

COMMITTEE	Communities, Housing & Infrastructure
DATE	15 March 2016
DIRECTOR	Pete Leonard
TITLE OF REPORT	Roads and Transport Related Capital Budget Programme 2016-2017
REPORT NUMBER:	CHI/16/041

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## **1 PURPOSE OF THE REPORT**

This report brings together the proposed roads and transportation programme from the approved Capital budgets for 2016/17. 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 2017/18 and 2018/19 are also included where possible. This report should be read in conjunction with Report CHI/16/039

## **2 RECOMMENDATIONS**

1. The Committee approves the schemes listed in the Appendices as the detailed proposals for expenditure within budget heading
2. Approve expenditure under the Nestrans Capital and Revenue Programmes 2016/17;
3. Instruct appropriate officials to implement the detailed programme.
4. (i) Authorises the Director of Communities, Housing & Infrastructure, the Head of Public Infrastructure and Environment and the Roads Infrastructure Manager, in connection with the attached Programme, to undertake or instruct tendering procedures or competitive quotation procedures as appropriate to be carried out.  
  
(ii) Grant approval to appropriate officers to award contracts on receipt of a valid tender submission subject to necessary funding in the approved revenue and capital budgets  
  
(ii) exempts all such procedures and contracts from Standing Order 1(3) of the Council's Standing Orders relating to Contracts and Procurement"
5. Note the submission made on behalf of Aberdeen City Council to the 'Smarter Choices, Smarter Places' fund and, should this be successful, approve officers to expend the funds as outlined in the proposed programme;
6. Note the submissions made on behalf of Aberdeen City Council to Sustrans Scotland's Community Links Fund 2016/17 and, should these be successful, approve officers to expend the funds in accordance with the proposed programme of work.

7. Where traffic legislation is necessary, to approve the proposals in principle and instruct the appropriate officials to progress the necessary legal procedures.

Where no significant objections have been received at the statutory consultation or public advertisement stages to instruct the appropriate officials to implement the scheme, otherwise these would be reported back to future committee.

### **3. FINANCIAL IMPLICATIONS**

Expenditure will be in accordance with the Council's approved Capital budgets for 2016 - 2017.

### **4. SERVICE & COMMUNITY IMPACT**

This report has no direct implications in relation to Equalities & Human Rights Impact Assessment.

The implementation of the programme will assist roads and footways within the City being maintained to an acceptable standard thus reducing the risk of injury to members of the public.

The proposals are in line with our 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.

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.

Aberdeen – the Smarter City

We will promote Aberdeen as a great place to live, bring up a family, do business and visit.

We will provide and promote a sustainable transport system, including cycling, which reduces our carbon emissions

Single Outcome Agreement, National Outcomes 5, 6, 10, 12, & 14

### **5. BACKGROUND/MAIN ISSUES**

This report brings together, for members' information, the proposed programme for Capital Funding spend for both Roads and Transportation for 2016/2017 together with provisional reserve list programme for 2017/2018.

The provisional reserve programme for 2017/2018 will allow substitution of schemes should it not be possible to implement any of the proposed 2016/2017 schemes.

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

**Estimated Costs for the individual proposed works are included in the Confidential Report**

**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. This proposed programme of works and reserve programme are set out in **Appendix A**

**Lighting Improvements:** Planned lighting improvements have been allocated a capital budget of **£2,000,000**. **£500,000** 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. Proposed programme and reserve programme for Street Lighting are in **Appendix B and C**.

**Cycling Walking Safer Streets:** A grant of **£251,000** 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.

**Road Safety Schemes:** Included in CWSS Budget

**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. The detailed programme is set out in **Appendix E**. A Reserve programme is given in **Appendix F**

**Carriageway Resurfacing:** The Capital carriageway resurfacing programme has been allocated a budget of **£2,288,000**. The programme is generally prepared on the basis of the results of the road condition surveys of the existing infrastructure. The detailed programme is set out in **Appendix G**. A Reserve Programme is given in **Appendix H**.

**Appendix N** provides an explanation of the Road Condition Index. **Appendix O** is copy of the table showing the RCI for all Councils across Scotland with **Appendix P** showing Aberdeen City's position against the other 32 Scottish Local Authorities.

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 have 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.

**Drainage:** A Capital Budget of **£147,000** has been allocated for the Drainage works, this programme is shown in **Appendix J**

**Road Sign Replacement:** A Capital Budget of **£44,000** has been allocated for the Road Sign Replacement Programme, this has been increased this year to combat the reduction in the CWSS budget.

**Weak & Major Bridge Repairs:** A Capital Budget of **£20,000** has been allocated for Weak Bridge Repairs and **£100,000** for Major Bridge Works, the other **£600K** for this project will be carried forward from the 2015-2016 Capital Plan.

**Flood Prevention Schemes:** A Capital Budget of **£100,000** has been allocated for Flood Prevention Schemes. Additional funding for flooding will be made available from the 20% of the Flooding Grant allocated through COSLA, this should provide a further **£500K** towards the implementation of future flood prevention schemes.

The allocation to these monies is shown in **Appendix K** but as yet no programme of works has defined.

**Appendix L** 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 M** is a summary of the proposed capital spend

## 6. IMPACT

### **Improving 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.

### **Improving Staff Experience**

The approval of the budget spends will allow staff to control the programming of the works and direct the available monies to the areas of most concern.

### **Improving our use of Resources –**

The Asset Management Plan will be used to manage the spend over several years to continue to optimise our use of resources to continue to provide best value

### **Corporate –**

The projects identified in this report will assist in the delivery of actions identified in the Single Outcome Agreement (SOA) 2013, in particular the Thematic Priority of Safer Communities (Safer Roads) and the Multi-lateral Priority – Integrated Transport (Aberdeen is easy to access and move around in).

### **Public –**

This report may be of interest to members of the public as it concerns various transport schemes taking place throughout the City which have the potential to affect all members of the travelling public.

An Equality and Human Rights Impact Assessment (EHRIA) has not been undertaken as the projects listed in this report flow from the RTS and the existing and emerging LTS's, all of which have, or will be, subject to their own EHRIA.

A Privacy Impact Assessment (PIA) has not been undertaken as implementation of the projects outlined in this report should not impact on the privacy of any individual.

The contents of this report link to the Community Plan vision of creating a *sustainable City with an integrated transport system that is accessible to all*.

