

Highway Structural Maintenance (HSM) and Bridge Assessment and Strengthening (BAS): Progress on 2010/11 Schemes and 2011/12 Programmes

Report of the Executive Director of Environment, Economy and Culture

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: It is recommended that:

- (a) progress on 2010/11 schemes detailed in Appendices I and II to this report be noted;**
- (b) the strategy for delivery of the 2011/12 HSM/BAS programmes as described in this report and set out in Appendices III and IV be approved;**
- (c) detailed allocation of the available budget to schemes on principal and non-principal roads be determined by the Executive Director of Environment, Economy and Culture on the basis of priorities identified from technical surveys and inspections, the recovery strategy, 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 Executive Director of Environment, Economy and Culture, within the agreed policy guidelines subject to the approval of the Cabinet Member for Highways and Transportation for any budget changes to individual schemes exceeding £25,000.**

1. Summary

This report covers Highway Structural Maintenance (HSM) and Bridge Assessment and Strengthening (BAS), giving a progress report for 2010/11 and outlining the programme for 2011/12. The report also gives an indication of the technical assessment methods which have been used to determine how the funding should be allocated.

2. Background

- (i) Since 1992 HSM and BAS has been funded as part of the supported capital programme.**

The HSM and BAS programmes have the objectives of achieving sustainable maintenance of strategic routes and strengthening the highway to carry 44 tonne vehicles, which have been allowed to travel on the country's roads since 1999. Targeting and carrying out this maintenance effectively and efficiently, whilst integrating policies for freight, public transport, walking and cycling, will enable the County Council to demonstrate that it applies the principles of good asset management to all its highway and transport assets that are needed to meet the objectives of the Devon Local Transport Plan (DLTP). A well maintained highway network is an essential requirement for the successful delivery of Devon County Council's Strategic Plan 2009 - 2013, in particular the pledges to reduce the number of potholes by 30%, and maintain 96% of A roads and 90% of B roads in good condition, by 2013. 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.

In recognition of their importance to the economy, the strategy first gave emphasis to principal roads, but from 2003 the non-principal road recovery programme was

designed to address the considerable challenge of maintaining the 11,800 km of non principal classified and unclassified roads in the County in a way that was affordable and would meet the objectives of the DLTP.

- (ii) The Devon Citizen's Survey indicates that the standard of maintenance on some parts of the network still falls below the reasonable expectation of road users.
- (iii) The last two winters (and this one so far) have been more severe in terms of adverse weather events than any in the last 30 years. 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. Members will already have observed an increase in potholes breaking out. With waterlogged and frozen ground and continuing low temperatures this problem is expected to increase substantially over the next few months. The current year's maintenance budgets have been put under great strain as a result of this year's weather. Its consequences will continue to cause severe problems in 2011/12.
- (iv) The reduction in the 2011/12 revenue maintenance budget has a significant implication for planned and preventative maintenance, and this will impact on the work delivered via this capital allocation.
- (v) Every year an assessment is made of relative maintenance priorities to determine minimum funding for essential services. The detailed allocations are made on a relative needs basis using inventory information and taking account of highway condition survey data from the Council's Pavement Management System.

3. Strategy

- (i) The condition of roads is assessed using best value performance indicators specified by Government and local performance indicators. Road surface condition is measured using the SCANNER (Surface Condition of the National Network of Roads) device which detects defects like rutting, cracking and bumpiness. This is the current state of the art in automated road condition surveys. The score processed from the survey estimates the percentage of the network requiring maintenance and is the basis of the reporting of the National Indicators, as shown in Table 1 below.

Skidding resistance is another factor that has an influence on road safety. Table 1 also includes the local indicator for Principal roads where skidding resistance does not need to be investigated.

