ABERDEEN CITY COUNCIL

COMMITTEE	Strategic Commissioning Committee
DATE	30 th April 2018
REPORT TITLE	Roads and Transport Related Budget Programme
	2018-2019
REPORT NUMBER	OPE/18/006
DIRECTOR	Rob Polkinghorne
CHIEF OFFICER	Mark Reilly
REPORT AUTHOR	Mike Cheyne
TERMS OF REFERENCE	Purpose 1 & 2

1. PURPOSE OF THE REPORT

This report brings together the proposed roads and transportation programme from the approved Capital budgets for 2018/19. This is presented as a provisional programme. Members are asked to approve the specific schemes where detailed and the budget headings for the remainder. In addition provisional programmes for 2019/20 and 2020/21 are also included where possible. This report should be read in conjunction with the exempt agenda section.

2. **RECOMMENDATIONS**

That the Committee

- 2.1 Approve the schemes listed in the Appendices as the detailed proposals for expenditure within budget heading;
- 2.2 Instruct Chief Officer of Operations and Protective Services to implement the detailed programme;
- 2.3 Delegate authority to the the Chief Officer of Operations and Protective Services, to undertake or instruct appropriate procedures in accordance with the Council's Procurement Regulations to procure the works referred to in the exempt Appendices for the Roads Capital Budget programme for the financial year 2018/19 and award contracts relating thereto;
- 2.4 Delegate authority to Chief Officer of Operations and Protective Services in consultation with the Head of Commercial and Procurement Services to award contracts on receipt of a valid tender submission subject to necessary funding in the approved revenue and capital budgets;
- 2.5 Approve as estimated expenditure in terms of the Procurement Regulation 4.1.1, in order for work to commence on the capital programme, the sums shown against each heading of the Roads Capital Budget for the financial year 2018/19 set out in Exempt Appendices to this report.

3. BACKGROUND

- 3.1 This report brings together, for members' information, the proposed programme for capital funding spend for both Roads and Transportation for 2018/2019 together with provisional reserve list programme for 2019/2020.
- 3.2 The provisional reserve programme for 2019/2020 will allow substitution of schemes should it not be possible to implement any of the proposed 2018/2019 schemes.
- 3.3 The appendices set out the proposed programme of works which will be funded through the approved capital budgets of the Council together with linkages to the community action plans
- 3.4 Estimated Costs for the individual proposed works are included in the exempt appendices to the report which are contained in the exempt section of the agenda
- 3.5 The proposals are in line with the Transportation Strategy to provide safe crossing, cycling and walking facilities and reduce traffic speeds thereby contributing to accident reduction across the City and improve safety for all road users.
- 3.6 The use of such funding will significantly enhance the Council's ability to meet the aims and objectives of the emerging Aberdeen Local Transport Strategy 2015-2020.

4. FINANCIAL IMPLICATIONS

4.1 Expenditure will be in accordance with the Council's approved Revenue and Capital budgets for 2018 - 2019.

5. LEGAL IMPLICATIONS

5.1 There are no direct legal implications arising from the recommendations of this report.'

6. MANAGEMENT OF RISK.

	Risk	Low (L), Medium (M), High (H)	Mitigation
Financial	Footway and cycleway improvements recommended in this report have no identified maintenance budget of their own and may therefore impact on the Council's maintenance budgets in the future	М	This will be minimised, however, by the use of high-quality design and installation materials to ensure longevity of new infrastructure

	Increase in insurance claims		Inspection regime
Legal	There are risks in promoting Traffic Regulation Orders due to possible public objection and this may delay the progression of some of the proposed schemes. Lack of Investment in Roads will increase claims against the council	L	Ensure that orders are progressed taking into account the longest possible time required to deliver. Continue to prioritise spend in order to repair higher used higher damaged roads and footpaths
Employee	Staff resources	Н	The approval of the budget spends will allow staff to control the programming of the works. There is a need to ensure that there are sufficient adequately trained staff resources to deliver the proposed programmes within the specified timescales.
Customer	Increased perception of poor quality road infrastructure	Н	The implementation of the programme will assist roads and footways within the City being maintained to an acceptable standard thus increasing ease of travel whilst reducing the risk to all members of the travelling public
Environment	The risks of inaction (not improving and increasing pedestrian and cycle infrastructure) are also significant in terms of a poor quality environment, poor reputation for Aberdeen and a decline in active travel which would have significant implications for the health and wellbeing of the citizens of Aberdeen	М	
Technology	Lack of Asset Management information to deliver annual work programme	М	Carry out a digital asset survey of the City Roads Infrastructure in order to manage the spend over several years to continue to optimise our use of resources to continue to provide best value
Reputational	Lack of Investment in Roads will increase claims against the council and press involvement	М	Continue to prioritise spend in order to repair higher used higher damaged roads and footpaths

7. OUTCOMES

Local Outcome Improvement Plan Themes	
	Impact of Report
Prosperous Economy	Investment in infrastructure
Prosperous Place	Safe and Resilient Communities

	Impact of Domost
	Impact of Report
Customer Service Design	Improved Customer Experience City Voice, the panel of Aberdeen residents who are contacted on a regular basis and asked for their views on a range of issues, is used to develop a statistically analysed pattern of response to basic aspects of asset management.
	The views of affected residents and road users are sought on our performance on specific schemes. Records held in the Confirm (Roads Maintenance Management) System and records of Claims by road users against alleged defects can be analysed to indicate areas of concern. Specific surveys may be carried out from time to time to address specific areas of concern. Results of these various analyses can be used in conjunction with inspection data to establish customers' areas of concern and expectations of the maintenance of the roads network.
Organisational Design	Our organisational structure is such that it reflects our services and the statutory duties we have to deliver.
Governance	The Asset Management Plan will be used to manage the allocated budget and spend over several years to continue to optimise our use of resources to continue to provide best value.
Workforce	Need to ensure that there are sufficient adequately trained staff resources to deliver the proposed programmes
Process Design	Required Technical staff to understand improved innovative processes that will assist in an improved service delivery and best value.
Technology	There is a need to modify the reporting systems from paper to digital in order that we can measure outputs.
Partnerships and Alliances	Continue to improve on customer information relating to works delivery

8. IMPACT ASSESSMENTS

Assessment	Outcome
Equality & Human Rights Impact Assessment	This report has no direct implications in relation to Equalities and Human Rights Impact Assessment.
Privacy Impact Assessment	Not required
Children's Rights Impact Assessment/Duty of Due Regard	Not applicable

9. BACKGROUND PAPERS

http://www.audit-scotland.gov.uk/docs/central/2010/nr_110216_road_maintenance.pdf http://www.transportscotland.gov.uk/report/j234326-02.htm RAMP Report to CH&I Committee 24 Jan 2017

10. APPENDICES

Please note Appendices A to N included in the exempt section of the agenda.

Appendix A: Traffic Lights and Pedestrian Crossing. A Capital budget of **£450,000** has been allocated to allow the continued upgrade of the systems across Aberdeen, corridor delays are reduced by the upgrading of these outdated systems ensuring that there are no delays in obtaining outdated parts.