All of the projects referred to in this report will contribute to delivery of the Smarter Mobility aims of Aberdeen – *The Smarter City: We will develop, maintain and promote road, rail, ferry and air links from the city to the UK and the rest of the world. We will encourage cycling and walking, and We will provide and promote a sustainable transport system, including cycling, which reduces our carbon emissions.*

## 7. MANAGEMENT OF RISK

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. This represents a potential Hazard and Financial Risk to the Council. This will be minimised, however, by the use of high-quality design and installation materials to ensure longevity of new infrastructure. 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 the City of Aberdeen and a decline in active travel which would have significant implications for the health and wellbeing of the citizens of Aberdeen (Opportunity, Environmental and Customer/Citizen Risks).

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.

## 8. BACKGROUND PAPERS

[http://www.audit-scotland.gov.uk/docs/central/2010/nr\\_110216\\_road\\_maintenance.pdf](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 20 Jan 2016

## 9. REPORT AUTHOR DETAILS

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## Appendix A

### ITS Unit Proposed Traffic Signal Refurbishment Programme 2016/17

Site	Installation	Type	Estimated Cost
Bridge Street / Wapping Street	Refurb'	Junction	
Gwr At Ashley Road	Refurb'	Junction	
Gwr At Holburn Road	Refurb'	Junction	
Great Southern Road At Hardgate	Refurb'	Dual Puffin	
Gallowgate At Seamount	Refurb'	Puffin	
Garthdee At Bridge Of Dee	Refurb'	Dual Puffin	
St Swithin St At Queens Cross	Refurb'	Puffin	
Schoolhill / Back Wynd	Refurb'	Puffin	
			£400,000.00

### ITS UNIT 2016/2017 Communication upgrade

Dyce Area Communication Upgrade			£50,000.00
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### ITS UNIT 2016/2017 Reserve Communication upgrade

Site	Installation	Type	Cost
Lang Stracht Communication Upgrade			
Mounthooly Area Communication Upgrade			
			£50,000.00

### ITS UNIT 2016/2017 Traffic Signal Refurbishment Reserve List

Site	Installation	Type	Cost
Westburn Rd @ 6 Roads Roundabout	Refurb'	Puffin	
Holburn St South Of Broomhill	Refurb'	Puffin	
Denburn At Blackfriars	Refurb'	Dual Puffin	
John St At Woolmanhill	Refurb'	Dual Puffin	
Skene Square At Woolmanhill	Refurb'	Puffin	
Lang Stracht / Fernhill	Refurb'	Junction	
Lang Stracht / Stronsay Drive	Refurb'	Junction	
Lang Stracht / Springhill Road	Refurb'	Junction	
			£400,000.00

**Appendix B**  
**Proposed Capital Lighting Programme 2016-2017**

<b>Scheme</b>	<b>Estimate</b>	<b>Comments</b>
<b><u>Corroded Column Replacement</u></b>		
Rubislaw Corroded Cols - PH2		
Mastrick Corroded Cols		
Summerhill/ King's Gate Corroded Cols		
Rosemount Corroded Cols		
Northfield/ Heathryfold Corroded Cols		
Hilton/ Clifton Corroded Cols		
Seaton Corroded Cols		
Woodside Corroded Cols		

**Corroded Replacement Total    £500,000**

<b><u>Column Replacement Schemes Backup</u></b>		
Great Northern Road		Structural improvements
Great Western Road		Forest Rd to Anderson Dr (PH3 - 10 No)
West Tullos Rd		Wellington Rd to Abbotswell Rd (28No)
Concrete Column replacement - various		
Lane Hamilton PI/ Carden PI		strainer cols replacement
Footways / Resurfacing Contract		
Davan Park Area		road columns omitted from 13/14 20No
Pittengullies Area, Peterculter		replacement of columns - 24
Spital Walk		replacement of underground cable network
Ashley lane		strainer cols replacement
Concrete Column replacement - various	£0	

**Column Replacement Schemes    £300,000**

Energy/Carbon Savings  
 Replacement of inefficient lanterns with LED    £1,500,000  
**Inefficient Lanterns    £1,500,000**



**Appendix C**  
**Proposed Reserve Capital Programme 2016-2017**

<b>Scheme</b>	<b>Estimate</b>	<b>Comments</b>
<b><u>8/10 m Height</u></b>		
North Deeside Rd		Bieldside - Murtle Den
Abbotswell Dr		rest of street (12cols)+track
West Tullos Rd		Wellington Rd to Abbotswell Rd (30No)
Mounthooly R/A		whole street - 18No cols
Concrete Column replacement - various		
<b>8/10m Total    £380,000</b>		
<b><u>5/6 m Height</u></b>		
Birkhall Area - Phase 2		replacement of columns faulty underground cable network
Concrete Column replacement - various		Phase 1
<b>5/6m Total    £270,000</b>		
<b>Total Reserve Programme    £650,000</b>		

## Appendix D

### CYCLING WALKING SAFER STREETS 2016/2017

LOCATION / PROPOSALS	DESCRIPTION OF WORK	IMPLICATIONS	BUDGET TOTAL
<b>CYCLING WALKING SAFER STREETS 2016 / 2017</b>			<b>£251,000</b>
<b>Schemes for 2016 / 17 (CWSS)</b>			
Various locations across the City. <b>Item No 051.</b>	Small scale improvements to pedestrian crossing / Disabled Crossing points / Core Paths - Dropped kerbs and pedestrian guard-rails.	Budget of £24,000 for implementation at various locations City wide. Individual location assessment - Local Councillors to be kept appraised.	
Various locations across the City. <b>Item No 052.</b>	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. <b>Item No 053.</b>	Cycling Facilities /Links / Parking / Lining & Signing throughout the City to provide missing Links on the road network	Budget of £91,000 for implementation at various locations City Wide. Discussions have been ongoing with the Cycling Forum to identify a series of improvements throughout the City. Some schemes may require the promotion of legislative procedures for a Traffic Regulation Order which may affect implementation.( <b>Requirement of Grant Offer to spend minimum 36% but preferably 50 % on cycling schemes</b> )	
Various locations throughout the City <b>Item No. 054</b>	Small scale improvements to signing & lining, bollards, barriers and all new works associated with traffic management / traffic Orders and road safety.	Budget of £55,000 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 <b>Item No. 055</b>	Route action work on various rural routes and City wide locations that have been identified for improvements from the annual accident scan.	No detrimental implications.	
Various Safety Campaigns throughout the City (not site specific) <b>Item No 056.</b>	Publicity in relation to Road Safety Campaigns & Community Safety Safe Drive - Stay Alive Campaign.	Budget of £7,000 for Aberdeen City Contribution Local Transport Strategy Policy / Proposal SP1.	
Traffic Calming & Road Safety on rural routes <b>Item No 57.</b>	Route action - hazard marker posts & improvements to signing / lining.	Improvements to driver safety and speed reduction.	

