

County Road Highway Maintenance Capital Budget: Progress on 2013/14 Schemes and the 2014/15 Programmes

Report of the Head of Highways, Capital Development and Waste

Please note that the following recommendations are subject to consideration and determination by the Cabinet (and confirmation under the provisions of the Council's Constitution) before taking effect.

Recommendations: That:

- (a) progress on 2013/14 capital funded Highway Maintenance schemes detailed in Appendices I and II to this report be noted;**
- (b) the capital funded highway maintenance programmes for 2014/15 as set out in Appendices III and IV be approved;**
- (c) detailed allocation of the available budget to schemes be determined by the Head of Highways, Capital Development and Waste on the basis of the Highways Asset Management Plan, and within the limits of the approved budget;**
- (d) authority to amend the programme to maximise the impact of the programme be delegated to the Head of Highways, Capital Development and Waste, within the agreed policy guidelines subject to consultation with the Cabinet Member for Highway Management and Flood Prevention for any budget changes to individual schemes exceeding £25,000.**

1. Summary

Programmes of capital funded highway maintenance schemes have been developed in accordance with the Highways Asset Management Plan to address the priority needs of the network within the available funding.

This report presents a progress report on the 2013/14 programme of capital funded schemes and information on the condition of carriageways for A, B, C and unclassified roads.

The report details proposals for capital funding of highway maintenance programmes in 2014/15. These include for investment in carriageways, footways, cycleways, drainage systems, road restraint systems, street lighting, bridges and other highway structures.

2. Background

Cabinet endorsed the Highway Asset Management Policy, Strategy and Plan at its meeting on 13 March 2013.

As the Local Highway Authority, Devon County Council has the duty to maintain a road network of 12,850 kilometres comprising:

- 970km principal (A) roads,
- 660km non-principal (B) roads,
- 4510km non-principal (C) roads,
- 6710km unclassified roads,

- over 4000km of footways,
- over 3500 bridges,
- retaining walls and highway embankments,
- road restraint systems,
- traffic signal installations,
- cycleways,
- over 80,000 street lights and illuminated signs and bollards.

There are basically three types of maintenance works undertaken:

- (a) Reactive repairs such as pot-hole filling, dealing with flooding, replacing road signs and markings, clearing vegetation which, if neglected, would pose a potential danger to road users. Additionally during the winter period precautionary salting and snow clearance are carried out as needed.
- (b) Routine maintenance such as gully emptying, grass cutting, cleaning and clearing of drainage pipes, ducts and channels.
- (c) Planned, programmed or structural maintenance, for example carriageway resurfacing, reconstruction and surface treatments, bridge and retaining wall strengthening, road restraint system renewal, drainage renewal, street lighting and traffic signals replacement.

This report deals with capital funding (c above), which is the investment in the highway network to keep the assets structurally sound, reduce risks to highway users and reduce long term maintenance costs.

Funding of all three types of maintenance works is closely linked. Neglect of revenue funded reactive and routine maintenance will reduce the service life of assets and will therefore tend to reduce asset value in time. Insufficient capital investment in the highway asset will lead to a fragile network, which is prone to failure, for example in severe weather conditions, thus placing extra demand on reactive safety defect repair work.

Revenue funding for 2014/15 is covered in a separate report to this Cabinet (HCW/14/20).

3. Asset Management Strategy

The Asset Management approach when applied to the management of Devon's Highway infrastructure provides a methodology that includes a systematic approach, which considers the whole of life costs of maintaining the highway assets.

The approach involves the optimisation and prioritisation of works based on assessed needs derived from the defined levels of service. It uses lifecycle planning to inform the optimal treatment at each stage of the assets life.

The Highway Asset Management approach enables better decision making, which takes account of the relationship between cost and performance. This in turn allows potential for the delivery of an improved level of service for the resources available or where insufficient budget is available to meet all needs, it can assist in ensuring that the effects of a reduction in the level of service is mitigated through the efficient deployment of available resources such that risks are identified, balanced and mitigated as far as possible.

The Asset Management Strategy endorsed in 2013, established that £64million a year is needed to prevent carriageway condition worsening. The current carriageway maintenance backlog is estimated to be £767million.

The level of funding available from the Department for Transport (DfT) Local Transport Plan grant is £34,692 million in 2014/15 for all highway features, not just carriageway structural maintenance.

4. Delivery Strategy

Carriageways:

A well maintained highway network is an essential requirement for the successful delivery of Devon County Council's Strategic Plan 2011-2015; in particular the pledge to maintain 96% of A and B roads in good condition. Schemes on the A and B road network have been identified for funding to maintain the current successful delivery of the Strategic Plan pledge.

The Non Principal Road Recovery Strategy has been used for some years to target important routes to settlements with a population of over 500 and linking communities, roads serving industrial estates, urban local distributor routes, and pre-salting routes not covered by the above. This strategy is helping to deliver a Strategic Plan objective of "connecting with Devon Communities", and will complete the link with winter service objectives, and the strategic target for B roads.

This strategy has so far tended to concentrate efforts on the non-principal classified network, and very limited funds have been available for structural maintenance on the rest of the minor road network. Where these routes are suitable for surface dressing this type of repair will be used in association with the required preparatory patching. The reactive safety defect repair regime and adherence to the cyclical maintenance regime (revenue funded) should keep the unclassified network usable, safe, and generally fit for purpose, although this is a major challenge for the service given the damage cause by severe weather events and the level of available revenue funding.