Appendix B: Lighting Improvements. Planned lighting improvements have been allocated a capital budget of £2,105,000. £605,000 will be used, in the majority, for the replacement of lighting columns that have been identified as potentially dangerous or beyond their design life. £1,500,000 has been allocated to change the existing lanterns to low energy and LED lighting, this will reduce the energy bill and CRC payments whilst also lowering Aberdeen City Council's carbon footprint.

Appendix C: Reserve Lighting Improvements

Appendix D: Cycling Walking Safer Streets. A grant of **£313,000** has been awarded by the Scottish Government for Cycling Walking Safer Streets (CWSS) projects in Aberdeen. The programme for these works are detailed in Appendix D and will provide significant road safety benefits in an effort to achieve accident reduction as well as reduce the number and severity of injuries sustained in road traffic accidents across the city. All schemes will be implemented as soon as possible subject to the successful promotion of any required legislation. A requirement of this budget is that the spend on cycling schemes should be a minimum of 36% of the grant. £60,000 has been allocated to install replacement part time 20mph signs at schools.

Road Safety Schemes: Included in CWSS budget.

Appendix E: Footway Resurfacing. A budget of **£600,000** has been allocated for footway resurfacing. The programme has been formulated on the basis of detailed surveys and targeted at footways categorised as being in a bad or poor condition.

The condition of sections of footway included in the programme are shown in the report under **Assessed Condition**, in order to maintain a standard level of comparison all footways have been assessed by the same person.

Appendix F: Reserve Footway Resurfacing.

Appendix G: Carriageway Resurfacing. The Capital carriageway resurfacing programme has been allocated a budget of **£2,758,000**. The programme is generally prepared on the basis of the results of the road condition surveys of the existing infrastructure.

Appendix H: Reserve Carriageway Resurfacing.

Appendix J1: Drainage. A Capital Budget of **£120,000** has been allocated for the drainage works.

Appendix J2: Reserve Drainage Programme.

Appendix K: Weak & Major Bridge Repairs. A Capital Budget of **£75,000** has been allocated for Weak Bridge Repairs and **£75,000** for Major Bridge Works.

Road Sign Replacement: A Capital Budget of **£30,000** has been allocated for the Road Sign Replacement Programme.

Appendix L: Flood and Coastal Protection Schemes. A Capital Budget of **£1,360,000** has been allocated for the initial design works for Flood Prevention and Coastal Protection schemes.

Appendix M: is a summary of the proposed capital spend.

Appendix N: shows the proposed budget available to Roads services for the delivery of their maintenance operations. With the removal of the trading account in 2012 the financial information was presented in a different manner, in order to manage this a virtual budget was set up allocating the monies to the old headings

Appendix O: provides an explanation of the Road Condition Index.

Appendix P: is copy of the table showing the RCI for all Councils across Scotland.

Appendix Q: showing Aberdeen City's position against the other 32 Scottish Local Authorities. It should be noted that the RCI has dropped by 1.0% this year.

The condition of sections of carriageway included in the programme are shown in the report under **Assessed Condition**, in order to maintain a standard level of comparison all roads surfaces having been assessed to the same criteria. Due to many road surfaces have suffered continued deterioration since the Road Condition Survey was carried out staff will continue to reassess all roads, this reassessment could necessitate changes to the proposed programme during the financial year.

11. REPORT AUTHOR CONTACT DETAILS

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Appendix A

ITS Unit Proposed Traffic Signal Refurbishment Programme 2018/2019

		Estimated
Site	Туре	Cost
LANGSTRACHT / SPRINGHILL ROAD	Refurb'	
LANGSTRACHT / SKYE ROAD	Refurb'	
ASHGROVE ROAD / FORRESTERHILL ROAD	Refurb'	
DENBURN / WAPPING STREET	Refurb'	
WOOLMANHILL @ SKENE SQUARE	Refurb'	
SKENE STREET @ WOOLMANHILL	Refurb'	
GREENFERN ROAD	Refurb'	
HOLBURN STREET SOUTH OF BROOMHILL ROAD	Refurb'	
NAL EQUIPMENT	Refurb'	
DESIGN WORK 2019/20		
	Total Refurbishment Programme	£450,000

ITS UNIT Traffic Signal Refurbishment Reserve List 2019/2020

Site	Installation	Cost
FOUNTAINHALL ROAD NEAR QUEENS CROSS	Refurb'	
JOHN STREET / LOCH STREET	Refurb'	
QUEEN'S ROAD / GROATS ROAD	Refurb'	
QUEEN'S ROAD / SPRINGFIELD ROAD	Refurb'	
WEST NORTH STREET / MEALMARKET STREET	Refurb'	
QUEEN'S ROAD @ VIEWFIELD ROAD	Refurb'	
SCHOOLHILL @ BACKWYND	Refurb'	
QUEEN'S ROAD NEAR GROATS ROAD	Refurb'	
BEACH ESPLANADE AT FUN BEACH	Refurb'	
		£444,000.00

Appendix B

Proposed Lighting Programme 2018-2019

Scheme	Estimate	Comments
Corroded Column Replacement		
(figures based on 10% failure rate from testing		
Seaton		
Bucksburn/ Dyce		
Kingswells		
Scotstown Corroded Cols		
Corroded Replacement Total	£500,000	

8/10 m Height		
Mounthooly Roundabout		whole street - 18No cols
Abbotswell Drive		rest of street (10cols)+track
Groats Road		9 Columns
Countesswells Avenue and Surrounding Area		Countesswells Ave - 20 No., C/well Tce - 13no, C/Well PI - 6no, C/well cres - 12no, P/wood PI - 5No, P/wood rd - 5no, P/wood rd - 5no, P/wood ave - 4no, P/wood tce - 4 no.
5/6 m Height		
Lane Hamilton PI/ Carden PI		strainer cols replacement
Footpath Samphrey Road to Groats Road		whole street - 18No cols
Concrete Column replacement - various		
Footways / Resurfacing Contract		
Total	£290,000	

Energy/Carbon Savings

Replacement of inefficient lanterns with LED

	£1,659,000
Total	£1,659,000

Appendix C

Proposed Reserve Programme 2018-2019

Scheme	Estimate	Comments
Corroded Column Replacement		
Dubford - Ph2 - Corroded Cols		
Scotstown/ Danestone - Ph2 - Corroded Cols		
Middleton - Ph 2 - Corroded Cols		
Kincorth/ Tullos Corroded Cols		
Cove/ Altens Corroded Cols		
Hazlehead Corroded Cols		
Rubislaw Corroded Cols		
Peterculter Corroded Cols		
Milltimber Corroded Cols		
Mannofield/ Braeside/ Airyhall Corroded Cols		
Ferryhill Corroded Cols		
Torry Corroded Cols		
Garthdee/ Ruthrieston Corroded Cols		
Cults Corroded Cols		
Column Testing		
Corroded Replacement Total	£781,000	

Appendix D

CYCLING WALKING SAFER STREETS 2018/2019. (Requirement of Grant Offer to spend minimum 36% but preferably 50 % on cycling schemes)