Table 1 – Summary of Condition of Classified Roads

Indicator	2005/06 %	2006/07 %	2007/08 %	2008/09 %	2009/10 %	Provisional 2010/11 %
NI 168 SCANNER Principal Roads – Percentage of the network requiring treatment	6	6	4	4	5	4
NI 169 SCANNER Non Principal Classified Roads – Percentage of the network requiring treatment	8	15	10	10	14	14
Local Indicator SA2(b) Skidding resistance – Percentage of the Principal Road network where skidding resistance does not need to be investigated.	80	83	79	90	93	96

- (ii) Devon's Strategic Plan 2009-2013 includes the following pledges:

- to reduce the number of potholes by 30% by 2013 (baseline 2010);
- 96% of A roads and 90% of B roads will be in good condition by 2013.

Currently, approximately 130,000 potholes that are considered to be a potential safety defect have been found this year (since 1st April 2010). Recent events indicate that this will be significantly exceeded by year end. A reduction of 30% in the number by 2013 would require significant maintenance work of both a reactive and preventative nature, mainly in the form of permanent pothole repairs, patching and surface dressing work.

- (iii) The combination of revenue budget reductions, construction inflation and the effect of the severe weather mean that the County Council will face significant challenges to its ability to manage the network in the coming year. The examination of relative priorities indicates a series of pressures. Although, where possible and appropriate, certain maintenance operations formerly funded from revenue will be financed from the capital settlement for highway structural maintenance, it must be remembered that this capital allocation is expected by the Department for Transport to be additional to highway authority revenue budgets and not used as an alternative. Nevertheless, pressure on the revenue budget forces the proposal to finance all reconstruction, surfacing, surface dressing and some patching from capital, leaving some planned patching as the only structural maintenance funded from revenue.

The strategic pledge relating to the condition of A & B roads will be addressed by implementing suitable annual programmes of structural maintenance works. The choice of treatment and location of the works will be selected by applying good asset management principles, using the Council's Pavement Management System to achieve best value for money in enabling the Council to help to meet its pledges and also manage the condition of the rest of the network.

Long term investment needs to achieve defined outcomes in terms of the condition of Devon's highway network and have been calculated by using a financial model developed by the Council's consultants, WDM Ltd. To summarise, it shows that an average annual investment of £50-60 million would be required for all types of structural maintenance (resurfacing and strengthening) to maintain all classes of road in the same condition as they are now, expressed as the percentage of A, B, C class and unclassified roads in need of repair. This is clearly considerably in excess of the amount the Council has available for the purpose now or in the foreseeable future.

With an average annual spend on road structural maintenance at a more realistic level of approximately £30 million, at 2010 prices, over the 15 years of Devon's third Local Transport Plan, 2011 – 2026 (in line with the actual 2010/11 spend) the money left after funding the pledge for A and B roads will be insufficient to prevent a significant deterioration in C class and unclassified (U/C) roads.

Table 2 – Summary of Investment Required for Classified Roads

	Length (km)	2011 condition indicator: Percentage in need of repair or condition "red"	Average annual investment £million	2026 condition indicator: Percentage in need of repair or condition "red"
A roads	969	4	6	4
B roads	663	5	3	5
C roads	4,512	16	11	30
U/C roads	6,688	20*	10	30+

*Estimated from a sample SCANNER condition survey

- (iv) The Cumbrian floods alerted all local authorities to the strategic importance of highway bridges and structures, their contribution to maintaining communities, and their potential vulnerability when subject to extreme conditions. This has highlighted the need to ensure that limited budgets are focussed on key areas, through effective asset management.

Significant progress has been made in gathering data as part of the Transport Asset Management Plan, enabling prioritisation of project work on structures to be identified in most areas. An increasing amount of data has now been gathered relating to the condition of the County's highways structures – both bridges and more recently retaining walls. The condition of these structures is determined in accordance with national guidelines for inspection and assessment resulting in the calculation of an overall Structure Stock Condition Performance Indicator (SSCPI). The current condition of highway structures based on information collected to date is set out below.

Table 3 – Summary of Condition of Bridges and Structures

Condition				
SSCPI category	Poor	Fair	Good	Excellent
SSCPI range	40 to 64	65 to 84	85 to 94	94 to 100
Average score of Bridges stock			92	
Average score of Retaining Walls stock		70		

This has highlighted the disparity between the general condition of bridges and retaining walls, and has influenced the decision to prioritise budgets to improve the condition of retaining walls over the coming years in order to address this imbalance. The Asset Management Plan, currently under development, will set service levels for both individual structures and the structure stock as a whole. Currently, repairs are required to 1,455 retaining walls and 689 bridges to raise them to the 'Good' category.