LOCATION / PROPOSALS	DESCRIPTION OF WORK	IMPLICATIONS	BUDGET TOTAL
City Wide Item No 63.	Removal of existing "at any time" plates (Phase 4 and final)	This scheme requires to be completed ASAP as the existing signage must be removed to comply with current legislation.	
Various locations across the City. Item No.	Re-texturing of existing road surface at various locations / corners / junctions that have been identified as a concern from the annual accident scan	No detrimental implications	
Various locations across the City. Item No.	Specific Road Safety schemes - still to be identified Improvements to existing traffic signals / ped crossings / new puffins / Toucans	No detrimental implications	
		<b>Total (CWSS)</b>	<b>£251,000</b>

## Appendix E

### Capital Footway Programme 16/17

Name of Road	Location and Description of Works	Assessed Condition	Area(s q.m)	Estimated Cost
VARIOUS SITES	Tree Removals and Footway Reinstatements	10		
VARIOUS SITES	Small capital schemes individually under £10000 in value - both bitmac and slabbed/pavoi locations	10		
VARIOUS SITES	Grind tree stumps and reinstate footway in bitmac or slabs	10		
DUNMAIL AVENUE	West Side.Renew kerbing and resurface footway in bitmac including regrading of pedestrian crossing points.Remove tree stump at entrance to Dunmail Manor to allow construction of pedestrian crossing point.	10	75	
NORTH DEESIDE ROAD(CULTS)	South Side from Millden Road to St Devenicks Place.Replace kerbs where necessary and resurface footway in bitmac.	10	200	
KIRKHILL ROAD(TORRY)	South Side from Ladywell Place to Kirkhill Place.Relay stone kerbs and resurface footway in bitmac.	10	569	
TOLLOHILL GARDENS	North Side - Tollohill Gardens to driveway at No 34.Renew kerbs and resurface footways with bitmac	10	337	
OSCAR ROAD	West Side from Grampian Place to Car Park o-p 61.(Excludes short section in front of Torry Neighbourhood Centre) Lay new K14 at rear of footway and resurface footway in bitmac.(Front kerbs ok)	10	300	
PROVOST FRASER DRIVE	South Side from opposite No 12 to Upper Mastrick Way.Resurface sections of remote footway in bitmac.(Sections 8m, 176m, 105m and 48m long)	10	673	
AUCHINLECK CRESCENT	West Side from King's Court to Elphinstone Court.Renew kerbs and resurface footway in bitmac.Include entrance to King's Court.	10	140	
DOMINIES ROAD	North Side from No 4 to Car Park entrance and short section o/s No 1.	10	175	
AULDEARN ROAD	South Side from Auldearn Gdns to Auldearn Lane. Renew kerbs and resurface footway in bitmac	10	147	
OYNE ROAD	North Side Renew kerbs and resurface footway in bitmac	10	300	
STRATHMORE DRIVE	West Side from No 17 to Gadie Crescent.Renew kerbs and resurface footway in bitmac.	10	305	

### Capital Footway

<b>£600,000</b>
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## Appendix F

### Footway Reserve List 2016-2017

Name of Road	Location and Description of Works	Assessed Condition	Area (sq m)	Estimated Cost
MANOR WALK	West and North Side from Manor Avenue to opposite 17. Relay stone kerbs and replace slabs with bitmac.	9	231	
DUNBAR STREET	West Side from 59 to 73. Resurface footway with precast concrete slabs. Instal bollards.	9	164	
KINKELL ROAD	West Side from Craigiebuckler Avenue to Kildrummy Road. Renew kerbs and resurface footways with bitmac.	9	254	
WINDFORD ROAD	North Side Renew kerbs and resurface footway in bitmac	9	358	
MANOR WALK	West and North Side from opposite 17 to Manor Drive. Relay stone kerbs and replace slabs with bitmac.	9	559	
FERNHILL ROAD	North Side from no 16 (end of loop) to Fernhill Drive. Renew kerbs and resurface footway in bitmac.	9	183	
MOIR DRIVE	1 - 17/19 Moir Drive. Renew kerbs and resurface footway with bitmac.	9	209	
BURNIEBOOZLE CRESCENT	South Side from No 88 to Craigiebuckler Avenue. Renew kerbs and resurface footway with bitmac.	9	273	
KAIMHILL CIRCLE	Phase 2 Inner Section from lane opposite Ruthrie Terrace to No 72. Relay stone kerbs and replace slabs with bitmac.	9	440	
BURNIEBOOZLE CRESCENT	North Side from No 109 to Craigiebuckler Avenue. Renew kerbs and resurface footway with bitmac.	9	324	
TOLLOHILL GARDENS	North Side - East (Short) Section. Renew kerbs and resurface footways with bitmac	9	132	
GIRDLENESS ROAD	Girdleness Gardens to No 88. Remote footway - Replace whin kerbs (North Side only) with Concrete Edging kerbs both sides and resurface footway in bitmac.	9	100	
RICHMONDHILL PLACE	East Side from Kingsgate to opposite 21. Relay stone kerbs and resurface footways in PC Slabs. Remove all 11 mature trees.	9	315	
HOLBURN STREET	East Side. Entrance 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	200	
GREAT NORTHERN ROAD	South Side. Sections outside Lloyds Pharmacy (451) and Iceland. Resurface footway with bitmac.	8	185	
KINKELL ROAD	East Side from Craigiebuckler Avenue to Kildrummy Road. Renew kerbs and resurface footways with bitmac.	8	264	