LOCATION / PROPOSALS	DESCRIPTION OF WORK	ESTIMATED COSTS	Budget
Various locations across the City. Item No 051.	Small scale improvements to pedestrian crossing / Disabled Crossing points / Core Paths - Dropped kerbs and pedestrian guard-rails.	Budget of £30,000 for implementation at various locations City wide. Individual location assessment - Local Councillors to be kept appraised.	
Various locations across the City. Item No 052.	Publicity in relation to Promotion of Bike Week / Cycle Map / Zenith / Other Cycling Initiatives across the City / Green Transport Week / European Mobility week.	Budget of £1,000 to be spent City wide.	
Various locations across the City. Item No 053.	Cycling Facilities /Links / Parking / Lining & Signing throughout the City to provide missing Links on the road network	Budget of £128,000 for implementation at various locations City Wide. Schemes include £50k continuation of Dyce Drive Cycle/ Pedestrian provisions, £15k Hardgate cycle contraflow, £40k upgrading of Bedford Road cycle network, and small scale measures as advised by Aberdeen Cycle Forum	
Various locations throughout the City Item No. 054	Small scale improvements to signing & lining and all new works associated with traffic management / traffic Orders and road safety.	Budget of £30,000 for implementation at various locations City wide. Individual location assessment - Local members to be kept appraised.	
Traffic Calming & Road Safety - Various locations throughout the City Item No. 055	Route action work on various rural routes and City wide locations that have been identified for improvements from the annual accident scan.	£10,000 budget for portable VMS signs to address speeding and poor driver behaviours, various measures as identified throughout the year.	
Various Safety Campaigns throughout the City (not site specific) Item No 056.	Publicity in relation to Road Safety Campaigns & Community Safety Safe Drive - Stay Alive Campaign.	Budget of £12,000 for Aberdeen City Contribution Local Transport Strategy Policy / Proposal SP1.	
Parking Improvements Item No. 061	Parking Improvements	Budget of Parking , £5,000 for update of Zone Y Garthdee and £45, 000 for extension of Zone X	

Aberdeen City Council Road Safety Plan	Bi-annual review and publication of the Road Safety Plan (Statistical update only - Aberdeen City)	Budget of £2,000 Road Safety Action Plan	
Various locations across the City. Item No. 063	Specific Road Safety schemes - still to be identified Improvements to existing traffic signals / ped crossings / new puffins / Toucans	No detrimental implications	
		Total (CWSS)	£313,000

Replacement of part time 20mph signs at schools.

Replacement of 33 signs at schools.Kingswells – 4 signs Bucksburn – 7 signs Midstocket – 13 signs Rosehill – 9 signs	£60,000
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Appendix E

Footway Programme 2018/2019

Name of Road	Name of Road Location & Description of Works		Estimated Cost (£)
Various Locations	Tree Removals and Footway Reinstatements	10	
Various Locations	Tree Stump Removals and Footway Reinstatements	10	
Various Locations	Small capital schemes individually under £10000 in value - both bitmac and slabbed/paviour locations	10	
Various Locations	Grind tree stumps and reinstate footway in bitmac or slabs	10	
Various Locations	Removal of old disintegrating (vibrated stone) kerbs and renew with concrete kerbs in footways in reasonable condition. Minimum amount of reinstatement to rear and front of kerbs.	10	
Various City Centre slabbed locations	Install City Centre Bollards and resurface footway in slabs	10	
Upperkirkgate	North Side from Bon Accord Centre towards Gallowgate. Resurface footway with slabs. Install City Centre bollards.	10	
Upperkirkgate	South from St Nicholas Centre to Flourmill Lane. Resurface footway with slabs. Install City Centre bollards.	10	
Gallowgate	West side number 17 to St Paul Street.	10	
Victoria Road	South Side from Nos 136/138 to No 184. Relay nominal lengths of Flat Granite Kerbs(25m) and resurface footway with concrete slabs. Install 55 No Morpeth Bollards(every 6th course) Phase 1 of 2 from 136/138 to 162/164.	10	
Farquhar Road	Lane leading to rear of 79 to 113 Farquhar Road. Renew kerbs and resurface footway in bitmac.	10	
Kildrummy Road	Outer Footway from No 26/36 to No36.Renew kerbs and resurface footway with bitmac.	10	

Harthill Place	North Side from Sheddocksley Road to Lane to Lock-ups(Loop outside Nos 2 to 8) Renew concrete kerbs and resurface footway in bitmac.	10	
Woodburn Place	East Side from Hazlehead Road to Woodburn Avenue.Relay stone kerbs and resurface footways with bitmac.	10	
Kildrummy Road	Outer Footway from No 58/60 to Kinaldie Crescent.Renew kerbs and resurface footway with bitmac.	10	
Kildrummy Road	Inner Footway from Craigiebuckler Avenue to Kinkell Road.Renew kerbs and resurface footway with bitmac.	10	
Orchard Road	East Side from lane to University Road. Relay stone kerbs and resurface footway in bitmac.	10	
Corndavon Terrace	Middle Section North Side from Derry Place to Derry Avenue.Renew kerbs and resurface footway with bitmac.	10	
Kincorth Place	Replace 82 metres of kerbing and 210 metres of bad footway.	9	
Gardner Road	Replace bad sections of footway at various locations.	9	
Hutchison Terrace	Resurface footway.	Trial	
	Footway Total		£600,000

Appendix F

Footway Reserve List 2018-2019

Name of Road	Location & Description of Works	Assessed Condition	Estimated Cost
Tollohill Gardens	South Side. Renew kerbs and resurface footways with bitmac.	9	
Burnieboozle Crescent	South Side from No 88 to Craigiebuckler Avenue. Renew kerbs and resurface footway with bitmac. (last phase).	9	
Holburn Street	East Side.Entance to Talisman Oil to Holburn Bar excluding section recently completed outside Tesco Express.Relay stone kerbs and resurface footway with precast concrete slabs.Instal bollards.	9	
Kaimhill Circle	Phase 3 Outer Section from Kaimhill Road to Garthdee Drive.(2 sections)Relay stone kerbs and replace slabs with bitmac.	9	
Cairnwell Drive	North Side from No 88 to opposite Derry Avenue.(Phase 1 of 2)Renew kerbs and resurface footway in bitmac.	9	
Airyhall Avenue	Cul-de-sac from 17 to 35.Relay stone kerbs and resurface footway in bitmac.	9	
Victoria Road	South Side from Nos 136/138 to No 184. Relay nominal lengths of Flat Granite Kerbs (25m) and resurface footway with concrete slabs. Install 55 No Morpeth Bollards (every 6th course) (Phase 2 of 2 from 162/164 to 184).	9	
Manor Walk	West and North Side from opposite 17 to Manor Drive. Relay stone kerbs and replace slabs with bitmac.	9	
Dunbar Street	West Side from 59 to 73. Resurface footway with precast concrete slabs. Install bollards.	9	
Cairnwell Drive	North Side from opposite Derry Avenue to Long Walk Road.(Phase 2 of 2)Renew kerbs and resurface footway in bitmac.	9	
Girdleness Road(Phase 1)	Gregness Gardens West to Lane at Bus Shelter (at No 66) on South Side. Remote footway - Relay whin kerbs (North Side only) where necessary. New edging kerbs on South Side and resurface footway in bitmac.	9	