The key priority in recent years has been to ensure that all structures on the principal road network are assessed and considered for upgrading to meet the 44 tonne gross vehicle weight capacity. Strengthening works to bridges on lesser categories of highway are being prioritised to be consistent with the maintenance principles adopted for the whole highway network. Currently 240 bridges have some strength deficiency and, where appropriate, are being managed using a risk-based approach.

With extreme weather events, particularly flooding, becoming more frequent there is an increasing need to carry out scour protection works to structures. Flood resilience has been enhanced at 8 vulnerable bridges during 2010 and the programme of prioritisation and protection will continue.

Work continues on the assessment of older structures, predominantly arches, where historic definitions of load bearing capacities have come into question following changes in design standards. These structural assessments are necessary to help identify and prioritise essential works and to best maintain and improve the condition of the bridge stock, and include a number of County-owned bridges spanning live railways.

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. This includes protection works at road/rail proximity sites in conjunction with Network Rail.

A renewal and maintenance programme has been put in place as a result of last year's programme to inspect and assess essential bridge components, particularly bearings and joints.

4. Analysis

(i) Principal Roads

Within the Council's Strategic Plan 2009 - 2013, there is a pledge to maintain 96% of 'A' (principal) roads in good condition. This equates to a target for the national indicator, NI 168, for the proportion of principal roads where maintenance should be considered of 4%, which is to say a network that is not perfect but is in steady state and generally fit for purpose, meeting user expectations. Condition has been stabilised at this level, enabling more money to be invested in the non principal roads, where the need is also apparent. However, with 26% of the principal network in condition "amber" as measured by the SCANNER surveys, that is, showing some signs of deterioration but not yet in need of major maintenance, continued investment and careful management will be required to ensure this performance can be achieved and sustained.

On Principal roads, the recovery strategy takes account of safety, serviceability and strength. The highest priority is given to safety, indicated by deficient skid resistance, and eradicating failed areas helps the Council to meet DLTP Objective 3 'Making roads safer'.

The prioritisation of schemes is based on a Value for Money Index which has been developed to take account of the effectiveness of the schemes in helping to achieve the overall road condition performance targets.

A key aim is also to be able to increase the proportion of preventative rather than reactive maintenance works undertaken, providing best value in the longer term. During 2010/11 the Council continued a preventative maintenance strategy on principal roads, allocating £1.95m to preparatory patching and surface dressing. SCANNER data is being used to target sites where surface dressing can provide a cost effective remedy to immediate defects and enhance the longer term life of the road pavement improving skidding resistance and sealing to prevent ingress of water, and help to further stabilise NI168.

(ii) Non Principal Roads

On non-principal classified roads (B and C roads) the 2009/10 SCANNER survey showed that 14% should be considered for planned maintenance soon (NI169). Non-principal classified roads comprise both B and C roads and the survey shows that 5% of B roads and 16% of C roads should be considered for maintenance. The 5% performance on B roads equates to 95% in good condition, which exceeds the Council's target for such roads in the Strategic Plan of 90%.

The Non Principal Road Recovery Strategy has been used to target important routes to settlements of over 500 population and linking communities, roads serving industrial estates, urban local distributor routes, and pre-salting routes not covered by the above. Since 2003/04 over 1,000 schemes covering 830km of carriageway have been completed. This strategy is helping to deliver a Strategic Plan objective of "connecting with the 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 limited funds have been available for structural maintenance on the rest of the minor road network. The reactive defect repair regime and adherence to the cyclical maintenance regime keeps the unclassified network usable, safe and generally fit for purpose, although this will be difficult to sustain with the revenue reductions. Where these routes are suitable

for surface dressing this type of repair will be undertaken in association with the required preparatory patching.

