CABINET
4 MAY 2010

ITEM NO. .....

IMPACT OF ADVERSE WEATHER ON HIGHWAY NETWORK CONDITION

Responsible Cabinet Member - Councillor David Lyonette, Transport Portfolio

Responsible Director - Cliff Brown, Director of Community Services

SUMMARY REPORT

Purpose of the Report

1. To provide an update on the impact of the adverse weather on the highway network, approve a programme of emergency repairs and make a decision on funding options.

Summary

2. Every year programmes of proactive and reactive maintenance take place to manage the condition of the highway network in the order of £2m. This report specifically looks at the impact of the severe winter weather on the road condition. It is important that it is understood that there are clear distinctions between the need for emergency repairs as a result of the impact of severe weather against ongoing maintenance of the highway network.

3. A plan was developed to manage the impact of the adverse weather on the highway network condition. This involved an initial phase of reacting to problems to ensure any safety defects were dealt with. The scale of the problem and weather conditions has meant that some repairs were of a temporary nature and will need revisiting as part of the detailed remedial programme outlined in this report.

4. Reports of highway failures were received from wide ranging sources. Initially, highway inspectors reacted to these reports but then an accelerated programme of inspecting the entire network was put in place. This was necessary to help manage risk and identify the scale of the problem. Details were stored in a database, which allowed monitoring and assessment of the issues to help develop a remedial strategy.

5. The continued cold weather has meant that we have not been able to conclusively close this phase of the programme. However, the winter maintenance season traditionally ends at the end of April. It is considered that the majority of locations affected by the severe weather have been captured. Any further defects will be picked up by the regular programme of safety inspections or investigation of individual reports.

6. The monitoring and assessment phase has identified in the region of 1,250 individual defects that have developed as a result of the adverse weather.

7. The remedial programme has been developed and the proposed treatment has been selected based on the site specific conditions where surfaces have failed and defects are at or judgement dictates they will soon reach intervention level. The programme will basically consist of either patching works or resurfacing works. Details are included in **Appendix 1.**

8. It is important to remember that there is also an annual programme of highway maintenance works that will be running in tandem that will also help address locations affected by the impact of winter.

9. As part of the ongoing monitoring and assessment programmes a number of areas were identified as showing signs of potential failure.

10. A number of these areas had been previously identified and were programmed to be treated prior to the winter. In total 23,541 square metres of carriageway have already been surfaced using micro-asphalt surfacing during March 2010 to help prevent further deterioration and extend the life of the road. Details of these are included in **Appendix 2.**

11. On 2 February 2010 Cabinet released £100,000 of additional capital funding to accelerate repairs. As the scale of the problem emerged across the country the Department for Transport (DfT) re-issued guidance on how to claim emergency capital funding. In late March 2010 this provision was set aside in lieu of a direct payment. An additional £100m was announced as part of the national Budget and this has realised a revenue grant to Darlington of £148.5k towards the impact of the adverse weather.

12. The total estimated cost of the impact of adverse weather this winter has been estimated at £660,795. Funding the remedial programme is essential to prevent further deterioration, higher ongoing sporadic maintenance costs and potential insurance claims. Public satisfaction levels with highway infrastructure are also likely to drop significantly if the programme is not delivered.

13. The funding made available to date is not sufficient to deliver the remedial programme identified. This has resulted in a need to revisit agreed programmes of Highways and Transport schemes and undertake a difficult exercise of examining how the deficit maybe funded.

Recommendations

14. It is recommended that:

    (a) Members approve the remedial programme set out in **Appendix 1.**

    (b) Members approve one of the three funding options set out in paragraph 58 and **Appendix 4** to finance the remedial programme.

Reasons

15. The recommendation is supported by the following reasons:

    (a) The remedial programme is essential to prevent further deterioration of the highway network, higher ongoing sporadic maintenance costs and potential insurance claims.

(b) To address public satisfaction levels with highway infrastructure as a result of the adverse weather.

Cliff Brown
Director of Community Services

Background Papers

(i) Report to Cabinet 3 November 2009 - Review of the Medium Term Financial Plan and Proposed Business Model for the Future

(ii) Report to Cabinet 2 February 2010 - Highway Winter Maintenance Operational Plan and Emergency Repairs.

(iii) Report to Cabinet 2 March 2010 – Transport Capital Programme 2010/11.