Girdleness Road(Phase 2)	Fernie Brae to Lane at Bus Shelter(at no 66) on South Side. Remote footway - Relay whin kerbs (North Side only) where necessary. New edging kerbs on South Side and resurface footway in bitmac.	9	
Girdleness Road(Phase 3)	Gregness Gardens West to Lane at Bus Shelter (at No 122) on South Side. Remote footway - Relay whin kerbs (North Side only) where necessary. New edging kerbs on South Side and resurface footway in bitmac.	9	
Girdleness Road(Phase 41)	Lane at Bus Shelter (at No 122) to Ladywell Place on South Side. Remote footway - Relay whin kerbs (North Side only) where necessary. New edging kerbs on South Side and resurface footway in bitmac.	9	
Walker Road	West Side from Polwarth Rd to Grampian Place. Renew kerbs and resurface footways with bitmac.	9	
Deansloch Crescent	Between Byron Avenue and Quarry Road renew bad sections of kerb and footway at various locations.	9	
Orchard Road	West Side from Orchard Walk to Orchard Street. Relay stone kerbs and resurface footway in bitmac.	8	
Craigielea Place	East Side. Renew kerbs and resurface footways with bitmac.	8	
Windford Road	South Side Renew kerbs and resurface footway in bitmac.	8	
Corndavon Terrace	Middle Section South Side from Derry Place to Derry Avenue including end corners. Renew kerbs and resurface footway with bitmac.	8	
Seamount Place	Remove top surface and overlay with 50mm bitmac. (Alternative is to Retread depending on rates).	8	
Kildrummy Road	Outer Footway from Craigiebuckler Avenue to No 18.Renew kerbs and resurface footway with bitmac.	8	
Harlaw Terrace	East Side. Relay stone kerbs and resurface footway with bitmac. Remove four large mature trees.	8	
Moray Place	West Side from Carnegie Crescent to Rubislaw Den North. Renew kerbs and resurface footways with bitmac.	8	

Gardner Road	East Side from Hetherwick Rd to entrance to 145. Renew kerbs and resurface footways with bitmac.	8	
Orchard Road	East Side from University Rd to lane. Relay stone kerbs and replace slabs with bitmac.	8	
Kildrummy Road	Inner Footway from Fintray Road to Kinkell Road.Renew kerbs and resurface footway with bitmac.	8	
	Footway Reserve List Total		£760,000

Appendix G

Capital Works Resurfacing List 2018-2019

Name of Road	Location & Description of Works	Assessed Condition	Area (Sq m)	Estimated Cost (£)
Thistle Place	Resurface Carriageway	Visual Inspection	550	
Dyce Drive	Various locations - Resurface Carriageway - Patching	Red/Amber	2400	
Sheddocksley Road -	North end from Springhill Road to Number 33 - Resurface Carriageway	Visual Inspection	3520	
Merkland Road East	King Street to number 16 - Resurface Carriageway	Amber	1050	
Angusfield Avenue,	Queens Road to Springfield Avenue - Resurface Carriageway	Red/Amber	1020	
B997 Scotstown Road	ACC Waste Site towards Perwinnes Cottage - Carriageway patching	Red/Amber	1400	
Scotstown Road - Car Park	Resurface Carriageway	Visual Inspection	760	
George Street	Various Locations Patching	Red/Amber	1100	
North Deeside Road	South side - Coronation Road westwards - for 800m, Reconstruction 2m wide	Red/Amber /Green	1600	
Wales Street	Resurface Carriageway	Red	2150	
Hillview Crescent	Resurface Carriageway	Amber/Green	2900	
Spring Garden	George Street to Gallowgate, Resurface Carriageway	Red/Amber	2450	
Cummings Park Crescent	Carriagway Repairs - Norths side 1.5 metre wide.	Visual Inspection	600	
Kildrummy Road	Fintray Road junction Resurface Carriageway	Visual Inspection	450	
C89C Chapel of Stoneywood - Fairley Road	Kingswood Drive junction- Resurface Carriageway	Red/Amber	1200	
Inchgarth Road	Pitfodels Station Road westwards for 150m, Resurface Carriageway	Red/Amber	900	

Wardhead Place	Resurface Carriageway	Visual Inspection	645	
Weavers Row	Byron Avenue to Westerton Crescent, Resurface Carriageway	Visual Inspection	900	
Great Northern Road	Number 591 - 723 northbound Carriageway and area at Shell Garage, Resurface Carriageway	Red/Amber	3750	
Station Road West, Peterculter	From number 1a to 45, Resurface Carriageway	Red/Amber /Green	1620	
Walker Road	Grampian Place to Polwarth Road, Resurface Carriageway	Red/Amber	1892	
Malcolm Road	At A93 junction	Red/Amber /Green	100	
Mastrick Road	New Park Road to Upper Mastrick Way, Resurface Carriageway	Amber	860	
Mastrick Road	Inset road to Willowpark Creascent, Resurface Carriageway	Visual Inspection	1200	
C127C Blacktop Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	4200	
U090C Hope Farm Road	Structural Carriageway Strengthening	Visual Inspection	2800	
C21C Upper Persley	Various locations, Structural Carriageway Strengthening	Visual Inspection	1100	
C129C Baillieswells Road, Blacktop Road to Ladyhill Road .	Various locations, Structural Carriageway Strengthening	Visual Inspection	2100	
Park Road Cults	Various locations, Structural Carriageway Strengthening	Visual Inspection	50	
U095C Brodiach Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	450	
C93C Borrowston Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	200	
C20C Whitestripes Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	250	
B979 - A96 to Little Mill of Clinterty	Various locations, Structural Carriageway Strengthening	Visual Inspection	160	
C94C Mill of Birsack Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	100	

C92C Clinterty Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	200	
Union Street Strategic Bus Lanes	Various Locations partial reconstruction	Visual Inspection	2470	
Holburn Street Strategic Bus Lanes	Various Locations partial reconstruction	Visual Inspection	1630	
Structural Repairs at Bus Stops	Various Locations partial reconstruction	Visual Inspection		
Structural Repairs at Junctions	Various Locations partial reconstruction	Visual Inspection		
Structural Repairs at Traffic Calming	Various TBA	Visual Inspection		
Kingswells	Lock Block renewal trial	Visual Inspection		
Additional Investment in Roads	Repairs to Junctions, poor Utility Tracks and areas of recurring pothole repairs	Visual Inspection and Pothole Repair Records		
Additional Investment in Roads	4 Year Work Programmes and Carriageway Assessment for future additional Investment Monies			
	Resurface Carriageway total			£2,788,000

Appendix H

Resurfacing Reserve List 2017-2018

Name of Road	Location & Description of Works	Assessed Condition	Area (Sq m)	Estimated Cost
Victoria Street, Dyce	Junction with Farburn Terrace, Resurface Carriageway	Amber	1220	
Thorngrove Avenue	Great Western Road to Seafield Road, Resurface Carriageway	Red/Amber/ Green	3100	
Powis Circle	Resurface Carriageway	Red/Amber/ Green	680	
King George V Bridge and roundabouts north and south.	Resurface Carriageway	Amber	6100	
Great Southern Road	Provast Watt Drive to Stonehaven Road, Resurface Carriageway	Red/Amber/ Green	3600	
Viewfield Road	Viewfield Gardens to Number 18 and Leg to Seafield Avenue, Resurface Carriageway	Red/Amber/ Green	2403	
Burnieboozle Crescent	Number 60 to Craigiebuckler Drive, Resurface Carriageway	Red/Amber/ Green	2300	
Deeside Park	Resurface Carriageway	Visual Inspection	1000	
B999 Tarves Road	Mundurno to Denmore Road, Resurface Carriageway	Red/Amber	4100	
Fairley Road Kingswells	Old Skene Road to link road, Resurface Carriageway	Visual Inspection	825	
Kings Gate/Queens Road Roundabout	Resurface Carriageway	Red/Amber	2150	
Westburn Road	Bonnymuir Place to number 181, Resurface Carriageway	Red/Amber/ Green	3425	
Kingsgate	Gordondale Road to Oakhill Road, Resurface Carriageway	Red/Amber/ Green	3425	
Bob Accord Terrace	At Justice Mill Lane, Resurface Carriageway	Red	430	
West Craibstone Street	Resurface Carriageway	Red/Amber	400	

