue (phase 1 of 2)	See note	Woodlands
Hipswell Highway (phase 3)	See note	Wyken / Lower Stoke
Holyhead Road	See note	Sherbourne / Bablake
John Rous Avenue	See note	Westwood
Larch Tree Avenue (phase 3 Final)	See note	Westwood
Meadow Road (phase 1 of 2)	See note	Holbrook
Nod Rise (phase 4)	See note	Woodlands
Oxendon Way (phase 3 of 4)	See note	Binley & Willenhall
Porlock Close	See note	Cheylesmore
Regina Crescent (phase 1 of 2)	See note	Henley
Sadler Road (phase 1 of 2)	See note	Bablake / Radford
Station Avenue (phase 1 of 2)	See note	Westwood
Trinity Street	See note	St Michaels
Walsgrave Road (phase 2 final)	See note	St Michaels / Upper Stoke / Lower Stoke

2016/17 Footway Slurry Seal Schemes

ROAD NAME	TERMINALS FROM TO	WARD
Birch Close	See note	Woodlands
Brunswick Road	See note	St Michaels
Canley Road	See note	Earlsdon / Whoberley
Carmelite Road	See note	St Michaels
Earlsdon Avenue North	See note	Earlsdon / Whoberley
High Beech	See note	Woodlands
Hollis Road	See note	Lower Stoke
Larkfield Way	See note	Woodlands
Moor Street	See note	Earlsdon
Oakford Drive	See note	Woodlands
Queen's Road	See note	St Michaels
Regent Street	See note	St Michaels
Ridge Court	See note	Woodlands
Stoney Stanton Road	See note	Foleshill
Upper York Street	See note	St Michaels
Wareham Green	See note	Wyken
Woodridge Avenue	See note	Woodlands
Worsfold Close	See note	Bablake

Note:

Schemes may not be the entire Length of the named street/road

2016/17 Drainage CCTV Surveys

ROAD NAME	TERMINALS FROM	TO	Ward
Wyken Grange Road	Wyken Grange Road	Ansty Road	Upper Stoke
Lythalls Lane	253 Lythalls Lane	259 Lythalls Lane	Foleshill/Holbrooks
Kingfield Road	Kingfield Road	Outside 50 Kingfield Road	Foleshill
Holbrooks Lane	170 Holbrooks Lane	200 Holbrooks Lane	Holbrooks
Park Road	Full Length		St Michaels
Bennetts Road South	80 Bennetts Road South	100 Bennetts Road South	Bablake/Holbrooks
Stivichall Croft	Stivichall Croft	Baggington Road	Earlsdon/Wainbody
Ansty Road	81 Ansty Road	101 Ansty Road	Henley/Upper Stoke/Lower Stoke

2016/17 Capital Drainage Works

ROAD NAME	TERMINALS FROM	TO	Ward
Barker Butts Lane	77 Barker Butts Lane (and 73 Moseley Avenue)	81 Barker Butts Lane	Sherbourne Radford, Bablake
Grange Road	Outside 294 Grange Road	Junction of Jackers Road	Longford
Wyken Grange Road	Junction of Forknell Avenue	Junction of Ansty Road	Upper stoke
Coundon Road	Outside Station House, Coundon Road	Outside 41 Coundon Road	Sherbourne
259 Lythalls Lane	Junction of Compton Road	Junction of Cossington Road	Holbrooks
Opposite 136 Holbrook Lane	Outside 110 Holbrook Lane	Outside 158 Holbrook Lane	Holbrooks
Outside 182 Holbrook Lane	Outside 176 Holbrook Lane	Outside 202 Holbrook Lane	Holbrooks
Regent Street/Queens Road	Outside 19 Queens Road	Junction of Upper York Street	St Michaels
Park Road – unsure whether combined sewer or highway drain	Junction of Manor Road	End of Park Road (subway end)	St Michaels
84 Bennetts Road South – investigate whether gullies connect to combined sewer or highway drain	Outside 72 Bennetts Road South	Outside 88 Bennetts Road South	Bablake
Barras Green/ Barras Lane	Junction of Barras Green and Heath Road	100 Heath Road	Upper Stoke/Sherbourne
Lichen Green	Outside 29 Lichen Green	Outside 8 Lichen Green	Wainbody
Kingfield Road	Junction of Threadneedle Street	Outside 181 Kingfield Road	Foleshill