Dave Winstanley : Extension 2752

S17 Crime and Disorder	Implications on crime and disorder are considered in **Appendix 3** of the report.
Health and Well Being	Funding the remedial programme of works will restore highway condition and provide a better quality driving and walking surfaces, which will reduce risks of road traffic accidents and tripping accidents.
Sustainability	There are no issues relating to sustainability contained in this report.
Diversity	Implications are considered in **Appendix 3** of the report.
Wards Affected	All
Groups Affected	Implications are considered in **Appendix 3** of the report.
Budget and Policy Framework	If Cabinet approve funding option 2 or 3 in **Appendix 4** there will be an increase in the 2010-11 revenue budget. The increase would be within the delegated authority of Cabinet to vary the approved budget by up to £0.5M within the financial year. There have been no variations to the budget approved by Council on 25 February 2010 prior to this meeting.
Key Decision	This is a key decision.
Urgent Decision	This is considered an urgent decision to prevent further deterioration of the highway network and higher ongoing sporadic maintenance costs.
One Darlington: Perfectly Placed	Ensuring Darlington's highway network remains accessible to promote business opportunities and continuity is a key objective for the Prosperous theme. Maintaining highways contribute to the Safer Darlington theme for all types of road user. Well maintained highways contribute to the Greener Darlington theme as they encourage walking and cycling and may reduce car emissions.
Efficiencies	The report provides a funding scenario within the funding options that does not result in pressures on the MTFP in future years and the need to seek further efficiencies to fund additional borrowing.

MAIN REPORT

Information and Analysis

16. This report specifically looks at the impact of the severe winter weather on the road condition. It is important that it is understood that there are clear distinctions between the need for emergency repairs as a result of the impact of severe weather against ongoing maintenance of the highway network.

17. Every year programmes of proactive and reactive maintenance take place to manage the condition of the highway network. The national indicators that report highway condition are based on the percentage of the road network that needs to be assessed for repairs. The national indicators recognise the fact that the country's network is at varying levels of condition and that investment is required.

18. Specialist asset management systems are used in Darlington to allow condition data to be mapped to provide detailed asset data on the whole network. The system is being developed to allow consideration of adopting particular budget strategies for each of the assets allowing the effects of increases or decreases of resource to be assessed objectively and hence ensuring best use of resources. Knowledge of the various elements of the transport infrastructure, their lifecycles and the comparative risks is essential management information required by the Council as the Highway Authority. This element of the system is being developed as part of ongoing development of a comprehensive Transport Asset Management Plan.

19. The data for this system is obtained from a range of sources:-

    (a) A, B and C class roads are surveyed every year by a SCANNER vehicle that uses a series of lasers that pick up 4 main characteristics of the highway condition which are, wheel track cracking, rutting, texture of the surface and ride experience. Visual safety inspections are also undertaken by Highway Inspectors on a monthly basis to pick-up individual safety defects.

    (b) An independent assessment is undertaken on every unclassified road every 4 years to assess the condition. This is an independent assessment to enable the asset management data to be kept up to date and help determine priorities for treatment. Visual safety inspections are also undertaken by Highway Inspectors on a 3 monthly basis to pick-up individual safety defects in residential areas. Inspections are monthly in high pedestrian and traffic locations such as the town centre.

20. The asset management system automatically schedules safety inspections and the streets that require inspecting are downloaded into the Highway Inspectors handheld computer that produces a daily work programme. The findings are then uploaded into the asset management system and passed directly to the contractor or the relevant utility company for repair.

21. The condition data identifies the percentage of roads where maintenance should be investigated. This is represented as a traffic light system with 'Red' roads needing assessment for the type of maintenance required. Engineering assessments are made on these roads to determine the most appropriate solution and develop a programme of remedial works to help manage the risk associated with the road condition.

22. The system also maps amber and green roads, which are below levels required for assessment, but this helps predict future scenarios and condition performance. The table below provides the 2008/09 performance data. The figures demonstrate that the condition of network is at similar levels to the unitary average and all England averages. Whilst, NI169 is still above unitary averages there has been focused use of asset management data and efficient use of resources on the non-principal network to reduce this figure from 35% in 2006/07 to 15% in 2008/09.