The strategy above will continue to be developed and will be subject to some local flexibility and "common sense" variation to treatment lengths.

The Asset Management approach is to carry out preventative maintenance, rather than invest in a "worst first" strategy. By carrying out preventative maintenance, as much of the network as possible can be held in a serviceable condition. The alternative (worst first) would cost more per unit area treated, and would lead to more of the carriageway network become critical such that it would require expensive corrective interventions.

Road Restraint Systems:

A prioritised programme of road restraint system replacement will continue to improve the containment capacity of existing systems.

Bridges and Highway Structures:

The programme to upgrade bridges on the principal roads to meet the 44 tonne gross vehicle weight capacity has been substantially completed.

A programme is proposed to strengthen up to five priority sub-standard bridges on lower category roads during 2014/15. These have either a very low carrying capacity or show significant signs of distress. Where appropriate, other substandard bridges are being managed using a risk-based approach developed by the Highways Agency and adopted by the County Council.

Two bridges were lost in the floods of December 2012 and will be replaced in 2014, a third one was badly damaged and will be replaced in 2015/16, with design taking place in 2014.

The effects of extreme weather events continue to impact on all highway structures with bridges which are vulnerable to scour at particular risk in extreme flooding events.

An exceptional inspection of bridges was undertaken in 2012/13 to identify any structures that have been affected by scour as a result of the high river levels. This was repeated in 2013/14 and is to be continued over the next 3 years, such is the size of the Bridge stock. Four significant scour protection schemes were completed during 2013/14. Forward design on a number of schemes identified from the previously mentioned scour assessment will progress to the construction phase during 2014/15.

There has been significant damage to retaining walls, highway embankments and cutting slopes. The latent effects of periods of heavy rain and saturated ground conditions compound this problem so a significant proportion of the highway structures budget has been assigned to strengthen or reinstate these. A significant programme of retaining wall strengthening is proposed in 2014/15, including six major schemes over £100k each.

Work continues on the assessment of modern post tensioned bridges, which require detailed inspections and assessments on an 18 year cycle. These structural assessments are necessary to help identify and prioritise essential works and to best maintain and improve the condition of the bridge stock.

The programme arising from the risk ranking of all bridge parapets continues, with mitigation works on high priority sites due for completion this year and further sites programmed for next year. Three schemes have been included in this year's forward design process for delivery in 2014/15.

The renewal and major maintenance programme to carry out bearing replacement schemes will continue but efforts will also be focussed on the inspection and assessment of essential bridge components, particularly bearings and joints to develop a prioritised replacement programme.

A major water proofing and joint replacement scheme is planned to be undertaken in 2015/16 on the A380 Teign Estuary Viaduct in conjunction with resurfacing work. The structures element is estimated to be in the region of £1.5 million.

Street Lighting:

A prioritised programme of replacing street lighting columns will continue to replace older vulnerable lighting columns to mitigate the risk of column failure.

5. Trends in Condition

Machine based ("SCANNER") carriageway condition surveys shows trends over the last few years. The survey reports lengths that are labelled green, (showing only minor deterioration), red (that should be considered for maintenance works immediately) and amber (indicating stages of deterioration in between). Figures 1, 2 and 3 attached indicate that Devon's A, B and C roads are relatively stable. On the A and B roads this reflects the focus of investment on delivering the pledge in the Council's Strategic Plan.

The trend on C roads has been influenced by the preventative approach deployed on this part of the network, using surface dressing as a cost effective treatment. However, C roads have far less percentage green and far more percentage red than A and B roads. They are

of weaker construction and therefore will be far more susceptible to extreme weather conditions and pothole formation over the coming months and years.

Unclassified roads combined with C roads, make up 87% of Devon's road network. Analysis of the unclassified road network shows a higher proportion of this network is in the red condition, at 32%, and a significant proportion is in the amber condition.

A key issue for road users has been the large number of potholes that have appeared throughout the network, largely caused by water penetration, high water tables and the freeze/thaw cycles. The Council repaired nearly 180,000 potholes in 2010, (an unprecedented number) 120,000 in 2011, 115,000 in 2012 and 90,000 in 2013. Therefore the upward trend appears to have been reversed by doing permanent repairs to the most susceptible roads using the DfT's winter damage money, the DfT's Local Transport Plan maintenance grant and the Council's own resources.

Following the 2013 and 2014 storms and flooding large numbers of potholes are again appearing, so a significant challenge remains. It is clear that the general condition of a large part of the highway network is such that it is vulnerable to the formation of potholes and will remain so unless sufficient money is invested to repair the damage permanently and then keep pace with normal wear and tear and deterioration.

6. Analysis

Devon's highway network represents the largest capital asset managed by the Council. The asset has been valued at £10.2 billion (Gross Replacement Cost) under CIPFA guidance. This includes all highway assets such as footways, bridges and street lighting. Carriageways (road surfaces and the underlying construction layers) form by far the greatest part of Devon's highway assets by value. The value of carriageways alone is £8.5 billion, with a current total depreciation on this figure of £765 million, which is in line with previous calculations for the value of the backlog in road maintenance work. A certain level of backlog is to be expected and can be managed, but it is important that it is not allowed to increase each year. Unfortunately the cumulative depreciation has increased by over £50 million for each of the last 3 years and to stop this happening and keep the roads in their current overall condition would cost an average of approximately £64 million each year, as calculated using asset management models. The current budget does not provide for this, and deterioration on some classes of road is inevitable.