Proposed 2016/17 Verge Programme

Location	**Proposed Action**
General	Repair and protection
Previously approved in 2015/16	
Beake Avenue (459-467)	Install concrete grass grid or similar
Radford Road* (126 - Swillington Rd)	Combination of use of recycled materials to repair and concrete grass grid or similar
A45 (3 laybys)	Use recycled materials to repair
Tier 1 Roads	
A4600 – Ansty Road (448 - Caludon Park Ave)	Installation of bollards to prevent parking
A4600 – Hinckley Road (inbound) (Parkway to north east of layby)	Installation of bollards to prevent HGV parking
Tier 2 Roads	
Charter Ave (Various location between 460 – Mitchell Ave)	Combination of use of recycled materials to repair and bollards
Waste Lane (north side - vicinity of car park entrance)	Installation of bollards to prevent parking
Cheveral Avenue (41 – 51)	Use recycled materials to repair
Watery Lane (15 to Hall Brook Lane)	Use recycled materials to repair worst sections
Woodway Lane (Church to Potters Green Road)	Installation of bollards to prevent parking
Beake Avenue (Burnaby Road to Rupert Road)	Combination of use of recycled materials to repair and bollards

* Section approved previously 126 -152 Radford Road

Note: All locations subject to investigation and possible delays caused by engineering difficulties

Appendix 4

Safety Schemes and Traffic Management Programme 2016/7

Priority List		Type of scheme	
Location	**Possible Action**	**LSS**	**PSS**
London Road (A444 to St. James Lane)	Reduction in speed/ speed awareness measures.	X	
Ansty Road/Wyken Croft	Speed awareness measures.	X	
Longford Road (Windmill Road to Parkstone Road)	Changes to junction	X	
A444/Foleshill Road	Changes to road markings, barriers	X	
Lythalls Lane (Compton Road – Bedlam Lane)	Vehicle Activated Sign and road markings	X	
Lynchgate Road	20mph zone (in conjunction with Warwick University traffic calming)		X
Beake Avenue – north of Rylston Avenue	Pedestrian refuge type scheme		X
Broad St (near Webster St)	Pedestrian refuge type scheme		X
Mercer Avenue	Pedestrian refuge type scheme		X

LSS: Local Safety Scheme

PSS: Perceived Safety Scheme

Appendix 5

Traffic Management 2016/17

General	General low cost traffic management measures. e.g. road markings, traffic signs, bollards and congestion related remedial measures
Traffic Counts	Surveys to assess, traffic movements, speeds and volume
Traffic Regulation Orders	Advertisement and implementation of new and amended waiting restrictions
Residents' Parking Schemes	Programme of new residents' parking schemes around the City
A4600 Red Route	Amendments to traffic regulation order and congestion measures
Longford Road/Oakmoor Road	Capacity improvement
Binley Road/Allard Way	Capacity improvement

Notes.

- This includes approved priority and reserve schemes which will be carried forward from 2015/16.
- All locations subject to detailed investigation and possible delays caused by engineering difficulties / consultation issues

Appendix 6

Intelligent Mobility and Age Friendly Programme 2016/17

Traffic Signal Improvements

Priority Activity List	**Possible Action**
Binley Rd/Church Lane	Improvement to traffic signals to assist traffic and pedestrian movement
London Rd/St James Lane	Improvement to traffic signals to assist traffic and pedestrian movement
Bedworth Rd/Oban Road	Improvement to traffic signals to assist traffic and pedestrian movement
Reserve List	
Sewall Highway/Blackberry Lane	Improvement to traffic signals to assist traffic and pedestrian movement
Foleshill Rd/Harnall Lane	Improvement to traffic signals to assist traffic and pedestrian movement
Cox St/Swanswell St	Improvement to traffic signals to assist traffic and pedestrian movement