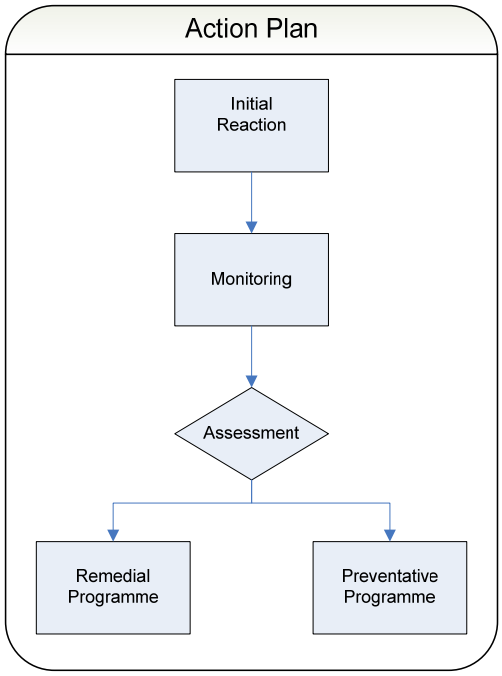
2008/2009 - National & Local Indicators on Road Condition	**Darlington Actual**	**Unitary Average**	**England Average**
LI 2610 Condition of unclassified roads (% where maintenance should be considered).	11%	13%	15%
NI168 Principal roads where maintenance should be considered.	5%	5%	5%
NI169 Non-principal classified roads where maintenance should be considered	15%	13%	15%

23. When these performance indicators are compared with the representative lengths of highway network there is approximately 70km of highway network that needs to be assessed for repairs. Each year approximately £2 million is invested in maintaining the highway network. A proportion of the red roads and amber roads are treated to manage the condition of the highway network. The roads selected are based on engineering judgements founded on safety, road hierarchy and value for money.

24. This is a difficult balance of judgements based on the resources available and the need to address roads at the optimum time and condition. As an example the preventative programme of micro-asphalt works identified in Appendix 2 typically costs approximately £3.20 per square metre. In comparison, if repairs are such that a new surface is required then the costs escalate to £20-£30 per sq.m. If repairs reach foundation levels of the road the repairs can cost in excess of £120 per sq.m.

25. It is imperative that roads are continuously monitored and repaired at the most opportune time to ensure a cost effective solution is delivered and maximum value for money is achieved.

26. The severe weather event started in December 2009. Snow coverage was fairly consistent until around mid January 2010 when the thaw started to set-in. Obvious signs of deterioration of roads and pavements became evident throughout the country. Darlington was no exception and an action plan was developed to deal with the consequences. The diagram below is a summary of the phases of the plan.



27. It is important to note that the traditional winter maintenance season does not end until May and continued cold weather will have a continued impact on the highway network. These further deteriorations will be picked up as part of the ongoing safety inspection regime and condition surveys.

Initial Reaction

28. The problems manifested themselves in a number of ways on both footways and road surfaces.

29. The main causes of the problems are from ingress of water into surfacing followed by its expansion during freezing causing the surfacing to fail. During the severe periods of cold the ground also exhibited high levels of ground heave.

30. The initial phase of the plan was targeted at reacting to ensure any safety defects were dealt with. The scale of the problem and weather conditions has meant that some repairs were of a temporary nature and will need revisiting as part of the detailed remedial programme outlined later in this report.

31. There were particular problems on concrete paved footway areas where ground heave lifted the paving slabs, creating hazards. Repairs to these areas were not possible until the ground returned to its original level. All areas of this type were marked with road cones to warn pedestrians of the problem. Significant proportions of these areas have returned to their original condition and do not require remedial work.

32. To ensure roads were kept in a safe condition bagged tarmac (applied cold) was used during the Christmas holiday season whilst mixing plants were closed. Once plants re-opened dedicated teams were tasked with undertaking emergency pothole repairs. Due to the scale of the problems encountered these repairs were not permanent repairs but intended to make the highway safe to allow its continued use until a more permanent repair can be considered and undertaken during more conducive conditions.

33. All of the problems that were identified were stored in a database to monitor the repairs and develop a full picture of the problem. This will not be a comprehensive record of every pothole or defect in the Borough as some defects are not at intervention level. These will be monitored and do not need emergency repairs. They will be picked up as part of ongoing routine maintenance works when they reach intervention levels.

34. The nationally recognised definition of damage to a highway surface is defined as "a defect which impairs the value or usefulness of the carriageway and provides a safety hazard for road users. A sharp edged depression (pot hole) of 40mm or greater in depth and extending in any one direction greater than 300mm may constitute a safety hazard and should be repaired in accordance with individual highway authority response times".