Devon's Strategic Plan includes the pledge to keep 96% of A and B roads in good condition. This will continue to be addressed by implementing a suitable programme of structural maintenance works, including surface dressing to prevent further deterioration of 'amber' sites.

Additionally during 2014/15 a proportion of the available funding will be required to repair storm damaged surfaces that have suffered a high number of potholes.

This means the money left after funding the pledge for A & B roads may well be insufficient to prevent a significant deterioration in C class and unclassified roads.

7. Capital Highway Maintenance Programmes: 2013/14

Appendix I shows progress with the Highways programme.

Appendix II shows progress with the Bridges and Highway Structures programme.

8. Capital funded Highway Maintenance Programmes for 2014/15

Devon's allocation for 2014/15 is £34.692 million. This includes an additional allocation of £3.2 million, which DfT allocated for winter damage.

It is proposed to allocate the available funding to Highway Capital Maintenance programmes as outlined in Appendix III and Appendix IV.

Key elements include:

(i) Highway Structural Maintenance (HSM): Principal Roads:

£1.6 million to specific larger schemes with a high Value for Money Index and schemes which will rectify carriageways with potential skidding defects.

£2.4 million on surface dressing and preparatory patching works. This will surface dress carriageways in 2014/15 and prepare for the 2015/16 dressing programme.

£1.2 million on surface treatments to repair winter damaged roads.

All will target "red" and "amber" SCANNER data and help to further contribute to the County Council's Strategic Plan pledge.

(ii) HSM Non-Principal Roads:

£13.6 million has been allocated to make further progress on the Non Principal Road Recovery Strategy and to undertake preparatory patching and surface dressing on local roads. This will support the strategic pledge for 'B' roads help maximise repairs to the more minor network.

£1.6 million on surface treatments to repair winter damaged roads.

(iii) Footways

Footways will be kept in a condition that is reasonably safe and commensurate with established usage. A significant programme of footway slurry sealing is planned. As this is a cost effective treatment for repairing worn surfaces, it is hoped that a greater area of footway can be treated for the equivalent budget.

(iv) Highway Structures

Extreme weather events have led to numerous failures of retaining walls, cuttings and embankments. It is therefore proposed to target an increased proportion of the overall on retaining walls and failed embankments supporting the highway.

The programme of bridge strengthening continues where good value can be demonstrated by intervention before more expensive repair is required.

The programme to prioritise and assess the potential of scour on river bridges will continue with both targeted work on higher risk sites and detailed assessment to determine a forward programme on others.

The replacement of limited life components (mostly bearings and expansion joints) continues, with specific works being targeted on the A380 bridges as the useful working life of bearings and expansion joints comes to an end.

(v) Street Lighting and Traffic Signals

A replacement programme for streetlight columns which have deteriorated through age will continue in association with work to reduce carbon footprint generated by Devon's streetlights.

Due to limited funding there may be instances where deteriorated columns are removed and not replaced until such time as funding becomes available. The opportunity will be taken, where possible to switch lanterns to part night lighting in accordance with the approved Policy.

A significant proportion of Devon's traffic signal equipment is approaching the end of its design life, and a replacement programme is being developed. This will include the use of LED signal aspects, and extra low voltage systems, which have the benefits of greater light integrity, reduced power consumption, and consequently reduced revenue expenditure and carbon emissions.

9. Options/Alternatives

The programme for 2014/15 optimises the use of the available funding to maximise repair work on the network. Any reduction in the programme would further compromise the County Council's ability to maintain the network in a reasonably safe condition and work towards the objectives of the Council's Strategic Plan and the Devon Local Transport Plan.

An alternative to the Asset Management Plan preventative regime would be to repair roads on a 'worst first' basis. However this would cost about a third more over time to maintain road condition. In going against sound asset management principles it could also adversely affect future financial settlements from DfT who have said that they will take this into account in the future.

10. Consultations

The results of the 2013 National Highways and Transport (NHT) Public Satisfaction Survey reflect public perception of performance, importance and desire for various activities to be funded. Analysis shows that the condition of the highway network and the speed and quality of repairs are important to the public.

The National survey shows that the level satisfaction with the condition of the highway in Devon is low at 37.3%. However, compared to other highway authorities included in the survey Devon is a relatively high performing authority.

The complete survey can be seen at <http://nhtsurvey2013.econtrack.co.uk>

11. Financial Considerations

Historic levels of capital funding for highways assets, provided by the DfT through Local Transport Plan grant allocations, are as follows:

- 2009/10, £28.500m;
- 2010/11, £31.780m;
- 2011/12, £36.883m;

- 2012/13, £35.123m;
- 2013/14, £39,442m.

The DfT has made one off special capital grants to the County Council in previous years where winter damage was evident, which is included in the above figures.

The capital funding of in 2014/15 is £34,692m and will be met from the Department for Transport Local Transport Capital Block Funding Grant.

Four of the last five winters have been more severe in terms of adverse weather events than any in the last 30 years. This year has seen extreme rain fall events and this has been interspersed with cold spells. The effects are felt not just in the cost of dealing with the events as they arise in their immediate aftermath but also in serious ongoing attrition of the surface and structure of the County's highways.

This is the last year of a four year grant for Local Transport Plan maintenance block which provides known funding allowing medium term planning, albeit at a level well below that needed to arrest asset depreciation. Future grant funding has yet to be released in detail by the Department for Transport.