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

5. HSM and BAS Programmes 2010/11

The HSM and BAS LTP settlement for 2010/11 was £31.789 million. £257k for repair works on the A361/A39 North Devon Link/Atlantic Highway, was also brought forward from 2009/10.

Appendix I shows progress with the HSM programme for 2010/11.

Appendix II shows progress with the BAS programme for 2010/11.

6. HSM and BAS Programmes for 2011/12

Devon's allocation for 2011/12 is £36.833 million.

It is proposed to allocate the available funding to HSM and BAS as outlined in Appendix III and Appendix IV.

This includes:

(i) HSM Principal Roads:

£6.7m to specific larger schemes with a high Value for Money Index. These schemes will rectify 30.4km of carriageway with potential skidding defects and problems identified by the SCANNER survey.

£3.3 on surface dressing and preparatory patching works. This will surface dress 75km of carriageway in 2011/12 and prepare for the 2012 dressing programme.

Both will target "red" and "amber" SCANNER data and help to further stabilise NI168 and contribute to the County Council's Strategic Plan pledges.

(ii) HSM Non-Principal Roads:

£15.6 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 to compensate for reductions that have had to be made in the 2011/12 revenue budget for this type of work, as detailed in a separate report to the Cabinet. This will help support the adjustment in the maintenance functions in the revenue budget and will aid NI 169 by treating carriageway with high levels of red and amber SCANNER defects and improve their surface condition.

(iii) Footways

Due to revenue budget restrictions general upgrades to footways will be only those funded by the allocation in this budget. Footways will be kept in a condition that is reasonably safe and commensurate with established usage.

(iv) Structures

Key elements of the 2011/12 BAS programme include:

Works valued at £700,000 will complete the contract to strengthen a retaining wall and cantilevered walkway adjacent to the A386 near Bideford Longbridge.

Further works valued at £1,085,000 are proposed as part of an ongoing programme to replace or strengthen highway retaining walls in order to address the disparity between the relatively good condition of the County's bridges and moderate condition of its retaining walls supporting the highway.

The replacement programme for limited life components of more modern bridges including bearings and movement joints will continue to be implemented especially for bridges on the A361 North Devon Link Road.

The asset management of all highways structures will continue to be developed by gathering further data and carrying out structural assessments in order to obtain a more detailed knowledge of the condition of the asset, and to allow a more integrated approach to prioritisation to be taken for the whole highway network.

(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, however, due to limited funding such work will be prioritised and 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 after consultation with Members and the police.

A significant proportion of Devon's traffic signal equipment is approaching the end of its design life, and the Transport Asset Management Plan will programme its replacement. 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.

7. Sustainability Considerations

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 and a recycling strategy has been adopted to promote this. A specific programme of recycling work was completed in 2010/11 and this will continue. All planings will be reused in the County's highway network. When surfacings incorporating primary materials are required, a durable low noise material such as stone mastic asphalt is considered.

8. Equality Considerations

No direct implications due to the capital budget at this time, but see the revenue report (EEC/11/37/HQ) for implications following the reduction in revenue budgets.

9. Legal Considerations

No direct implications at this time.

10. 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 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 safety will be compromised and third party claims may increase.

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.

The corporate risk registers have been updated as appropriate.

11. Options

The programme for 2011/12 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 DLTP, and the Council's Strategic Plan.

12. Reasons for Recommendation/Conclusion

The DfT capital settlement for 2011/12 provides funding at appropriate levels to achieve the long term plan and gives further opportunity to help address the current backlog of outstanding highway maintenance work on both Principal and non Principal roads. However, this must be seen as the continuation of a recovery programme towards a return to steady state maintenance on all routes serving the communities of Devon. 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.