Name of Road	Location and Description of Works	Assessed Condition	Area (sq m)	Estimated Cost
FERNHILL ROAD	North Side from Fernhill Rd to No 42(start of loop).Renew kerbs and resurface footway in bitmac.	8	81	
TOLLOHILL GARDENS	North Side - West(Long) Section.Renew kerbs and resurface footways with bitmac	8	287	
CRAIGIELEA AVENUE	East Side.Renew kerbs and resurface footways with bitmac	8	141	
WINDFORD ROAD	South Side Renew kerbs and resurface footway in bitmac	8	346	
HARLAW TERRACE	East Side.Relay stone kerbs and resurface footway with bitmac.Remove four large mature trees.	8	216	
TOLLOHILL GARDENS	South Side.Renew kerbs and resurface footways with bitmac	8	488	
MORAY PLACE	West Side from Carnegie Crescent to Rubislaw Den North. Renew kerbs and resurface footways with bitmac.	8	305	
GARDNER ROAD	East Side from Hetherwick Rd to entrance to 145..Renew kerbs and resurface footways with bitmac.	8	299	
FERNHILL ROAD	South Side from Fernhill Drive to Fernhill Place.Renew kerbs and resurface footway in bitmac.	8	355	
ORCHARD ROAD	East Side from University Rd to lane.Relay stone kerbs and replace slabs with bitmac.	8	113	
COUNTESSWELLS ROAD	In front of 209 - 219.Resurface footway in bitmac.(No kerbing required)	8	126	
ARNAGE DRIVE	East Side from Arnage Drive to Mastrick Road.Renew kerbs and resurface footways with bitmac.	8	129	
TAY ROAD	Remaining areas of footway from Nos 24 and 26 to bus stop at Provost Fraser Drive.Renew K14 kerbs and resurface footway with bitmac.	8	139	
KAIMHILL CIRCLE	Phase 3 Outer Section from Kaimhill Road to Garthdee Drive.(2 sections)Relay stone kerbs and replace slabs with bitmac.	8	347	
CATTOFIELD PLACE	South Side from Cattofield Terrace to Cattofield Gardens. Relay stone kerbs and resurface footway with precast concrete slabs.Remove 3 semi-mature trees.(Not Elms)	7	305	
CATTOFIELD PLACE	South Side from Cattofield Gardens to Back Hilton Road.Relay stone kerbs and resurface footway with precast concrete slabs.	7	489	
CATTOFIELD PLACE	South Side from Cattofield Terrace to No 11.Relay stone kerbs and resurface footway with precast concrete slabs.	7	262	
CATTOFIELD PLACE	North Side from Back Hilton Road to No 24.Relay stone kerbs and resurface footway with precast concrete slabs.	7	1,083	
WELLWOOD TERRACE	North Side.Renew concrete kerbs and resurface footway in bitmac.	7	272	

Name of Road	Location and Description of Works	Assessed Condition	Area (sq m)	Estimated Cost
CRAIGIEVAR PLACE	South Side, Aboyne Gardens to Craigievar Crescent. Renew kerb and resurface footway with bitmac.	7	156	
COUNTESSWELLS CRESCENT	Inner Circle from Countesswells Avenue to o/p 53/55. Renew kerbs and resurface footway in bitmac.	7	139	
ARDBECK PLACE	South Side .Renew kerbs and resurface footways with bitmac.	7	336	
STEWART CRESCENT	South Side from Longlands Place to Whin Park Road. Renew kerbs and resurface footway in bitmac	7	300	
ORCHARD ROAD	West Side from Orchard Walk to Orchard Street. Relay stone kerbs and resurface footway in bitmac.	7	332	
ORCHARD ROAD	East Side from lane to 4/6. Relay stone kerbs and resurface footway in bitmac.	7	230	
ARDBECK PLACE	South Side .Renew kerbs and resurface footways with bitmac.	7	342	
<b>Current Footway Reserve List Total</b>				<b>£878,000</b>

**Appendix G**  
**Capital Works Resurfacing List 2016-2017**

Name of Road	Location & Description of Works		Assessed Condition	Area (Sq m)	Estimated Cost
Craigshaw Drive	Wellington Road to passed Wiseman's Entrance. Resurface carriageway	2014	Red/Amber	2500	
Russell Road	North Esplanade West to Poynerook Road. Resurface Carriageway	2014	Red/Amber	1500	
Strategic Bus Stops	Various Locations Partial Reconstruction	Visual Inspection			
Structural Repairs at Junctions	Various	Visual Inspection			
Structural Repairs at Traffic Calming	Various	Visual Inspection			
Structural Carriageway Strengthening	Various				
Netherview Avenue	Balloch Way/Princess Drive to Berrywell Walk. Resurface Carriageway	2015	Red/Amber	1460	
Broomhill Road	Balmoral Place to Abergeldie Place. Resurface carriageway.	2015	Amber	1300	
Heathryfold Circle	Resurface carriageway.	2015	Red/Amber	5700	
Clifton Road	Anderson Avenue to Hilton Terrace. Resurface carriageway.	2015	Red/Amber	2000	
Guild Street	Eastbound Carmelite Street to Market Street. Resurface carriageway.	2015	Red/Amber	1100	
Commerce Street	Virginia Street Junction Resurface Carriageway	2015	Red/Amber	1000	
Earn's Heugh Road	Partan Skelly Avenue to Cove Road. Resurface carriageway.	2015	Amber	4000	
King Street	Southbound University Road to Linksfield Road. Resurface carriageway.	2015	Red/Amber	825	
Abbotswell Drive	Great Southern Road to Deevale Road. Resurface carriageway.	2015	Amber	2850	
Hazledene Road	Queen's Road to Craigiebuckler Avenue. Resurface carriageway.	2015	Red/Amber	3400	
Borrowstone Road	Borrowstone Farm to Wynford Farm. Carriageway overlay.	2015	Red/Amber	6750	