12. Sustainability Considerations

The ability to efficiently transport people and goods around the County underpins Devon's economy and has a direct impact on the quality of our environment.

When maintenance work is undertaken it is managed to ensure that the effect on the surrounding environment is kept to a minimum. On carriageways, surface treatment and reconstruction work is tightly controlled to achieve long term durability. Recycled materials and secondary aggregates are used whenever possible. When carriageway surfacing incorporating primary materials is required, a durable low noise material such as stone mastic asphalt is considered.

Construction contracts include for recycling plans to ensure that the use of natural resources is reduced where recycled alternatives exist.

13. Carbon Impact Considerations

The carbon impact of this highway maintenance programme through the manufacture and planning of the materials is likely to be offset by reduced emissions from highway users utilising a better maintained network, and using suitable alternatives such as walking and cycling.

14. Equality Considerations

Where relevant to the decision, the Equality Act 2010 Public Sector Equality Duty requires decision makers to give due regard to the need to:

- eliminate discrimination, harassment, victimisation and any other prohibited conduct;
- advance equality by encouraging participation, removing disadvantage, taking account of disabilities and meeting people's needs; and
- foster good relations between people by tackling prejudice and promoting understanding.

Taking account of age, disability, race/ethnicity (includes Gypsies and Travellers), gender and gender identity, religion and belief, sexual orientation, pregnant women/ new and breastfeeding mothers, marriage/civil partnership status in coming to a decision, a decision maker may also consider other relevant factors such as caring responsibilities, rural isolation or socio-economic disadvantage.

This may be achieved, for example, through completing a full Equality Impact Needs Assessment/Impact Assessment or other form of options/project management appraisal that achieves the same objective.

According to the Place Survey 2008 Road and Pavement Repairs' was the highest concern in terms of 'what needs improving most' for over 75s. In a survey in 2008 with disabled people 35.5% said they had difficulty getting around and saw improvements to roads and pavements as a priority. Although not unlawful direct discrimination, poor road conditions could disadvantage people with physical disabilities/health conditions who experience pain or discomfort on bumpy surfaces. Older people have a greater risk of tripping and falling on pavements that are in poor condition, the consequence of which is often broken hips, wrists and ankles and other physical injury. Fear of falling in the highway is a significant issue for older people wishing to maintain their freedom to venture out of their homes unaided. Women in particular are most at risk with one in three women and one in twelve men over 50 affected by osteoporosis. Fractures as a result of falls occur most commonly in the hip, spine and wrist. There were almost 1,000 hip fractures amongst over 65s in Devon in 2007/8. Improved transport infrastructure normally improves journey times and would enable more people to travel more easily for access to employment, education and leisure, although may also contribute to some traffic related adverse impacts such as noise and air pollution. Suitable footways will benefit vulnerable pedestrians. Related impacts are discussed in the highways revenue budget impact assessment.

Monitoring of the above impacts will be undertaken through three mechanisms:

- 1) The annual National Highways and Transportation (NHT) Survey. This is a good benchmark as the survey reflects national trends. So for example this year, Devon is in the top quartile (of County Councils in England) for "condition of roads". However the satisfaction level to attain being in the top quartile is only 35%, down 5 percentage points on last year. So nationally the satisfaction of road condition has dropped, not just in Devon.
- 2) The data obtained from the Customer Service System which monitors customer contacts for the County Council. This has shown historically downturns in customer satisfaction, which are often reflected nationally as above. This monitoring also highlights "other" issues such as adverse weather. For example, customer contacts in 2011 were 73,600 with 95,700 in 2012, a 30% increase reflecting the various storm events.
- 3) Data on the number and intensity of safety defects and other urgent maintenance interventions.

15. Legal Considerations

The lawful consequences of the recommendations have been considered in the preparation of this report.

The reduction in the revenue allocation will put more pressure on the amount and type of work that will be completed in the capital budget. This will lead to an overall reduction in

maintenance and potential road closures, particularly on the minor part of the network. This may be legally challenged by local residents and other road users.

There is also likely to be an increase in user dissatisfaction and complaints which could lead to challenges to the Authority under Section 56 of the Highways Act.

A reduction in structural maintenance will also result in more safety defects that will lead almost inevitably to an increase in third party claims and potentially litigation.

16. Risk Management Considerations

The proposals contained in this report have been assessed and all reasonable actions are taken to safeguard the Council's position.

The cumulative reduction in the revenue budget has significant implications for this capital allocation. Inability to undertake enough planned and general preventative maintenance work will result in an increased depreciation to the highways asset. This will lead to increased deterioration and defects and as a consequence. We will get more safety defects with the potential for more claims, which will put pressure on revenue and staffing budgets.

Where risks have been identified such as those associated with cost inflation or inclement weather, which could disrupt the capital programme by causing higher than anticipated costs or delays respectively, the implications have been taken into account in preparing this report. This includes the provision for reasonable contingencies in the estimates for capital highway and bridge maintenance schemes.

17. Public Health Impact

The cumulative reduction in budgets could also have an impact on public health with reduced maintenance having an effect on sustainable travel alternatives, and potentially more injuries resulting from crashes, trips and falls.

18. Reasons for Recommendation/Conclusion

The DfT capital settlement for 2014/15 provides funding towards the Strategic Plan objectives and gives further opportunity to help address the current backlog of outstanding highway maintenance work. However, it should be noted that it only provides funding to 36% of annual depreciation. It is also important that the capital funding for highway maintenance from central government is supported by a robust revenue allocation, as the commitment by the County Council is being monitored in this respect and could influence future capital settlements.