Chris McCarthy

Electoral Divisions: All

Cabinet Member for Highways and Transportation,
Councillor Stuart Hughes

Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Ref.
1. Devon Local Transport Plan 2006-2011	July 2006	-
2. Devon PMS and Condition Data		-

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**Appendix I
To EEC/11/36/HQ**

Highway Structural Maintenance Programme 2010/2011

Road No	Scheme Name	County Electoral Division	Scheme Total £'000	Comments
	Commitments/contract retentions		200	
A3123	Lynton Cross to Berrydown Cross	Combe Martin Rural	442	Completed
A386	Knapp House	Northam	75	Completed
A386	Torrige Hill to Ford Rise	Bideford East	71	Programmed March 2011
A388	Stibb Cross	Torrington Rural	40	Completed
A388	Woodford Bridge	Holsworthy Rural	69	Completed
A388	South of West Stibb Farm	Torrington Rural (60%)/Holsworthy Rural (40%)	56	Completed
A388	Forestreet	Bideford South & Hartland	100	Completed
A399	Four Cross Way to Mockham Down Gate	Chulmleigh & Swimbridge (90%)/ South Molton Rural (10%)	682	Completed
A399	Mockham/Shutscombe/Brayford	Chulmleigh & Swimbridge (50%)/ South Molton Rural (50%)	250	Completed
A399	Newtown Bridge	South Molton Rural	28	Completed
A3072	Halsegate Cross	Hatherleigh & Chagford	53	Completed
A388	Mount Lane to Blagdon Cross	Holsworthy Rural	87	Completed
A386	Whites Lane to Limers Hill	Torrington Rural	30	Design ongoing, works deferred to 11/12 for co-ordination reasons
A361	Dean Cross to Score Lay By	Combe Martin Rural/Ilfracombe	515	Completed
A377	Blackboards	Torrington Rural	235	Completed
A3124	South Nethercott Farm	Hatherleigh & Chagford	153	Completed
A3072	Hatherleigh Roundabout	Hatherleigh & Chagford	55	Completed
A377	Kingford	Chulmleigh & Swimbridge	235	Programmed Feb 2011
A361	Gornhay	Tiverton West	15	Design ongoing, works deferred to 11/12 due to ongoing negotiation
A3015	Wilton Way Rbt to Moor Lane Rbt	Heavitree & Whipton & Barton	0	Deferred to 2012/13
A377	Alphington Cross and Spur	Alphington & Cowick	200	Due for completion February 2011
A376	Clyst St George Rbt	Broadclyst & Whimble	29	Completed
A376	George & Dragon Rbt	Broadclyst & Whimble	21	Completed
A376	Clyst St Mary Rbt	Broadclyst & Whimble	82	Completed
A377	St Andrew's Road to Three Horseshoes	Broadclyst & Whimble	99	Completed
A375	Radway to Peaslands Road	Sidmouth Sidford	97	Programmed March 2011
A377	Lapford Cross to Railway Cottages	Newton St Cyres & Sandford	236	Completed
A3072	Bow (West Edge) to Nicholls Nymett Cross	Newton St Cyres & Sandford (25%)/Crediton Rural (25%)/Hatherleigh & Chagford (50%)	522	Completed
A377	Red Cow	St David's & St James	42	Completed
A377	Morchar Road to Bury Bridge	Newton St Cyres & Sandford	181	Completed
A373	Dulford	Honiton St Paul's	180	Completed
A358	Tytherleigh (Fordwater Farm)	Axminster	75	Completed
A358	Tytherleigh (Broom Lane)	Axminster	27	Completed
A358	First Avenue to Weycroft Farm	Axminster	40	Completed
A358	Weycroft Bridge to Weycroft Manor Farm	Axminster	40	Completed
A358	Smallridge Road north for 270m	Axminster	46	Cancelled
A38	Culmstock Cross	Willand & Uffculme	105	Completed
A396	Ashley Rise	Tiverton West	56	Completed
A361	Uplowman Bridge to Junction 27	Willand & Uffculme/Tiverton East	273	Programmed March 2011
A379	The Retreat to Swans Nest road	Exminster & Kenton	78	Completed
A379	Lower Marsh Row	Exminster & Kenton	102	Completed
A379	Labrador Bends	Teign Estuary	300	Completed
A381	Two Mile Oak	Teignbridge South	138	Due for completion February 2011