Park Street	Frederick Street - Park Place, Resurface Carriageway	Red/Amber	800	
Wellheads Road	Riverview Drive to Royal Bank, Resurface Carriageway	Amber	745	
Countesswells Road	Kirkbrae to Slopefield Roundabout, Patching Carriageway	Visual Inspection	1750	
North Deeside Road	Junction with Cairn Road, Resurface Carriageway	Red/Amber	900	
Shapinsay Road	Resurface Carriageway	Visual Inspection	1136	
Linksfield Road	Zebra to King Street, Resurface Carriageway	Red/Amber	1950	
Forest Avenue	Queens Road to Cromwell Road, Resurface Carriageway	Red/Amber/ Green	3700	
South Esplanande West	Resurface Carriageway	Amber	4400	
Crown Cresccent	Resurface Carriageway	Red/Amber/ Green	2350	
North Deeside Road	Junction with Quarry Road, Resurface Carriageway	Red/Amber	920	
North Deeside Road	Junction with Bailliewells Road, Resurface Carriageway	Red/Amber	1130	
St Machar Road	Resurface Carriageway	Visual Inspection	2800	
Kirkbrae	Kirk Brae Court to Countesswells Road, Patching Carriageway	Red/Amber/ Green	1200	
Donmouth Car Park	Resurfacing	Visual Inspection	1200	
Gallowgate car park	Resurfacing	Visual Inspection	1300	
Kennerty Car Park	Resurfacing	Visual Inspection	1200	
Summer Street Car Park	Resurfacing	Visual Inspection	700	
Viewfield Car Park	Resurfacing	Visual Inspection	400	
C150C Landerberry Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	480	

Grandholm Road/Balgownie Drive	Various locations, Structural Carriageway Strengthening	Visual Inspection	850	
U149C Anguston Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	500	
U149C Linmoor Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	200	
U182C Christie Grange Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	300	
U090C Tulloch Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	300	
U131B Bishopdams Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	300	
C55C Pitmedden Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	140	
U058C Caskieben Road	Various locations, Structural Carriageway Strengthening	Visual Inspection	400	
	Resurfacing Reserve			£2,353,195

Appendix J1

Drainage Programme 2018-2019

Name of Road	Location & Description of Works	Estimated Cost
Clifton Road	Clifton Road at Bairds Pharmacy	
Countesswells Road	At junction with Great Western Road	
Caskieben Road	Various location along road	
Wood Street	Frontage of number 11	
King Street	On footway next to Morrisons	
Fonthill Road	At lane next to Parish Church	
Wellside Wynd	Near number 21	
Various locations	Unallocated to Resolve Serious Flooding or Ponding Issues (See below)	
Various locations	Replacement of Gullies	
	Capital Works Drainage Total	£120,000

Appendix J2

Capital Drainage Reserve 2017-18

Name of Road	Location & Description of Works	Estimated Cost
Derry Place	Outside number 12	
Seafield Drive West	Outside number 23	
Garthdee Road	Ponding near ASDA	
Holburn Street	Junction of Ruthrieston Road	
Wellington Road	Ponding at Argyll	
Westburn Road	Junction with Mount Street	
Donstreet Woodside	Various ponding issues	
Various locations	Unallocated to Resolve Serious Flooding or Ponding Issues (See below)	
Various locations	Replacement of Gullies	
	Capital Works Drainage Reserve Total	£120,000

Appendix K

Capital Works Major Bridge Repairs

Location & Description of Works	Estimated
A93 Cults Bridge Strengthening Design.	
Mill of Clinterty Bridge Arch Strengthening	

Capital Works Other Un-programmed Budgets

Road Sign Replacement:	£	30,000
Weak Bridge Repairs:	£	75,000
	£	105,000

Appendix L

Flooding and Coastal Protection Capital Works

Project	2018/19
Merchant Quarter - Design	
Integrated Catchment/SWMP	
Peterculter - Study & detailed design	
Inchgarth Hake installation	
Deeside Court – Valve Installation	
Software Purchase	
East Tullos Burn	
River Don Flood Plain Study	
Jesmond - Study	
Denburn - Study	
Begin Project – Match Funding	
Score Project – River Gauging	
Langstracht Drainage - Works	
Foot Dee - Study	
Personal Flood Protection - Grant	
Sea Wall – Survey and Study	
Kingswells Old Skene Road	
Reinstatement Coastal Defences Grayhope Road	
Total	£1,360,000

Appendix M

Summary Capital Works

Traffic Signal Refurbishment Programme:	£ 450,000
Lighting Programme:	£2,159,000
CWSS Capital Grant: Road Safety Programme & 20mph signs:	£ 373,000
Footway Resurfacing Programme:	£ 600,000
Carriageway Resurfacing Programme:	£2,758,000
Drainage Programme:	£ 127,000
Major Bridge Repairs:	£ 75,000
Road Sign Replacement:	£ 30,000
Weak Bridge Repairs:	£ 75,000
Flooding and Coastal protection:	£1,360,000
Total	£8,007,000

Appendix N:

Revenue Budget

Budget 2018/19

General Roads Maintenance

- Carriageway Patching
- Footway Patching
- Drainage
- Road Markings & Studs
- Gully Emptying
- Pedestrian Barriers
- Traffic Signs & Bollards
- Safety Fences
- Technical Surveys
- Street Naming
- Inspections
- Footway Bollards

Traffic Works

- Disabled Parking
- Traffic Management Reviews
- Blue Badge Scheme Costs
- ITS Annual Communication Costs
- ITS Annual Contract Costs
- Traffic Signal Maintenance
- Software Licences

Maintenance Programmes

Sponsored Roundabout Costs Surface Dressing Bridge Works Winter Maintenance & Emergencies Street Lighting Maintenance Street Lighting Electricity Flood Risk Management Flood Prevention Coast Protection

INCOME

Blue Badge Scheme Recoverable Works Income Street Occupations Income

NET BUDGET FOR ACTIVITIES

£5,569,987

Appendix O

Road Condition Index

From 2004, a carriageway condition Statutory Performance Indicator (SPI) was introduced across Scotland. This indicator is:

"The percentage of the road network that should be considered for maintenance treatment."

The Road Condition Index (RCI) is the figure reported for the SPI and is produced from a Scotland wide survey. The SRMCS survey information is collected and processed centrally by an independent contractor engaged by SCOTS. Surveys are undertaken annually by means of machine-based measurement on a specified sample of each council's road network. All survey vehicles are independently calibrated by the Transport Research Laboratory including periodic calibration checks during the survey season.