The proposed programme is designed to make best use of the available financial resources using the Cabinet endorsed Asset Management approach.

David Whitton
Head of Highways, Capital Development and Waste

Electoral Divisions: All

Cabinet Member for Highway Management and Flood Prevention: Councillor Stuart Hughes

Strategic Director, Place: Heather Barnes

Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Ref.
None		

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**Appendix I
To HCW/14/19**

Highway Structural Maintenance Programme 2013/2014

Road No	Scheme Name	County Electoral Division	Scheme Total £'000	Comments
	Overprogramming from 2012-13 <i>Principal Roads</i>		1,995	
A399	Blackmoor Gate to Friendship Farm	Chumleigh & Swimbridge/Combe Martin Rural	500	Complete
A390	Boughthayes	Tavistock	21	Complete
A375	Synderborough House to Knapplands Phase 1	Ottery St. Mary Rural	51	Complete
A375	Synderborough House to Knapplands Phase 2	Ottery St. Mary Rural	247	Complete
A361	Bolham Roundabout - Tiverton	Tiverton West	233	Complete
A3072	Culvenhayes to Greenhill X - Sampford Courtnay	Hatherleigh & Chagford	203	Feb-2014
A3072	Jacobstowe	Hatherleigh & Chagford	44	Feb-2014
A3072	Underdown Farm to Cliston Lane	Hatherleigh & Chagford	50	Feb-2014
A386	New Road to Longbridge - Bideford	Bideford East	21	Complete
A388	Chapel Street - Holsworthy	Holsworthy Rural	25	Feb-2014
A379	Combe Road, Dartmouth	Dartmouth & Kingswear	8	Complete
A38	Maidendown to Burlescombe	Willand & Uffculme	98	Feb-2014
A386	Kitts Bridge	Yelverton Rural	7	Feb-2014
A361	Gornhay	Tiverton East	10	Complete
A3052	Bowd to Core Lane	Sidmouth Sidford	6	Complete
A379	Ashford	Yealmpton	9	Feb-2014
	Minor schemes		25	
A396	Road restraint system Exeter Inn	Tiverton West	41	Underway
A381	Road restraint system Halwell to Totnes	Thurlstone, Salcombe & Allington, Totnes Rural	367	Underway
A381	Road restraint system Newton Road	Teign Estuary	55	Feb-2014
A377	Road restraint system Eggesford Station to Tonyfield Wood	Newton St Cyres & Sandford	43	Jan-2014
A381	Road restraint system Teignmouth Road	Teign Estuary	9	Feb-2014
A396	Road restraint system White Hall Cottage to Bickleigh Road	Tiverton West	29	Feb-2014
A379	Road restraint system Noss Marina to Noss Plantation	Dartmouth & Kingswear	26	Feb-2014
A377	Road restraint system Codden Hill Cross to New Bridge Cross	Chumleigh & Swimbridge	7	Feb-2014
A386	Road restraint system Little Torrington		2	Feb-2014
A384	Road restraint system Austins Bridge		5	Feb-2014
A379	Road restraint system Devon Motel to Bridge Road		4	Feb-2014
A385	Road restraint system Rattery Cross to Culver Park		4	Feb-2014
A385	Road restraint system Marley Head to Edeswell Farm		5	Feb-2014

Road No	Scheme Name	County Electoral Division	Scheme Total £'000	Comments
	SCRIM remedial works		1,114	Mar-2014
	Surface Dressing 2013/14		3,813	Complete
	Pre Patching for 2014/15 Surface Dressing		1,199	Mar-2014
	Pre Patching 2013/14 Surface Dressing		696	Complete
	<u>Non-Principal Roads</u>			
C28	Non-Principal Road Recovery Programme	Honiton St Pauls	2,493	Mar-2014
	Seven Mile Straight		250	Complete
	Exeter Micro Asphalt Programme		175	Complete
	Exeter City Centre		174	Complete
	Surface Dressing 2013/14		10,334	Complete
	Pre Patching 2014/15 Surface Dressing		2,954	Feb-2014
	Pre Patching 2013/14 Surface Dressing		1,854	Complete
B3137	Road restraint system Cruwys Morchard Woods	Newton St Cyres & Sandford	534	Underway
B3227	Road restraint system Black Cat	Tiverton West	465	Underway
B3193	Road restraint system Whetcombe Barton	Chudleigh Rural	310	Feb-2014
L4409	Road restraint system Hestow Road,	Kingsteignton	18	Feb-2014
U2808	Road restraint system Venbridge Hill (A30 Over bridge)	Crediton Rural	8	Complete
C411	Road restraint system West Lodge to Humber Lane	Teign Estuary	15	Feb-2014
C156	Road restraint system Gages Farm to Furzeleigh Farm		39	Feb-2014
C5	Beatland Corner to Lee Moor Wotter		12	Feb-2014
C168	North Park Road		11	Feb-2014
B3230	Shirwell Cross		3	Feb-2014
	<u>All Roads</u>			
	Pre Surface Dressing Cleaning/Design		925	
	Wet/Dry collision sites		32	Complete
	High skid resistance surfacing		1,202	Underway
	Carriageway Condition Surveys		259	
	Material Testing		175	
	Programme Delivery Group		1,007	
	Forward design		91	
	Footways		809	
	Cycleways		150	
	Street Lighting Columns		500	
	Drainage		1,508	