Name of Road	Location & Description of Works		Assessed Condition	Area (Sq m)	Estimated Cost
Abbotswell Crescent	Redmoss Road to number 240	2015	Red/Amber	720	
Invercauld Road	Long Walk Road to Birkhall Parade	2015	Amber	2900	
Willow Park Crescent	Mastrick Drive to Ross Crescent	2015	Amber	3000	
Danestone Circle	Whole street and part Cummings Park Road	2011	Amber	2220	
Battock Place	Tullos Circle to Balnagask Road. Resurface carriageway.	2014	Red/Amber	1450	
Mansefield Road	Victoria Road to Glenbervie Road. Resurface carriageway.	2014	Red/Amber	1350	
Bon Accord Crescent	Including junction of West Craibstone Street. Resurface carriageway.	2015	Red/Amber	2300	
Marischal Street	Number 41 to Regent Quay. Resurface carriageway.	2015	Red/Amber	620	
Tedder Road	St Machar Drive to Harris Drive Resurface Carriageway	2013	Red/Amber	1800	
Primrosehill Gardens	Clifton Road to Primrosehill Drive Resurface Carriageway	2013	Red/Amber	1200	
Kingswood Drive	Broaddykes Drive to Coldstone Avenue.	2015	Amber	1050	
Arran Avenue	Benbecula to Skye Road	2014	Amber	1800	
St Devenick's Place	North Deeside Road to Deeview Road South. Resurface carriageway.	2,015	Red/Amber	1080	
Deeview Road South		2015	Red/Amber	95	
Deeside Gardens	Deeside Drive to Number 138. Resurface carriageway.	2015	Red/Amber	2800	
Rubislaw Park Road	Queen's Road to Rubislaw Park Crescent. Resurface carriageway.	2015	Red/Amber	1420	
Laurel Drive	Resurface carriageway.	2015	Amber	5500	
Broadfold Road	Ellon Road to Cloverhill Road. Resurface carriageway.	2015	Amber	1700	
Auldearn Road/Kincorth Circle	Provost Watt Drive to Deevale Gardens	2015	Red/Amber	2650	
St Ronan's Drive	Lower section adjoining St Ronan's Place.	2013	Red/Amber	250	

#### Capital Works Resurfacing

**£2,288,000**

## Appendix H

### Capital Works Resurfacing Reserve List 2016-2017

Name of Road	Location & Description of Works		Assessed Condition	Area (Sq m)	Estimated Cost
Hollybank Place	Holburn Street to Hardgate.	2015	Red/Amber	1200	
Howburn Place	Holburn Street to Hardgate.	2015	Amber	1075	
Balfron Place	Resurface Carriageway	Visual Inspection	Amber	450	
Campsie Place	Resurface Carriageway	Visual Inspection	Amber	1000	
Rosewell Place	Resurface Carriageway	Visual Inspection	Amber	550	
Rosewell Terrace	Resurface Carriageway	Visual Inspection	Amber	500	
Mount Pleasant	Resurface Carriageway	Visual Inspection	Amber	800	
Hutcheon Gardens	Resurface Carriageway	2015	Red/Amber	800	
Ruthrieston Road	Cul-de-sac to Ruthrieston Crescent Resurface Carriageway	2015	Amber	1000	
Wales Street	Resurface Carriageway	Visual Inspection	Red	1700	
Springfield Road	Service Road at 1 - 15. Widen and resurface carriageway.	2013	Red/Amber		
Fraser Place	George Street to Causewayend Resurface Carriageway	2013	Amber	1000	
Market Street	Poynerook Road to Guild Street. Resurface carriageway.	2013	Red/Amber	3250	
Pittodrie Street	Golf Road to King Street Resurface Carriageway	2011	Red/Amber	5000	
Clifton Road	Great Northern Road to Leslie Road	2015	Red/Amber	3800	
North Deeside Road	Rob Roy Bridge to boundary	2015	Red/Amber	3300	
Powis Circle	Resurface Carriageway	2014	Red/Amber	1600	
Kirk Brae	North Deeside Road to Friarsfield Road	2015	Red/Amber	2500	
Friarsfield Road	Kirk Brae to Abbotshall Road	2015	Red/Amber	900	
Hutcheon Low Drive	Resurface Carriageway	2015	Amber	1800	
Laurel View	Resurface Carriageway	2015	Amber	900	
Scostown Road	Cameron Street to Gordon Place	2015	Red/Amber	2800	

<b>Name of Road</b>	<b>Location &amp; Description of Works</b>		<b>Assessed Condition</b>	<b>Area (Sq m)</b>	<b>Estimated Cost</b>
Great Northern Road	Northbound carriageway Anderson Road to Haudagain Roundabout, Resurface Carriageway	2015	Red/Amber	4000	
Wellington Road	Northbound Craigshaw Drive to Abbotswell Road. Resurface carriageway	2015	Amber	5200	
Abergeldie Road	Holburn Street to Broomhill Road Resurface Carriageway	2015	Red/Amber	2700	
Deeside Crescent	Resurface Carriageway	2015	Amber	1500	
Dalmaik Terrace	North side of carriageway from School Road to junction with Dalmaik Crescent.	2013	Red/Amber	665	
St Ronan's Drive	Lower section adjoining St Ronan's Place.	2013	Red/Amber	250	
Contlaw Road	North Deeside Road to Beanshill Livery Stables.	2015	Red/Amber	7450	
Countesswells Crescent	Resurface Carriageway	2015	Red/Amber	1900	
Gardner Road	Gardner Drive to Webster Road.	2015	Red/Amber	2350	
Clifton Road	Great Northern Road to Leslie Road	2015	Red/Amber		
Carden Place	Queen's Cross to Prince Arthur Street	2015	Red/Amber	3500	
					£1,995,000

## Appendix J

### Capital Works Drainage Programme 2015-2016

Name of Road	Location & Description of Works	Estimated Cost
Links Road	Drainage Improvement	
Wellington Road	Polwarth Road Install drainage and resurface lane of carriageway	
Hareness Road	At Wellington Road Roundabout Drainage Improvement	
Brodiach Road	Drainage Improvement	
North Deeside Road	Millside Junction Drainage Improvement	
Brig o' Balgownie	Investigate drainage and install new gullies if possible to resolve water issue at property adjacent to bridge	
St Swithin Street	Drainage improvement including renewal of footway from lane to Union Grove Traffic Lights	
Various locations	Unallocated to Resolve Serious Flooding or Ponding Issues	
Various locations	Replacement of Gullies	

**Capital Works Drainage**

**£147,000**

## Appendix K

### Capital Works Major Bridge Repairs

Location & Description of Works	Estimated
A93 Culter Bridge Strengthening and Service Diversions.	£100,000

### Capital Works Other Un-programmed Budgets

Road Sign Replacement:	£ 44,000
Weak Bridge Repairs:	£ 20,000
Flood Prevention Schemes:	<u>£100,000</u>
	<u>£164,000</u>