A379	Between Stolford Farm & Harraton Cross	Yealmpton	6	Majority of scheme re-evaluated, current condition acceptable, monitoring to continue
A379	Modbury Village	Yealmpton	297	Ongoing, due for completion March 2011
A380	Penn Inn Rbt	Newton Abbot South (75%)/Newton Abbot North (25%)	270	Completed
A381	Penn Inn to Station Road	Newton Abbot North	64	Completed
A379	Kenton	Exminster & Kenton	287	Completed
A379	Exminster turning to Matford Roundabout	Exminster & Kenton	160	Completed
A383	Highweek	Newton Abbot North	140	Completed
A3122	Hemborough Post to West Norton Farm	Dartmouth & Kingswear (50%)/Kingsbridge & Stokenham (50%)	500	Completed
A3121	Modbury Cross to Kitterford Cross	Yealmpton	80	Due for completion March 2011
A3121	Kitterford Cross to Haredon Cross, Ugborough	Yealmpton	383	Completed
A3121	Lower Ludbrooke Cottages to Erme Bridge	Yealmpton	508	Completed
A379	Goutford Gate to Modbury Cross	Yealmpton	203	Completed
A381	East Street	Newton Abbot North (50%)/Newton Abbot South (50%)	49	Completed
A379	Landcombe Cove	Kingsbridge & Stokenham	43	Due for completion February 2011
A380	Penn Inn to Aller Brake Rd	Newton Abbot South	248	Due for completion February 2011
<u>Principal Roads</u>				
Local Reconstruction, Resurfacing, Overlay, Patching			1,050	
Surface Dressing			1,004	
Patching Pre 11/12 Surface Dressing			951	
Treatment of sites with low Skid Resistance			661	
<u>Non-Principal Roads</u>				
Non-Principal Road Recovery Programme			4,500	
Local Reconstruction, Resurfacing, Overlay, Patching			0	
Surface Dressing 10/11			5,131	
Pre Patching for Surface Dressing 10/11			3,058	
Exeter Micro Asphalt Programme			284	
Deep Recycling			500	
C784 Loxbeare Vehicle Restraint System			27	
Capitalised Revenue			421	
<u>All Roads</u>				
Wet/Dry accident sites:			13	
Apply high skid resistance surface to approaches to railway and pedestrian crossings			132	
Carriageway Condition Surveys			325	
Forward Design and Investigation			250	
Material Testing			70	
Contract Administration and Supervision			550	
TAMP			134	
Towns, Villages and Rural Communities Programme			0	
Footways and Estates Programme (LPSA2)			0	
Drainage & Flooding			0	
Street Lighting Columns and traffic signals			500	
Additional Patching			1,681	
HIGHWAY STRUCTURAL MAINTENANCE PROGRAMME				
Total			30,840	

LTP Settlement plus TAMP plus Carry Over from 09/10 BAS Virement		28,941 134 68 127	
Total Allocation		29,270	
Overprogramming		-1,570	

SCE (R) 2010/2011

A361	Holbrooke Lane On & Off Slips	Willand & Uffculme	143	Complete
A361	Uplozman Bridge to Junction 27	Willand & Uffculme (& Tiv East if extended)	114	Programmed March 2011
SCE (R) HIGHWAY STRUCTURAL MAINTENANCE PROGRAMME (b/f from 09/10)			257	

HIGHWAY STRUCTURAL MAINTENANCE PROGRAMME + SCE(R)	Total Expenditure	31,097	
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**Appendix II
To EEC/11/36/HQ**