Road No	Scheme Name	County Electoral Division	Scheme Total £'000	Comments
	Highway Structural Maintenance Programme		37,279	
	Funded by: HSM/LTP Settlement Revenue contribution to Capital		36,568 711	
	Total		37,279	

Bridge Assessment & Strengthening Programme 2013/14

Road	Scheme Name	County Electoral Division	Estimate £'000	Comments
	<u>Bridge Strengthening Schemes</u>			
B3344	Bovey Bridge Cantilever Footway	Bovey Tracey Rural	50	Consultations ongoing
A379	Countess Wear Bridge Refurbishment, Exeter	Priory & St Leonards	10	Completed
UC	St Swithins, Sandford No 1719	Newton St Cyres & Sandford	65	Completed
A381	Newton Abbot Station f/b No 3817 Replacement	Newton Abbot South	30	Design ongoing
C472	Taw Bridge, North Tawton No 0128	Hatherleigh & Chagford	125	Design ongoing
C131	Dunkeswell Bridge No 2309	Honiton St Pauls	20	Completed
C476	Kersham Bridge Nr Eggesford No 3439	Chulmleigh & Swimbridge	100	Completed
A3015	Frog Street Bridge, Exeter	Exeter	60	Completed
C193	Wisdom Bridge, Cornwood No 0447	Bickleigh & Wembury	20	Consultations ongoing
Z116	Higher Buckfast Mill Leat, Buckfastleigh No 0553	Ashburton & Buckfastleigh	40	Completed
	Bridge Scour Protection Programme		225	Completed
	Bridge Assessments and Post - tensioning Programme		100	Ongoing
	Substandard Parapets Programme		275	Completed
	Retaining Walls Programme		1,000	Completed
	Joints & Bearings Replacement Programme		220	Completed
	Bridge Re-waterproofing Programme		100	Completed
	Corrosion Protection Programme		225	Completed
	Traffic & Signing		25	Completed
	Rock face Management		100	Completed
	Forward Design Programme		50	Completed
	Management of Sub-standard Bridges		25	Completed
	Retentions		9	Ongoing
Bridge assessment and strengthening programme			2,874	

**Appendix III
To HCW/14/19**

Highway Structural Maintenance Programme 2014/2015

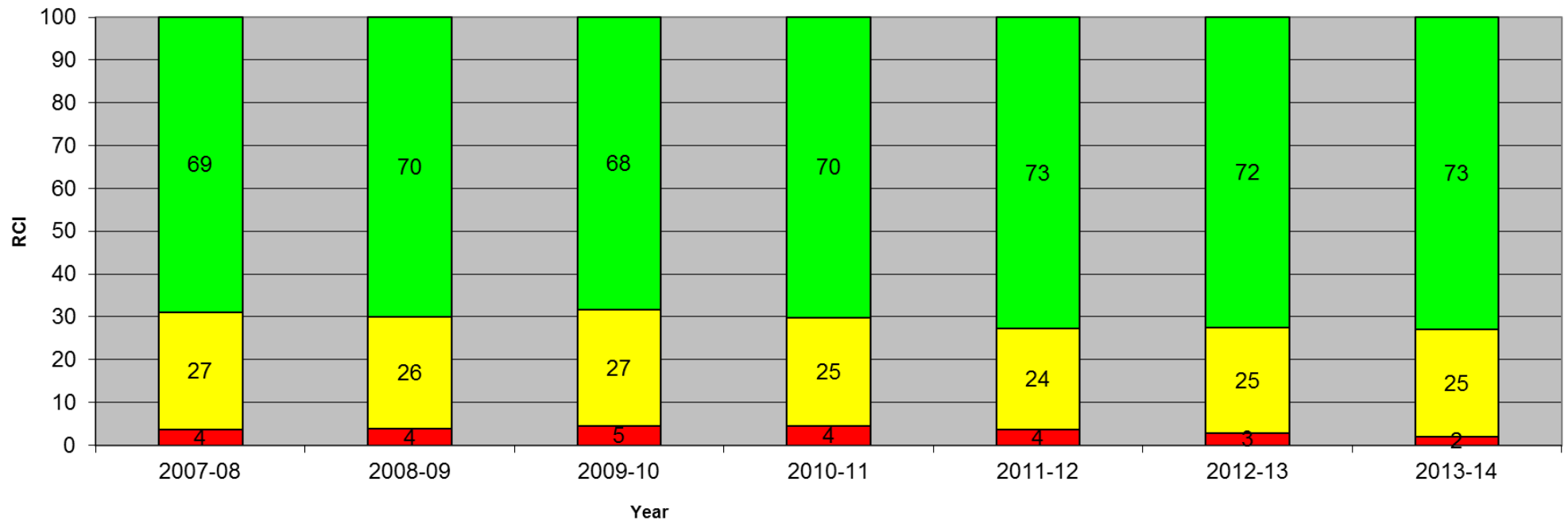
Road	Scheme Name	County Electoral Division	Ranking Value	Treatment Type	Estimate £'000
	Commitments /overprogramming				0
A386	Plymouth Road - Tavistock	Tavistock	27.2	Micro asphalt	49
A3124	River Torridge - St Giles in the Wood	Torrington Rural	23.7	Resurface/Overlay	58
A379	Myrtle Hill to Dawlish Road - Teignmouth	Teignmouth	23.6	Resurface/Overlay	45
A386	The Quay - Appledore	Northam	19.3	Micro asphalt	10
A3072	Exbourne (Jacobstowe to Sampford Courtenay) 5	Hatherleigh and Chagford ED		Resurface/Overlay	274
	<u>Principal Roads</u>				
	Principal roads recovery at winter damage sites				1,200
	SCRIM Remedial Works				1,162
	Surface Dressing				1,469
	Pre Patching for 2015/16 Surface Dressing				884
	<u>Non-Principal Roads</u>				
	Non-Principal Road Recovery Programme				2,139
	Exeter Surface Treatment Programme				250
	Exeter City Centre				250
	Surface Dressing				6,925
	Pre Patching 2015/16 Surface Dressing				3,798
	Pre Patching 2014/15 Surface Dressing (winter)				500
	Minor roads recovery at winter damage sites				1,608
	<u>All Roads</u>				
	Pre Surface Dressing Cleaning / Design				800
	Wet/Dry Collision Sites				250
	High Skid Resistance Surfacing Programme				900
	Carriageway Condition Surveys				315
	Forward Design and Investigation				200
	Material Testing				300
	Programme Delivery Group				1,000
	Footways				1,500
	Cycleways				250
	Road restraint systems - strategy priority 1 and 2 schemes				1,102
	Road restraint system A396 Exeter Inn/Cove				420
	Road restraint system B3227 Black Cat Stage 2				490
	Road restraint system B3193 Whetcombe				258
	Road restraint system B3137 Cruwys Morchard Woods phase 2				101
	Road restraint system A377 Codden Hill phase 2				48
	Road restraint system C407 Milestone				13
	Road restraint system C337 Old Exeter				13
	Road restraint system L1507 Woodway				13
	Drainage works				1,582
	Cattle Grid structural repairs				136
	Street Lighting Columns				500
	HIGHWAY STRUCTURAL MAINTENANCE PROGRAMME				30,812