Monitoring & Assessment

35. Reports of highway failures have been received from wide ranging sources. Initially, highway inspectors reacted to these reports but then an accelerated programme of inspecting the entire network was put in place. The inspection was necessary to help manage risk and identify the scale of the problem.

36. As Highway Authority the Council is responsible for 534km of highway, consisting of 59km 'A' Roads, 137km 'B' & 'C' class roads and 338km of unclassified roads. There are also approximately 770km of footways. Given the size of the network the inspection has taken some time to complete. With the continuing cold weather, the problems have continued to materialise and this has resulted in ongoing monitoring of previously identified areas.

37. The continued cold weather has meant that we have not been able to conclusively close this phase of the programme. However, the winter maintenance season traditionally ends at the end of April and it is considered that the majority of locations affected by the severe weather have been captured. The data captured has been used to develop remedial and preventative programmes.

38. There is no doubt that there will be locations where members of the public feel remedial action should be taken. Where they are at a safety intervention level these will be considered as part of this process or as part of ongoing reactive maintenance. There needs to be some recognition that the condition of the road may not be at intervention level but under review and monitoring as part of the ongoing highway maintenance programmes.

39. There is an ongoing inspection and monitoring process that captures this with all adopted roads and streets in the Borough are inspected by a team of four Highways Inspectors. Inspection frequencies are based on the character of the street and typically:

Location	Inspection Frequency
Town Centre	Monthly
Residential Streets	Every three months
Classified Roads	Monthly
Back lanes	Annually

40. These frequencies are based on the national code of practice for highway maintenance. However, some of the residential streets are inspected at a greater frequency than required by

the code to manage risk. Any defects identified on inspections are entered into a hand-held computer & an order sent for repair. The repair records are held in a database & the information is used to defend insurance claims. A programme of independent surveys is also undertaken annually by specialist highway assessment vehicles that scan and record the condition of the highway.

41. The inspection system has been developed and improved since Darlington became a unitary authority. The improvement can be seen in the insurance repudiation rate. This has improved from 57% repudiated in 1997/1998 to over 90% in 2008/2009 demonstrating robust systems of inspections and repairs are in place.

Remedial Programme

42. The remedial programme has been developed utilising the information gathered during the monitoring and assessment phase. The proposed treatment has been selected based on the site specific conditions where locations have failed and defects are at or judgement dictates they will soon reach intervention level. The remedial will basically consist of either:

    (a) Patching works: - The works will involve the localised repair of an isolated failed area. This will involve cutting or planning an appropriate area to remove the defects and replacing with new material. The joints will then be sealed to prevent water ingress.

    The patching work does address the isolated locations but there is an ongoing risk that adjacent areas could deteriorate and further patching could be required. It is not economically viable to fully resurface roads when there are only localised signs of failures.

    (b) Resurfacing works: - where a section of road or the entire road has been significantly impacted by the weather and it is not economical to undertake patching, a resurfacing scheme will be necessary. This will involve planing large sections of highway to remove the defects and replacing with new material.

43. The monitoring and assessment phase has identified approximately 1250 defects and larger areas requiring resurfacing, that have developed as a result of the adverse weather.

44. Details of the remedial programme are included as **Appendix 1**. In accordance with the DfTs advice and best practice the solutions are based on cost/benefit judgements. The remedial programme consists of patching works at an estimated cost of £91,447 and a resurfacing programme at an estimated cost of £519,348. A detailed report on locations of patching works will be made available to Ward Councillors and published on the Councils Website.

45. It is important to remember that these works are being proposed as a direct result of the impact of bad weather and the need for emergency repairs rather than ongoing maintenance issues on the highway network.

Preventative Programme

46. As part of the monitoring and assessment programme a number of areas were identified as showing signs of potential failure. A number of these areas had been previously identified and were already programmed for work during 2009/10 prior to the winter.

47. A programme of micro-asphalt works had been planned for these areas. Micro-asphalt (slurry seal) is a technique used to extend the life of a surface and basically involves applying a thin surface to the road which fills any defect and seals the surface.