## Appendix L:

### Revenue Anticipated Budget

	Budget 2016/17
<b>General Roads Maintenance</b>	
- Carriageway Patching	£833,896
- Footway Patching	£157,000
- Drainage	£175,000
- Road Markings & Studs	£407,000
- Gully Emptying	£379,000
- Pedestrian Barriers	£10,000
- Traffic Signs & Bollards	£82,000
- Safety Fences	£31,000
- Technical Surveys	£23,000
- Street Naming	£15,000
- Inspections	£84,000
- Footway Bollards	£8,000
<b>Traffic Works</b>	
- Disabled Parking	£253,000
- Traffic Management Reviews	£160,000
- Blue Badge Scheme Costs	£39,000
- ITS Annual Communication Costs	£130,000
- ITS Annual Contract Costs	£204,000
- Traffic Signal Maintenance	£147,000
- Software Licences	£3,000
<b>Maintenance Programmes</b>	
Sponsored Roundabout Costs	£35,000
Surface Dressing	£120,000
Bridge Works	£263,000
Winter Maintenance & Emergencies	£1,727,000
Street Lighting Maintenance	£1,428,000
Street Lighting Electricity	£2,159,086
Flood Risk Management	£210,000
Flood Prevention	£53,000
Coast Protection	£70,000
<b>INCOME</b>	
Blue Badge Scheme	-£59,000
Street Occupations Income	-£477,000
<b>NET BUDGET FOR ACTIVITIES</b>	<b><u>£8,585,982</u></b>

## Appendix M

### Summary Capital Works

<b>Traffic Signal Refurbishment Programme:</b>	<b>£ 450,000</b>
<b>Lighting Programme:</b>	<b>£2,000,000</b>
<b>CWSS Capital Grant: Road Safety Programme:</b>	<b>£ 251,000</b>
<b>Footway Resurfacing Programme:</b>	<b>£ 600,000</b>
<b>Carriageway Resurfacing Programme:</b>	<b>£2,288,000</b>
<b>Drainage Programme:</b>	<b>£ 147,000</b>
<b>Major Bridge Repairs:</b>	<b>£ 100,000</b>
<b>Road Sign Replacement:</b>	<b>£ 44,000</b>
<b>Weak Bridge Repairs :</b>	<b>£ 20,000</b>
<b>Flood Prevention:</b>	<b>£ 100,000</b>
<b>Total</b>	<b>£6,000,000</b>

## Appendix N

### 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 O

RCI Results 2014\_16 (4 years data for Unclassified Roads)