**Appendix IV
To HCW/14/19**

Bridge Assessment & Strengthening Programme 2014/15

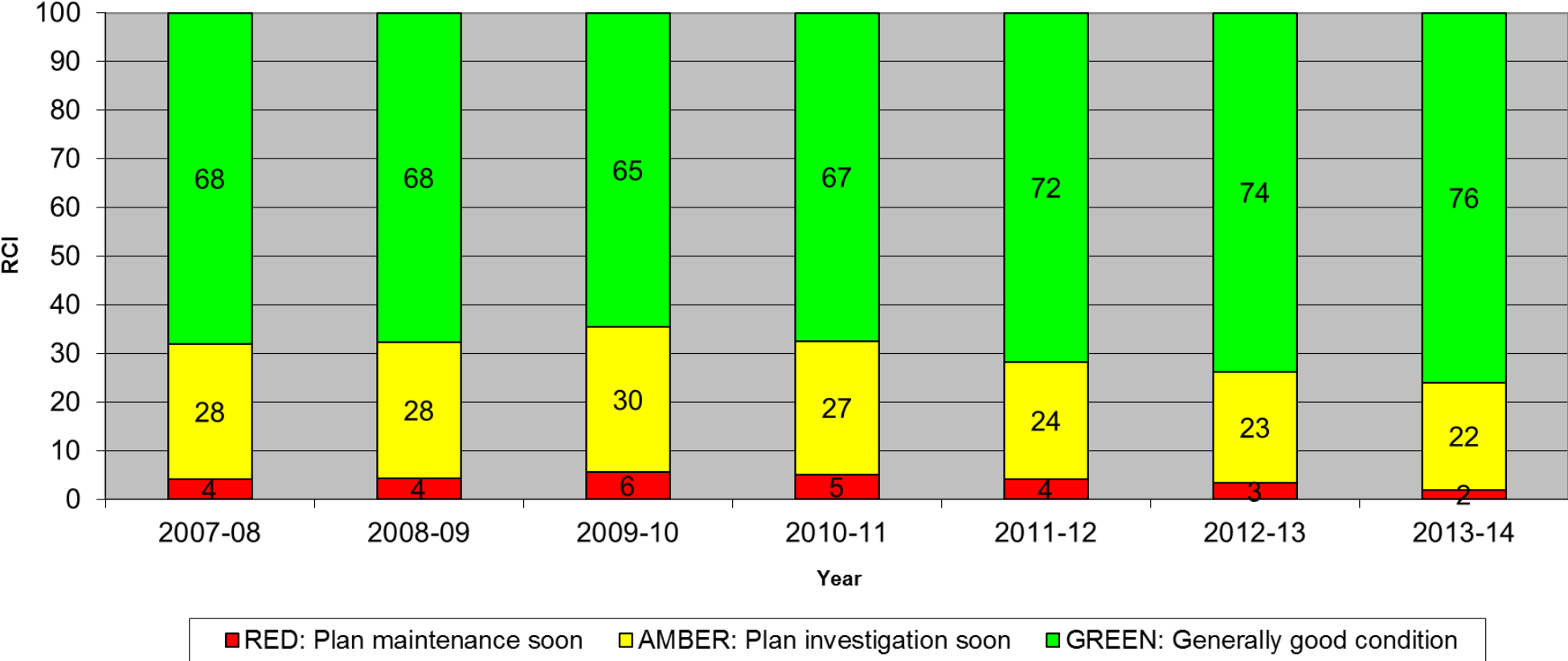
Road	Scheme Name	County Electoral Division	Estimate £'000
	<u>Bridge Strengthening Schemes</u>		
C120	Teigngrace Causeway	Kingsteignton & Newton Abbot	50
B3344	Bovey Bridge Cantilever Footway	Bovey Tracey Rural	20
A381	Newton Abbot Station f/b No 3817 Replacement	Newton Abbot South	45
C472	Taw No 128	Hatherleigh & Chagford	230
C193	Wisdom Bridge No 447 - widening		90
	Various Legacy Work		
R2508	Collard Bridge	Chulmleigh & Swimbridge	350
C187	Waterstave Bridge	Cullompton Rural	360
F120	Alma Footbridge advance design	Sidmouth & Sidford	25
	Holding code		670
	Various Retaining Wall Work		
A399	Bray Quarry -550m	South Molton Rural	180
B3193	Whetcombe Barton landslip and VRS	Chudleigh Rural	350
B3193	Lyneham Wood Landslip	Chudleigh Rural	230
	Holding code		535
	Scour Protection		
B3222	Exe Bridge Dulverton	Tiverton West	110
	Stage 1 Assessments		50
	Sub-Standard Parapets		
U2201	Norleigh Bridge	Hatherley & Chagford	70
A377	Kingford Bridge	Chulmleigh & Swimbridge/Torri	20
	Principal Inspections		200
	Management of Sub-Standard Bridges - BD79		25
	Assessments		
	Post Tensioned Special Inspections		50
	BD101 - re-assessments		50
	Corrosion Protection		
	Deferred		
	Asset Management Data Collection - Retaining walls and Embankments		40
	Traffic & Signing - replacing damaged/obsolete signs at bridges		25
	Joints & Bearings		
A380	A380Teign Estuary Viaduct - contract prep		10
A379	Shaldon Bridge Bearing Refurbishment	Teign Estuary	50
	Waterproofing		
X106	Hoemoor Farm	Axminster / Honiton	35
A380	A380 Teign Estuary Viaduct - contract prep		10
	Bridge assessment and strengthening programme		3,880