Bridge Assessment & Strengthening Programme 2010/2011

Road No	Scheme	County Electoral Division	Scheme Total £'000	State of Progress/Start Date
A386	Bideford Long Bridge cantilever strengthening	Bideford East	300	Works commenced Feb 2011
A386	Bideford Long Bridge strengthening	Bideford East	12	Final
C120	Teigngrace Causeway	Kingsteignton & Newton Abbot North	10	Investigations ongoing
B3344	Bovey Bridge cantilever footway	Bovey Tracey Rural	20	Design ongoing
C52	Otterton Bridge	Budleigh	130	Works completed July 2010
UC	Padley Bridge	Hatherleigh & Chagford	30	Works completed Oct 2010
A377	Exe Bridge South parapet strengthening	St David's and St James	334	Works ongoing
A379	Exeter Bypass Bridge	St Loyes and Topsham	250	Works ongoing
UC	Tuckmill Bridge	Honiton St Paul's	4	Completed June 2010
UC	South Wood Dry Bridge	Chudleigh Rural	20	Works completed April 2010
A399	Shutscombe Wood	South Molton Rural	220	Works ongoing
A39	Watersmeet NT retaining wall	Combe Martin Rural	34	Completed Feb 2011
C459	Snapper retaining wall	Chumleigh & Swimbridge	31	Works completed Oct 2010
UC	Woodend retaining wall	Dartmouth & Kingwear	75	Works completed Dec 2010
UC	Tavistock Old Exeter Road retaining wall	Tavistock	52	Works completed June 2010
UC	Southpool Creek retaining wall	Kingsbridge & Stokenham	83	Works ongoing
B3227	Bampton retaining wall	Tiverton West	82	Works completed Nov 2010
B3193	Teign Valley landslip	Chudleigh Rural	30	Works completed Feb 2011
UC	Shaugh Prior retaining wall	Bickleigh & Wembury	87	Completion March 2011
A361	Score Quarry landslip	Ilfracombe	73	Completed Oct 2010
UC	Hoodown Lane retaining wall	Dartmouth & Kingwear	20	Completed Sept 2010
B3205	Brixham Road retaining wall	Dartmouth & Kingwear	15	Completed Aug 2010
A396	Ashley carriageway stabilisation	Tiverton West	44	Completed Jan 2011
A39	Watersmeet wall	Combe Martin Rural	60	Completed Feb 2011
A396	Yearlstone slope stabilisation	Tiverton West	16	Investigations complete
	Assessments		200	
	Advance Design		50	
	Substandard Parapets		50	
	Asset Management Data Collection		33	
	Railway Structures Assessment/Inspection		35	
	Traffic & signing		10	
	Road/rail Incursions		70	
	Joints & Bearings		135	
	Deck waterproofing		50	
	Rockface Management		40	
	Management of sub-standard structures		20	
BRIDGE ASSESSMENT & STRENGTHENING PROGRAMME		Total	£2,725	
	LTP settlement		2,848	
	External contribution		4	
	Vired to HSM		-127	
BRIDGE ASSESSMENT & STRENGTHENING PROGRAMME		Total Expenditure	2,725	