Authority	Random No	Network				A Roads				B Roads				C Roads				All Classified Roads				U Roads			
		Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI
Aberdeen	1	4.64	27.97	67.39	32.6	3.56	23.20	73.24	26.8	5.46	28.17	66.38	33.6	3.25	26.68	70.07	29.9	4.07	26.07	69.86	30.1	5.05	29.35	65.60	34.4
	2	4.46	28.27	67.27	32.7	4.16	29.79	66.05	33.9	5.10	31.85	63.05	37.0	3.54	27.63	68.83	31.2	4.20	29.52	66.28	33.7	4.75	26.85	68.40	31.6
	3	10.13	34.10	55.77	44.2	7.16	34.50	58.34	41.7	10.14	38.74	51.11	48.9	10.59	33.26	56.15	43.8	9.71	35.57	54.72	45.3	10.50	32.79	56.71	43.3
	4	5.56	28.73	65.71	34.3	6.26	31.15	62.59	37.4	4.29	31.61	64.10	35.9	4.20	29.28	66.52	33.5	4.85	30.44	64.71	35.3	6.48	26.47	67.04	33.0
	5	4.78	28.51	66.71	33.3	2.42	20.31	77.26	22.7	3.37	24.48	72.16	27.8	4.17	25.47	70.36	29.6	3.43	23.65	72.91	27.1	5.52	31.21	63.27	36.7
	6	12.48	34.38	53.15	46.9	5.16	28.57	66.27	33.7	4.65	29.52	65.83	34.2	8.39	34.05	57.56	42.4	6.59	31.54	61.87	38.1	20.57	38.27	41.17	58.8
	7	3.58	22.43	73.99	26.0	2.41	17.53	80.06	19.9	2.98	20.98	76.03	24.0	3.27	20.63	76.09	23.9	2.97	19.83	77.21	22.8	3.76	23.20	73.04	27.0
	8	7.42	37.14	55.43	44.6	7.99	30.25	61.76	38.2	6.87	32.67	60.45	39.5	5.77	42.61	51.62	48.4	7.12	34.17	58.70	41.3	7.79	40.86	51.34	48.7
	9	9.24	29.88	60.88	39.1	3.42	23.52	73.05	26.9	5.87	28.88	65.25	34.7	8.46	30.54	61.00	39.0	5.96	27.55	66.49	33.5	13.49	32.90	53.61	46.4
	10	3.75	24.11	72.14	27.9	2.47	22.03	75.50	24.5	1.67	20.87	77.46	22.5	2.91	20.97	76.12	23.9	2.37	21.14	76.49	23.5	5.28	27.41	67.31	32.7
	11	5.91	29.52	64.57	35.4	3.09	23.44	73.47	26.5	2.72	20.25	77.03	23.0	5.09	25.27	69.65	30.4	3.65	23.63	72.71	27.3	6.72	31.62	61.66	38.3
	12	9.80	36.50	53.71	46.3	4.24	28.33	67.43	32.6	6.65	34.77	58.58	41.4	7.02	35.28	57.70	42.3	6.20	33.37	60.43	39.6	15.55	41.50	42.95	57.0
	13	7.89	31.27	60.85	39.2	1.76	17.02	81.22	18.8	3.64	27.40	68.95	31.0	6.84	24.84	68.32	31.7	4.89	24.14	70.97	29.0	9.52	35.15	55.33	44.7
	14	14.76	39.65	45.58	54.4	9.17	35.72	55.11	44.9	17.44	43.52	39.04	61.0	16.78	41.61	41.61	58.4	14.57	40.45	44.98	55.0	15.19	37.94	46.87	53.1
	15	3.68	21.25	75.07	24.9	2.18	20.82	77.00	23.0	1.72	18.26	80.02	20.0	1.74	17.08	81.18	18.8	1.83	18.24	79.92	20.1	6.01	25.05	68.94	31.1
	16	6.59	29.26	64.16	35.8	4.90	23.85	71.25	28.8	3.47	23.81	72.72	27.3	4.86	26.10	69.04	31.0	4.67	24.62	70.71	29.3	7.16	30.63	62.21	37.8
	17	6.98	30.87	62.15	37.8	8.91	26.68	64.40	35.6	4.41	29.15	66.44	33.6	10.26	38.44	51.30	48.7	8.01	32.76	59.23	40.8	6.14	29.31	64.56	35.4
	18	8.33	31.05	60.62	39.4	2.49	18.80	78.71	21.3	5.01	29.22	65.77	34.2	7.95	32.31	59.73	40.3	5.51	27.93	66.55	33.4	10.97	33.96	55.07	44.9
	19	2.84	18.38	78.79	21.2	1.89	18.46	79.65	20.4	1.81	16.59	81.60	18.4	1.98	12.99	85.03	15.0	1.88	16.07	82.05	18.0	3.94	21.05	75.01	25.0
	20	11.43	32.73	55.85	44.2	4.50	26.53	68.98	31.0	8.29	33.33	58.39	41.6	8.98	33.43	57.59	42.4	7.03	30.70	62.27	37.7	16.57	35.09	48.34	51.7
	21	8.53	30.37	61.09	38.9	1.83	18.91	79.26	20.7	7.36	27.05	65.59	34.4	4.44	30.57	64.99	35.0	4.25	25.12	70.64	29.4	14.00	37.07	48.94	51.1
	22	4.90	23.99	71.11	28.9	1.74	18.20	80.06	19.9	3.74	28.31	67.95	32.0	3.92	23.15	72.93	27.1	3.40	23.45	73.15	26.8	6.57	24.59	68.84	31.2
	23	4.55	28.67	66.78	33.2	2.71	24.81	72.48	27.5	4.52	30.08	65.40	34.6	4.41	30.51	65.08	34.9	3.84	28.37	67.79	32.2	4.92	28.83	66.26	33.7
	24	8.20	30.98	60.82	39.2	5.09	24.56	70.34	29.7	3.64	23.76	72.60	27.4	4.50	22.63	72.86	27.1	4.44	23.80	71.77	28.2	9.58	33.62	56.79	43.2
	25	4.45	26.92	68.63	31.4	2.34	18.06	79.60	20.4	3.57	24.42	72.01	28.0	3.67	26.81	69.53	30.5	3.23	23.32	73.45	26.5	5.44	29.86	64.69	35.3
	26	3.64	23.77	72.59	27.4	1.38	15.96	82.66	17.3	3.47	22.47	74.06	25.9	8.01	35.75	56.25	43.8	4.01	23.91	72.07	27.9	3.40	23.69	72.91	27.1
	27	7.37	28.79	63.85	36.2	3.58	22.75	73.67	26.3	4.31	27.29	68.40	31.6	9.97	28.81	61.22	38.8	7.10	26.98	65.92	34.1	7.50	29.68	62.82	37.2
	28	5.52	28.01	66.47	33.5	2.35	19.83	77.82	22.2	2.30	21.37	76.34	23.7	5.40	31.45	63.15	36.8	3.65	25.23	71.12	28.9	6.84	29.96	63.20	36.8
	29	9.98	33.13	56.89	43.1	3.42	27.76	68.83	31.2	5.37	30.84	63.79	36.2	9.22	35.10	55.68	44.3	6.99	32.41	60.60	39.4	11.10	33.40	55.50	44.5
	30	5.94	23.47	70.59	29.4	2.09	16.73	81.18	18.8	1.35	20.76	77.89	22.1	1.40	15.20	83.39	16.6	1.58	16.06	82.36	17.6	8.15	27.22	64.63	35.4
	31	6.31	29.85	63.84	36.2	2.48	21.14	76.38	23.6	2.93	25.53	71.54	28.5	4.46	28.06	67.48	32.5	3.12	24.24	72.65	27.4	8.38	33.47	58.15	41.9
	32	5.36	26.72	67.92	32.1	2.78	21.66	75.55	24.4	2.03	18.36	79.61	20.4	2.01	17.10	80.90	19.1	2.29	18.95	78.75	21.2	6.46	29.50	64.04	36.0
ScotlandLA		7.36	29.31	63.33	36.7	4.13	24.82	71.05	29.0	5.94	28.86	65.20	34.8	6.25	28.49	65.26	34.7	5.54	27.52	66.94	33.1	9.13	31.05	59.82	40.2

## Appendix P

RCI Results 2014\_16 (4 years data for Unclassified Roads)