Survey coverage of the road network is detailed in the SPI and Audit Scotland has approved both the survey methodology and the agreed percentages of road surveyed to ensure a statistically reliable SPI. Survey coverage is carried out as follows:

- A Class Roads are surveyed in both directions every two years that is one direction in one year and the opposite direction the next year.
- **B and C Class Roads** in both directions over a four year period; that is 50% of the B and C Class network is surveyed in one direction in one year; 50% in one direction in year two; then the first 50% in the opposite direction in year three and so on.
- **Unclassified Roads** have a 10% random sample undertaken on an annual basis selected by the survey contractor. Short sections of such roads are excluded from the survey.

Following some refinements to the road condition assessment system a number of technical parameters were revised in 2008. While the surveys are undertaken on an annual basis, the RCI is now calculated over a two year rolling period to minimise the effect of sampling errors on the results.

In relation to the RCI, 'considered for maintenance treatment' means there is likely to be some defect in the condition of the road, but authorities will need to carry out more detailed investigations and prioritisation of need in the development of their future road maintenance programmes.

The results are categorised into Green, Amber and Red condition bands where:

- Green indicates the carriageway is generally in a good state of repair.
- **Amber** indicates the carriageway has some deterioration which should be investigated to determine the optimum time for planned maintenance treatment.
- **Red** indicates the carriageway has lengths in poor overall condition which are likely to require planned maintenance soon.

The RCI figure includes both the Amber and Red categories. An increase in the figure indicates deterioration and a decrease indicates improvement.

Appendix P shows the Road Condition Index for 2015 - 2017 taking into account the four year unclassified roads condition.

Road Condition Index for this period is 28.2%. This mean that approx. 242km of roads within the city were in need of some form of repair. The chart shows that Aberdeen City was 5th in Scotland for this two year period

Appendix Q shows the Road Condition Index for 2016 - 2018 taking into account the four year unclassified roads condition.

Road Condition Index for this period is 30.3%. This mean that approx. 260km of roads within the city are in need of some form of repair. The chart shows that Aberdeen City was 6th in Scotland for this two year period

The comparison of these two figures shows the continual deterioration of the roads asset.

Appendix R & S shows the Road Condition Index for the single year

Road Condition Index for this period is 29.2%. This mean that approx. 250km of roads within the city were in need of some form of repair. This figure is considered to give some inaccuracies and is not used in the annual SPI Index although it will be used in future calculations.

Appendix T shows the movement in the Road Condition Index between 2004 and 2018. The graphs show the movement in each road classification along with a comparator to the whole Scottish network. These graphs show that, in the main, the roads in Aberdeen are above the national average

Appendix P

RCI Results 2015_17 (4 years data for Unclassified Roads)

I	Randon		Netv	work			A Roads			B Roads			C Roads		All	Classified Ro	ads		U Roads		
Authority	No.	Red	Amber	Green	RCI	Red	AmberGree	n RCI	Red	AmbeiGree	n RCI	Red	AmberGree	n RCI	Red	AmberGreen	RCI	Red	AmbeiGre	een <mark>R</mark>	СІ
	1	4.35	28.26	67.40	32.6	3.71	23.70 72.5	27.4	5.23	27.85 66.9	1 33.1	2.62	26.12 71.20	5 28.7	3.82	25.92 70.25	29.7	4.73	29.94 65.	.33 <mark>34.</mark>	.7
	2	3.96	27.95	68.09	31.9	2.83	26.59 70.58	<mark>29.4</mark>	4.88	30.81 64.3	2 35.7	3.22	27.36 69.42	2 30.6	3.72	28.41 67.87	32.1	4.23	27.42 68.	.34 <mark>31.</mark>	.7
	3	9.12	33.22	57.67	42.3	6.42	32.17 61.43	38.6	8.20	35.69 56.1	1 43.9	8.23	32.01 59.76	5 40.2	7.84	33.42 58.73	41.3	10.26	33.03 56.	.71 <mark>43.</mark>	.3
	4	6.70	30.49	62.80	37.2	7.05	32.72 60.23	39.8	6.11	33.87 60.0	2 40.0	6.06	31.92 62.02	2 38.0	6.37	32.65 60.97	39.0	7.14	27.65 65.	.22 <mark>34.</mark>	.8
	5	4.54	27.26	68.19	31.8	1.61	17.54 80.8	19.1	2.27	19.87 77.8	5 22.1	3.11	22.47 74.42	2 25.6	2.44	20.30 77.26	22.7	5.71	31.13 63.	.16 <mark>36.</mark>	.8
	6	11.87	34.61	53.52	46.5	5.22	28.72 66.0	33.9	4.78	29.74 65.4	7 34.5	9.41	34.40 56.18	3 43.8	7.14	31.81 61.05	39.0	18.38	38.44 43.	.18 <mark>56.</mark>	.8
Aberdeen	7	<mark>4.22</mark>	24.00	71.78	28.2	2.74	18.47 78.79	21.2	3.06	21.45 75.4	9 24.5	4.13	23.32 72.5	27.5	3.51	21.54 74.96	25.0	4.43	24.74 70.	.84 29.	.2
	8	7.22	35.85			7.43	29.84 62.72		6.76	31.91 61.3	4 38.7	6.97	42.70 50.33		7.15	33.82 59.04	41.0	7.30	38.40 54.		
	9	8.93	29.77	61.30	38.7	3.89	25.24 70.8		6.50	29.83 63.6	7 36.3	9.12	31.03 59.8	5 40.1	6.54	28.61 64.85	35.1	12.03	31.29 56.	.68 <mark>43.</mark>	.3
	10	3.49	23.42			2.50	22.67 74.83		1.68	21.16 77.1		2.53	19.38 78.09	9 <mark>21.9</mark>	2.21	20.66 77.13		4.91	26.49 68.	.60 <mark>31.</mark>	.4
	11	5.38	28.44			3.20	23.79 73.02		2.06	19.44 78.5		4.93	24.63 70.44		3.60	23.55 72.85	27.1	6.02	30.19 63.	.79 <mark>36.</mark>	.2
	12	9.93	36.69			5.25	29.01 65.74	34.3	7.31	35.96 56.7	3 43.3	7.98	35.25 56.7	43.2	7.08	33.91 59.01	41.0	14.49	41.13 44.	.39 <mark>55.</mark>	.6
	13	8.50	30.68			1.84	14.42 83.74	16.3	3.31	26.91 69.7		7.52	25.23 67.25		5.14	23.69 71.17			34.49 55.		
	14	15.88				8.82	35.78 55.40	44.6	20.55	42.80 36.6	5 <mark>63.4</mark>	17.98			16.02	40.36 43.62	56.4	15.59	37.30 47.	.11 <mark>52.</mark>	.9
	15	3.70	21.23			2.76	22.04 75.20		1.90	19.51 78.5		1.83	16.69 81.48		2.06	18.65 79.29		5.76	24.49 69.		
	16	6.49	28.07			3.53	20.62 75.8		2.75	17.15 80.1		3.58	21.36 75.06		3.43	20.35 76.23		7.41	30.36 62.		
	17	7.33	30.99			9.25	26.94 63.8		5.40	31.43 63.1		11.86			9.13	33.78 57.09		5.85	28.70 65.		
	18	8.73	30.36			2.32	16.81 80.8		5.81	28.19 66.0		7.67	30.80 61.53		5.69	26.49 67.82			33.97 54.		
	19	2.81	18.38			1.99	20.08 77.93		1.81	16.15 82.0		2.00	13.49 84.53		1.92	16.54 81.53			20.50 75.		-
	20	10.91	32.93			4.45	26.78 68.78		8.07	33.77 58.1		8.52	32.78 58.69		6.80	30.73 62.47			35.49 48.		
	21	7.79	29.87		-	1.55	18.28 80.1		6.06	27.47 66.4		3.25	28.26 68.49		3.37	24.21 72.41	-	-	37.08 49.	-	_
	22	5.53	25.70			1.96	19.65 78.39		3.35	29.95 66.6		4.12	23.58 72.30		3.44	24.43 72.13			27.11 65.		
	23	5.08	30.07			2.86	25.73 71.40		5.71	33.84 60.4		4.84	32.82 62.34	-	4.40	30.61 64.99		-		.77 35.	
	24	7.55	29.88			4.64	24.86 70.50		4.39	24.63 70.9		3.97	22.39 73.65		4.38	24.16 71.46		-		.30 40.	
	25	4.38	26.99		-	2.53	18.33 79.14		3.73		3 29.2	3.18	25.69 71.12		3.17	23.37 73.47			29.95 64.		-
	26	3.73	25.62		-	1.55	16.77 81.68		3.22	24.36 72.4		6.62	34.97 58.42		3.59	24.57 71.84	-		26.28 69.		
		6.92	27.88			2.46	19.94 77.6		3.04	24.45 72.5		8.09	28.80 63.1		5.54	25.63 68.83			28.99 63.		
	28	5.21	27.88			2.49	20.48 77.02		2.36	21.74 75.9		5.48	32.44 62.08		3.74	25.95 70.30			29.24 64.		
	29	8.57	31.96			3.38	26.24 70.3		6.52	31.06 62.4		8.82	34.61 56.58		7.02	31.84 61.14			32.01 58.		
	30	3.91	22.75			1.89	15.65 82.40		0.94	17.50 81.5		1.30	14.08 84.62		1.42	14.77 83.80			26.79 68.		
	31	6.06	29.12			2.19	19.98 77.83		2.55	23.77 73.6		3.27	25.13 71.60		2.57	22.44 74.98			33.43 58.		
Cootlan - 1 A	32	4.67	26.08			2.52	22.00 75.48		1.43	17.55 81.0		1.49	15.22 83.29		1.86	18.04 80.10			28.97 65.		
Scotland LA	Aver	7.21	29.17	63.62	36.4	4.26	25.28 70.4	29.5	6.03	28.73 65.2	4 34.8	6.34	28.24 65.43	5 34.6	5.64	27.51 66.85	33.1	8.73	30.77 60.	.50 39.	5