**Appendix III
To EEC/11/36/HQ**

Highway Structural Maintenance Programme 2011/2012

Road	Scheme Name	County Electoral Division	Treatment Type	Estimate £'000
	Commitments/contract retentions			200
A386	Whites Lane to Limers Hill	Torrington Rural	Resurfacing	287
A39	Arlington Beccot to Blackmoor Gate	Chulmleigh & Swimbridge	Resurfacing	569
A399	Stowford Cross to Four Cross Way	Chulmleigh & Swimbridge	Resurfacing	316
A386	Morrisons to A39 Rbt	Northam	Resurfacing	190
A39	Westaway to Georges Road	Barnstaple North/Combe Martin Rural	Resurfacing	208
A3124	Venton Farm to Eastlake Farm	Torrington Rural	Reconstruction	401
A3124	Beaford to Beaford Moor	Torrington Rural	Reconstruction	713
A388	Stibb Cross to Woodford Bridge	Holsworthy Rural	Resurfacing	327
A361	Gornhay	Tiverton West	Drainage	250
A377	Atkins public lane to Bonhay Road	St Davids & St James	Resurfacing	69
A377	Haven Rd to Marsh Barton Rd	Exwick & St Thomas/Alphington & Cowick	Resurfacing	400
A3052	Bowd to Core Lane	Sidmouth Sidford	Resurfacing	247
A3052	Core Lane to Sidford Cross	Sidmouth Sidford	Resurfacing	200
A3052	Burrow Lane to The Falls	Budleigh	Overlay	76
A375	Yardlands to Temple Street	Sidmouth Sidford	Resurfacing	181
A3126	Leat Street to Kennedy Way	Tiverton West	Resurfacing	210
A3052	Crealy Lodge to Farrington Cross	Broadclyst & Whimble	Resurfacing	125
A3052	Bridge End to Berry Farm	Budleigh	Resurfacing	299
A3122	Collaton Cross towards Forces Cross	Thurlestone, Salcombe and Allington	Resurfacing	253
A382	Dyrons rbt to Halcyon Road	Newton Abbot North	Resurfacing	130
A381	Starboard Light to Luckhams Lane	Thurlestone, Salcombe and Allington	Resurfacing	77
A3122	Park & Ride Rbt to Yorke Road	Dartmouth & Kingswear	Micro Asphalt	100
A384	Riverford Bridge to Hood Bends	South Brent & Dartington	Resurfacing	34
A379	Valemoor to Teignmouth Road	Teign Estuary	Resurfacing	292
A379	Ashford	Yealmpton	Resurfacing	184
A379	Ashford (Structural work)	Yealmpton	Resurfacing	436
A379	Edmenston Jnc to Goutsford Gate	Yealmpton	Resurfacing	221
A3079	Grindhill	Okehampton Rural	Resurfacing	99
A379	Labrador Bends	Teign Estuary	Vehicle Restraint System	10
A381	Sorley Green Cross to Stumpypost Cross	Thurlestone, Salcombe and Allington	Overlay	366
<u>Principal Roads</u>				
Local Reconstruction, Resurfacing, Overlay, Patching, Retexturing & SCRIM treatment				1,050
Surface Dressing (prin Rd named schemes)				2,650
Pre Patching and other works 12/13 Surface Dressing				600
<u>Non-Principal Roads</u>				
Non-Principal Road Recovery Programme				3,513
Surface Dressing				6,950
Pre Patching and other works 12/13 Surface Dressing				3,700
Surface Dressing Cleaning/Design				600
Exeter Micro Asphalt Programme				250
Deep Recycling				400
<u>All Roads</u>				
Wet/Dry accident sites:				250
Apply high skid resistance surface to approaches to railway and pedestrian crossings				170
Carriageway Condition Surveys				350
Forward Design and Investigation				300
Material Testing				200
Contract Administration and Supervision				550
Street Lighting Columns and Traffic Signals				500
Footways				1,250

Cycleways	250
Planned Patching*	3,000 *
HIGHWAY STRUCTURAL MAINTENANCE PROGRAMME	34,003

*Depending upon amount over programmed in 2010/11

**Appendix IV
To EEC/11/36/HQ**

Bridge Assessment & Strengthening Programme 2011/12

Road	Scheme Name	County Electoral Division	Estimate £'000
A386	Bideford Long Bridge Cantilever Strengthening	Bideford East	700
C120	Teigngrace Causeway	Kingsteignton & Newton Abbot N	20
B3344	Bovey Bridge Cantilever Footway	Bovey Tracey Rural	40
A379	Exeter Bypass Bridge	St Loyes and Topsham	70
A379	Countess Wear Bridge Refurbishment and Scour Protection	St Loyes and Topsham	20
UC	Ivy Cottage Bridge No 494	Yealmpton	40
UC	St James Railway Bridge No 1085	Teignmouth	40
B3195	Lemon Bridge No 1017	Newton Abbot North	30
A361	Stoney Bridge No 2816	Braunton Rural	30
UC	Alsa Bridge No 2666	Tiverton East	30
A39	Pilton North Bridge No 2805	Barnstaple North	30
C375	Alphington Flood No 4757	Alphington & Cowick	20
	Assessments		150
	Retentions		5
	Advance Design		50
	Substandard Parapets		100
	Retaining Walls		1,085
	Bridge River Scour Protection		55
	Asset Management Data Collection		20
	Railway Structures Assessment/Inspection		50
	Traffic & Signing		20
	Road/rail Incursions		75
	Joints & Bearings		70
	Rockface Management		20
	Waterproofing		10
	Management of Sub-standard Structures		50
BRIDGE ASSESSMENT & STRENGTHENING PROGRAMME			2,830