Authority	Random	Network				A Roads				B Roads				C Roads				All Classified Roads				U Roads			
	No	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI	Red	Amber	Green	RCI
Aberdeen	19	2.84	18.38	78.79	21.2	1.89	18.46	79.65	20.4	1.81	16.59	81.60	18.4	1.98	12.99	85.03	15.0	1.88	16.07	82.05	18.0	3.94	21.05	75.01	25.0
	15	3.68	21.25	75.07	24.9	2.18	20.82	77.00	23.0	1.72	18.26	80.02	20.0	1.74	17.08	81.18	18.8	1.83	18.24	79.92	20.1	6.01	25.05	68.94	31.1
	7	3.58	22.43	73.99	26.0	2.41	17.53	80.06	19.9	2.98	20.98	76.03	24.0	3.27	20.63	76.09	23.9	2.97	19.83	77.21	22.8	3.76	23.20	73.04	27.0
	26	3.64	23.77	72.59	27.4	1.38	15.96	82.66	17.3	3.47	22.47	74.06	25.9	8.01	35.75	56.25	43.8	4.01	23.91	72.07	27.9	3.40	23.69	72.91	27.1
	10	3.75	24.11	72.14	27.9	2.47	22.03	75.50	24.5	1.67	20.87	77.46	22.5	2.91	20.97	76.12	23.9	2.37	21.14	76.49	23.5	5.28	27.41	67.31	32.7
	22	4.90	23.99	71.11	28.9	1.74	18.20	80.06	19.9	3.74	28.31	67.95	32.0	3.92	23.15	72.93	27.1	3.40	23.45	73.15	26.8	6.57	24.59	68.84	31.2
	30	5.94	23.47	70.59	29.4	2.09	16.73	81.18	18.8	1.35	20.76	77.89	22.1	1.40	15.20	83.39	16.6	1.58	16.06	82.36	17.6	8.15	27.22	64.63	35.4
	25	4.45	26.92	68.63	31.4	2.34	18.06	79.60	20.4	3.57	24.42	72.01	28.0	3.67	26.81	69.53	30.5	3.23	23.32	73.45	26.5	5.44	29.86	64.69	35.3
	32	5.36	26.72	67.92	32.1	2.78	21.66	75.55	24.4	2.03	18.36	79.61	20.4	2.01	17.10	80.90	19.1	2.29	18.95	78.75	21.2	6.46	29.50	64.04	36.0
	1	4.64	27.97	67.39	32.6	3.56	23.20	73.24	26.8	5.46	28.17	66.38	33.6	3.25	26.68	70.07	29.9	4.07	26.07	69.86	30.1	5.05	29.35	65.60	34.4
	2	4.46	28.27	67.27	32.7	4.16	29.79	66.05	33.9	5.10	31.85	63.05	37.0	3.54	27.63	68.83	31.2	4.20	29.52	66.28	33.7	4.75	26.85	68.40	31.6
	23	4.55	28.67	66.78	33.2	2.71	24.81	72.48	27.5	4.52	30.08	65.40	34.6	4.41	30.51	65.08	34.9	3.84	28.37	67.79	32.2	4.92	28.83	66.26	33.7
	5	4.78	28.51	66.71	33.3	2.42	20.31	77.26	22.7	3.37	24.48	72.16	27.8	4.17	25.47	70.36	29.6	3.43	23.65	72.91	27.1	5.52	31.21	63.27	36.7
	28	5.52	28.01	66.47	33.5	2.35	19.83	77.82	22.2	2.30	21.37	76.34	23.7	5.40	31.45	63.15	36.8	3.65	25.23	71.12	28.9	6.84	29.96	63.20	36.8
	4	5.56	28.73	65.71	34.3	6.26	31.15	62.59	37.4	4.29	31.61	64.10	35.9	4.20	29.28	66.52	33.5	4.85	30.44	64.71	35.3	6.48	26.47	67.04	33.0
	11	5.91	29.52	64.57	35.4	3.09	23.44	73.47	26.5	2.72	20.25	77.03	23.0	5.09	25.27	69.65	30.4	3.65	23.63	72.71	27.3	6.72	31.62	61.66	38.3
	16	6.59	29.26	64.16	35.8	4.90	23.85	71.25	28.8	3.47	23.81	72.72	27.3	4.86	26.10	69.04	31.0	4.67	24.62	70.71	29.3	7.16	30.63	62.21	37.8
	27	7.37	28.79	63.85	36.2	3.58	22.75	73.67	26.3	4.31	27.29	68.40	31.6	9.97	28.81	61.22	38.8	7.10	26.98	65.92	34.1	7.50	29.68	62.82	37.2
	31	6.31	29.85	63.84	36.2	2.48	21.14	76.38	23.6	2.93	25.53	71.54	28.5	4.46	28.06	67.48	32.5	3.12	24.24	72.65	27.4	8.38	33.47	58.15	41.9
LA Average		7.36	29.31	63.33	36.7	4.13	24.82	71.05	29.0	5.94	28.86	65.20	34.8	6.25	28.49	65.26	34.7	5.54	27.52	66.94	33.1	9.13	31.05	59.82	40.2
	17	6.98	30.87	62.15	37.8	8.91	26.68	64.40	35.6	4.41	29.15	66.44	33.6	10.26	38.44	51.30	48.7	8.01	32.76	59.23	40.8	6.14	29.31	64.56	35.4
	21	8.53	30.37	61.09	38.9	1.83	18.91	79.26	20.7	7.36	27.05	65.59	34.4	4.44	30.57	64.99	35.0	4.25	25.12	70.64	29.4	14.00	37.07	48.94	51.1
	9	9.24	29.88	60.88	39.1	3.42	23.52	73.05	26.9	5.87	28.88	65.25	34.7	8.46	30.54	61.00	39.0	5.96	27.55	66.49	33.5	13.49	32.90	53.61	46.4
	13	7.89	31.27	60.85	39.2	1.76	17.02	81.22	18.8	3.64	27.40	68.95	31.0	6.84	24.84	68.32	31.7	4.89	24.14	70.97	29.0	9.52	35.15	55.33	44.7
	24	8.20	30.98	60.82	39.2	5.09	24.56	70.34	29.7	3.64	23.76	72.60	27.4	4.50	22.63	72.86	27.1	4.44	23.80	71.77	28.2	9.58	33.62	56.79	43.2
	18	8.33	31.05	60.62	39.4	2.49	18.80	78.71	21.3	5.01	29.22	65.77	34.2	7.95	32.31	59.73	40.3	5.51	27.93	66.55	33.4	10.97	33.96	55.07	44.9
	29	9.98	33.13	56.89	43.1	3.42	27.76	68.83	31.2	5.37	30.84	63.79	36.2	9.22	35.10	55.68	44.3	6.99	32.41	60.60	39.4	11.10	33.40	55.50	44.5
	20	11.43	32.73	55.85	44.2	4.50	26.53	68.98	31.0	8.29	33.33	58.39	41.6	8.98	33.43	57.59	42.4	7.03	30.70	62.27	37.7	16.57	35.09	48.34	51.7
	3	10.13	34.10	55.77	44.2	7.16	34.50	58.34	41.7	10.14	38.74	51.11	48.9	10.59	33.26	56.15	43.8	9.71	35.57	54.72	45.3	10.50	32.79	56.71	43.3
	8	7.42	37.14	55.43	44.6	7.99	30.25	61.76	38.2	6.87	32.67	60.45	39.5	5.77	42.61	51.62	48.4	7.12	34.17	58.70	41.3	7.79	40.86	51.34	48.7
	12	9.80	36.50	53.71	46.3	4.24	28.33	67.43	32.6	6.65	34.77	58.58	41.4	7.02	35.28	57.70	42.3	6.20	33.37	60.43	39.6	15.55	41.50	42.95	57.0
	6	12.48	34.38	53.15	46.9	5.16	28.57	66.27	33.7	4.65	29.52	65.83	34.2	8.39	34.05	57.56	42.4	6.59	31.54	61.87	38.1	20.57	38.27	41.17	58.8
	14	14.76	39.65	45.58	54.4	9.17	35.72	55.11	44.9	17.44	43.52	39.04	61.0	16.78	41.61	41.61	58.4	14.57	40.45	44.98	55.0	15.19	37.94	46.87	53.1