Appendix Q

RCI Results 2016_18 (4 years data for Unclassified Roads)

ا Authority	Randor No.	Red	Netv Amber		RCI	Red	A Ro Amber		RCI	Red	B Ro Amber		RCI	Red	C Ro Amber		RCI	All Red	Classifi Amber			Red	U Ro Amber		RCI
	19	1.75	18.03	80.21	19.8	2.02	20.37	77.61	22.4	2.77	18.14	79.08	20.9	2.14	14.11	83.76	16.2	2.35	17.60	80.05	19.9	1.07	18.54	80.39	19.6
	30	3.27	22.08	74.65	25.3	1.56	13.62	84.82	15.2	0.62	16.32	83.06	16.9	1.17	13.26	85.58	14.4	1.23	13.60	85.17	14.8	4.30	26.36	69.33	30.7
	15	3.36	22.81	73.83	26.2	3.14	23.48	73.38	26.6	2.39	21.65	75.96	24.0	2.40	19.61	77.99	22.0	2.56	21.03	76.41	23.6	4.36	25.05	70.58	29.4
	10	3.68	24.23	72.09	27.9	2.97	22.90	74.13	25.9	2.03	21.46	76.51	23.5	2.84	22.04	75.11	24.9	2.57	22.00	75.43	24.6	4.90	26.70	68.39	31.6
	26	3.82	25.57	70.61	29.4	2.16	19.45	78.39	21.6	3.98	26.72	69.29	30.7	8.62	36.44	54.94	45.1	4.67	26.79	68.54	31.5	3.28	24.81	71.91	28.1
Aberdeen	7	5.10	25.18	69.71	30.3	3.14	19.51	77.36	22.6	3.03	19.41	77.55	22.4	5.07	22.35	72.58	27.4	4.08	20.91	75.01	25.0	5.41	26.45	68.14	31.9
	32	4.40	26.13	69.47	30.5	3.23	25.06	71.71	28.3	1.71	19.74	78.55	21.5	2.09	18.19	79.71	20.3	2.45	20.93	76.61	23.4	5.10	28.00	66.90	33.1
	22	4.96	26.82	68.22	31.8	2.23	21.76	76.01	24.0	4.65	31.21	64.13	35.9	4.56	25.62	69.81	30.2	4.08	26.28	69.64	30.4	5.93	27.43	66.64	33.4
	1	4.09	27.71	68.20	31.8	4.37	25.54	70.09	29.9	5.26	28.52	66.22	33.8	2.79	25.56	71.65	28.3	4.10	26.53	69.37	30.6	4.08	28.57	67.35	32.6
	28	4.44	27.37	68.18	31.8	2.55	20.34	77.11	22.9	2.53	21.94	75.53	24.5	5.48	31.62	62.90	37.1	3.88	25.87	70.25	29.7	4.87	28.49	66.64	33.4
	11	4.40	27.49	68.10	31.9	3.24	23.58	73.18	26.8	1.36	17.20	81.44	18.6	4.25	26.33	69.42	30.6	3.34	23.69	72.97	27.0	4.78	28.85	66.37	33.6
	5	4.61	28.13	67.26	32.7	1.90	18.45	79.65	20.3	3.06	21.27	75.67	24.3	3.46	24.20	72.34	27.7	2.88	21.70	75.42	24.6	5.57	31.70	62.73	
	25	4.73	28.11	67.16	32.8	3.31	21.70	74.99	25.0	3.78	26.68	69.54	30.5	4.48	28.67	66.85	33.2	3.87	25.80	70.33	29.7	5.37	29.85	64.77	
	27	6.06	27.84	66.10	33.9	2.96	20.80	76.24	23.8	2.72	23.26	74.02	26.0	8.49	29.05	62.46	37.5	5.80	25.70	68.51	31.5	6.19	28.90	64.91	
	2	4.59	29.56	65.86	34.1	2.96	26.31	70.73	29.3	5.97	34.33	59.70	40.3	4.23	29.31	66.46	33.5	4.59	30.47	64.94	35.1	4.58	28.52	66.89	
	24	6.20	28.97	64.83	35.2	3.69	23.90	72.41	27.6	3.87	26.20	69.93	30.1	3.10	23.01	73.88	26.1	3.60	24.49	71.91	28.1	7.15	30.62	62.23	
	21	5.44	29.85	64.71	35.3	1.47	17.31	81.23	18.8	6.23	28.00	65.77	34.2	3.25	27.81	68.95	31.1	3.39	23.83	72.78	27.2	8.05	37.51	54.44	
	31	5.97	30.40	63.63	36.4	2.49	22.58	74.93	25.1	3.07	26.32	70.61	29.4	4.28	26.48	69.24	30.8	3.12	24.72	72.17	27.8	7.81	34.08	58.11	
a	16	6.38	30.00	63.62	36.4	3.54	23.22	73.24	26.8	2.24	17.56	80.20	19.8	4.37	25.66	69.98	30.0	3.62	23.20	73.18	26.8	7.20	32.02	60.78	
Scotland LA	verag	6.99	29.70	63.31	36.7	4.43	25.73	69.84	30.2	6.47	29.43	64.10	35.9	6.91	29.25	63.84	36.2	6.06	28.27	65.68	34.3	7.90	31.09	61.01	
	4	6.05	31.14	62.81	37.2	7.03	31.92	61.05	38.9	6.65	33.60	59.75	40.2	6.39	31.61	62.00	38.0	6.65	32.20	61.15	38.9	5.27	29.74	65.00	
	23	5.34	31.92	62.73	37.3	3.16	26.14	70.70	29.3	6.66	35.43	57.91	42.1	5.94	34.28	59.77	40.2	5.17	31.74	63.09	36.9	5.44	32.02	62.55	
	13	7.61	29.83	62.57	37.4	1.80	15.22	82.99	17.0	4.08 5.08	27.52	68.40	31.6	8.00	26.47	65.53	34.5	5.61 5.82	24.66	69.74	30.3	8.70	32.64 31.34	58.66	
	29 9	7.09 8.79	30.80 30.01	62.11 61.21	37.9 38.8	2.68 3.88	21.42 25.01	75.90 71.10	24.1 28.9	6.27	31.05 29.39	63.87 64.34	36.1 35.7	7.50 9.40	32.12 30.88	60.39 59.72	39.6 40.3	5.82 6.58	29.37 28.36	64.81 65.06	35.2 34.9	7.57 11.64	32.15	61.09 56.21	
	9 18	8.48	30.53	60.99	39.0	2.38	17.40	80.22	20.9 19.8	6.00	29.59	64.36	35.6	9.40 8.28	32.17	59.72 59.54	40.5	6.00	28.30	66.28	33.7	10.79	33.16	56.05	
	10	8.48 7.63	31.51	60.86	39.1	8.36	27.86	63.78	36.2	6.22	33.03	60.75	39.2	0.20 13.14	38.15	48.71	40.5 51.3	9.77	34.19	56.04	44.0	5.87	29.31	64.82	
	3	7.97	32.99	59.04	41.0	6.21	32.00	61.79	38.2	7.92	32.79	59.29	40.7	8.12	33.24	58.65	41.4	7.65	32.81	59.54	40.5	8.26	33.15	58.60	
	20	10.19	32.39	57.52	41.0	3.97	25.55	70.48	29.5	6.98	33.40	59.61	40.7	8.63	33.12	58.25	41.4	6.32	30.25	63.43	36.6	8.20 14.71	34.66	50.63	
	8	7.17	36.27	56.56	43.4	7.23	28.83	63.94	36.1	5.30	31.72	62.98	37.0	6.77	42.04	51.19	48.8	6.65	33.09	60.26	39.7	7.81	40.25	51.94	
	6	11.79	35.53	52.68	47.3	5.49	28.83	65.06	34.9	5.56	30.42	64.01	36.0	10.64	35.67	53.69	46.3	8.04	32.79	59.17	40.8	16.96	39.28	43.76	
	12	10.17	38.37	51.45	48.5	6.21	31.77	62.02	38.0	8.61	37.77	53.62	46.4	8.47	36.06	55.47	44.5	7.95	35.54	56.51	43.5	13.70	42.88	43.41	
	14	16.62	38.87	44.52		8.91	34.58	56.51		21.51		36.14				37.94		17.06	39.68	43.27		15.67	37.13	47.19	