Devon A Class Road Condition Index (RCI) by Year

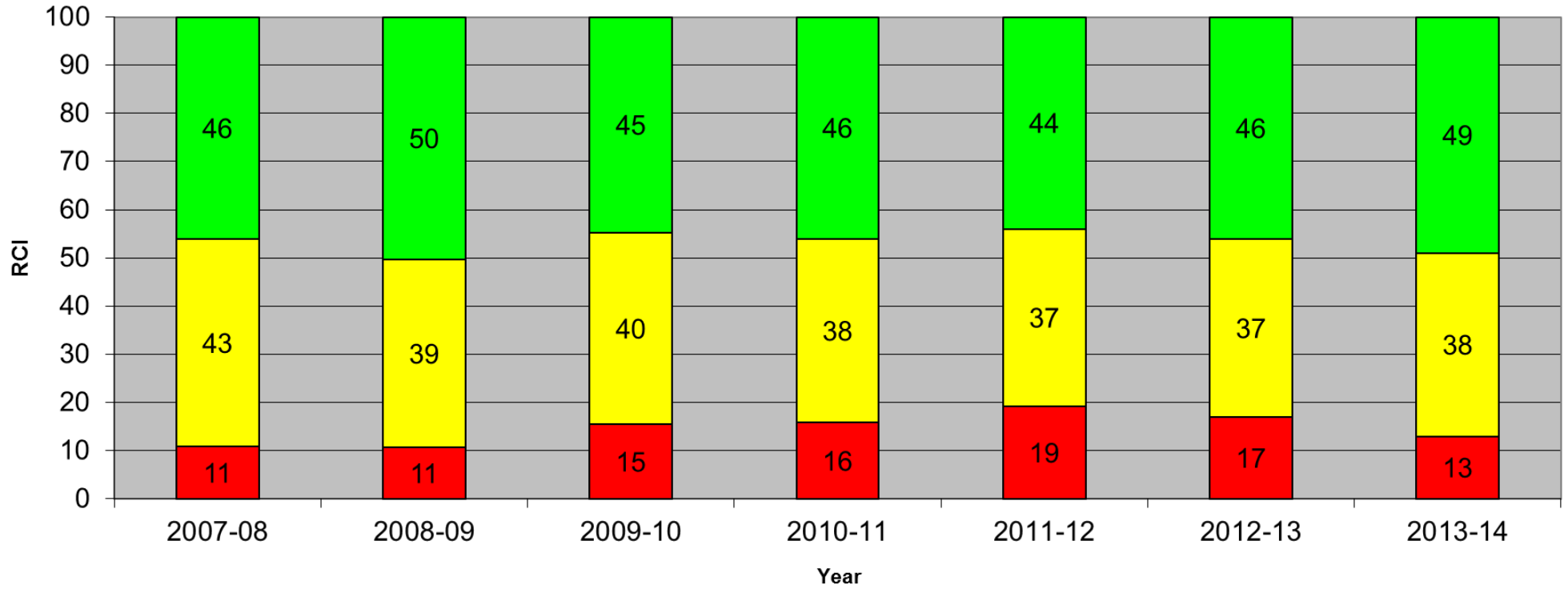


■ RED: Plan maintenance soon ■ AMBER: Plan investigation soon ■ GREEN: Generally good condition

Devon B Class Road Condition Index (RCI) by Year



Devon C Class Road Condition Index (RCI) by Year



■ RED: Plan maintenance soon ■ AMBER: Plan investigation soon ■ GREEN: Generally good condition