Appendix R

System: WDM PMS System Version: 4.10.0 Run Identifier: SRMCS PI Calculation Date: 15/May /2017 ID: RP10.01 WSAIIClassesv0202 SPI CARRIAGEWAY CONDITION INDICATOR

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01/January/2017 From Date:

ToDate:31/December/2017

Report Run Date: 15/May/2017 Rule Set

Weighting Set ID:

29.20

Results from Network Lengths Surveyed

Environment	Class	Red		An	nber 1	Gr	een	Cov	Network	
		Km	%	Km	%	Km	%	Km	%	Km
Urban	Α	1.897	3.93	10.906	22.61	35.438	73.46	48.241	94.41	51.100
	В	0.521	3.69	2.658	18.80	10.958	77.51	14.137	48.92	28.900
	С	0.543	3.24	2.892	17.25	13.330	79.51	16.765	38.02	44.100
	U	3.616	4.84	18.174	24.31	52.982	70.86	74.772	11.57	646.100
Rural	Α	0.048	0.58	0.735	8.86	7.514	90.56	8.297	115.24	7.200
	В	0.050	1.02	0.586	11.99	4.250	86.98	4.886	31.93	15.300
	С	1.858	5.53	7.759	23.08	24.006	71.40	33.623	57.57	58.400
	U	0.978	16.40	2.345	39.32	2.641	44.28	5.964	13.49	44.200
Overall By Class	Α	1.945	3.44	11.641	20.59	42.952	75.97	56.538	96.98	58.300
	В	0.571	3.00	3.244	17.05	15.208	79.95	19.023	43.04	44.200
	С	2.401	4.77	10.651	21.14	37.336	74.10	50.388	49.16	102.500
	U	4.594	5.69	20.519	25.41	55.623	68.89	80.736	11.70	690.300
Urban	All	6.577	4.27	34.630	22.50	112.708	73.23	153.915	19.98	770.200
Rural	All	2.934	5.56	11.425	21.65	38.411	72.79	52.770	42.18	125.100
All		9.511	4.60	46.055	22.28	151.119	73.12	206.685	23.09	895.300

Appendix S

Results of Surveys Weighted Across Total Network Lengths

Environment	Class	R	ed	Ar	nber	Gro	een	Cove	rage	Network
		Km	%	Km	%	Km	%	Km	%	Km
Urban	Α	2.009	3.93	10.906	22.61	37.538	73.46			51.100
	В	1.065	3.69	2.658	18.80	22.401	77.51			28.900
	С	1.428	3.24	2.892	17.25	35.064	79.51			44.100
	U	31.246	4.84	18.174	24.31	457.814	70.86			646.100
Rural	Α	0.042	0.58	0.735	8.86	6.521	90.56			7.200
	В	0.157	1.02	0.586	11.99	13.308	86.98			15.300
	С	3.227	5.53	7.759	23.08	41.696	71.40			58.400
	U	7.248	16.40	2.345	39.32	19.573	44.28			44.200
Overall By Class	Α	2.051	3.52	12.190	20.91	44.059	75.57			58.300
	В	1.222	2.76	7.269	16.45	35.710	80.79			44.200
	С	4.656	4.54	21.084	20.57	76.760	74.89			102.500
	U	38.494	5.58	174.419	25.27	477.387	69.16			690.300
Urban	All	35.748	4.64	181.634	23.58	552.818	71.78			770.200
Rural	All	10.673	8.53	33.329	26.64	81.098	64.83			125.100
All		46.422	5.19	214.962	24.01	633.916	70.80			895.300

Appendix T Road Condition Index 2004-2018