48. The specialist micro-asphalt contractor was due to visit last summer but rain during their scheduled visit period resulted in a need to reschedule. The contractor was re-scheduled for March 2010 and they have undertaken a programme of works to areas showing signs of distress. This has been increased as a result of the winter and a higher specification solution used at certain locations. In total 23,541 sq.m of carriageway have been covered using this technique. This was funded from the highway maintenance revenue budget at a cost of £75k. Details of the locations that have been treated are included at **Appendix 2.**

49. This type of treatment provides an extremely cost effective solution to roads starting to fail. However, this has resulted in some residents expressing concerns regarding this solution when it is first applied. We have received complaints that it looks extremely black and shiny. However, once it is has fully dried and some trafficking weathers the surface, it provides an acceptable finish.

Funding

50. On 2 February 2010 Cabinet released £100,000 of additional capital funding to accelerate repairs. As the scale of the problem emerged across the Country the Department for Transport (DfT) re-issued guidance on how to claim emergency capital funding. In late March 2010 this provision was set aside in lieu of a direct payment. An additional £100m was announced as part of the national budget and this has realised a revenue grant to Darlington of £148.5k towards the impact of the adverse weather.

51. The DfT will be attaching conditions to the grant requiring that it be spent on repairs to the authority's highway network resulting from, or worsened by, the 2009/10 winter weather. In the interests of transparency the DfT will also require each authority to provide by 31 October 2010 a brief public statement of how it has spent the money.

52. Whilst an *ad hoc* patching approach to filling individual holes in the carriageway is acceptable, both the Council and DfT are eager to see this additional funding used in a way that will maximise the benefits to the road user over the longer term. The remedial programme developed reflects this desire with a bias of spend towards resurfacing elements. Whilst, it is recognised the general public desires a swift response the council does not wish to see repair works done unravel in the autumn simply because they were hastily done. It is intended that the remedial programme will be commenced in May with the aim of completing the programme as soon as practicably possible.

53. All highway authorities in the country will be undertaking similar programmes and there will be a significant demand on specialist contractors. These works will also need to be considered in conjunction with other works already planned to ensure there are minimal conflicts and disruption and congestion is managed.

54. The estimated costs of the remedial programme compared with the funding made available to date have resulted in a deficit of £412,295. The funding of the remedial programme is considered essential to prevent further deterioration, higher ongoing sporadic maintenance costs and potential insurance claims. Public satisfaction levels with highway infrastructure are also a significant issue at the moment and this issue has received much national attention. Public satisfaction levels are likely to drop significantly if the programme is not delivered.

55. Having regard for the report to Cabinet on 3rd November 2009 - Review Of The Medium Term Financial Plan And Proposed Business Model For The Future, Members will be aware of the ongoing challenges the Government faces in balancing the nation's budgets following the investment it has made in responding to the recession and will appreciate that this will have an impact on Local Government funding in future years.

56. Members will appreciate that judgements will be key to decisions in relation to funding options. All public sector services are preparing for potentially significant reductions in spend allocations to balance the nation's budget. The impact of the adverse weather during the winter has resulted in a pressure that must be managed. Given the levels of uncertainty in the future a funding plan has been produced that identifies options for funding the deficit from within existing budget allocations and prudential borrowing options.

57. **Appendix 3** outlines the analysis of existing Highways and Transportation budgets to examine how the deficit maybe funded including prudential borrowing options.

58. Based on the analysis of budgets and funding options contained in **Appendix 3,** a series of funding options are presented in **Appendix 4** for Members' consideration.

    (a) Option 1 – funds the remedial programme from within existing budgets, the impacts and consequences of which are considered in **Appendix 3**.

    (b) Option 2 – funds the remedial programme from existing budgets and a requirement for prudential borrowing of £204,807. This option would not result in the scheme deferrals identified from the Local Transport Plan Integrated Block and their associated impacts identified in **Appendix 3.**

        The cost of prudential borrowing £204,807 will require an additional £24.8k per year for 10 years to be built into the MTFP.

    (c) Option 3 – funds the remedial programme from existing budgets and a requirement for prudential borrowing of £309,807. This option would not result in the scheme deferrals identified from the Local Transport Plan Integrated Block and their associated impacts identified in **Appendix 3.** It would also mean Freemans Place works would be undertaken as part of the LTP Maintenance Block. A £40k contingency would be built into the remedial programme to pick up areas that have deteriorated further, not being identified or undertake further proactive maintenance works.

        The cost of prudential borrowing £309,807 will require an additional £37.5k per year for 10 years to be built into the MTFP.

59. If Cabinet approve funding option 2 or 3 there will be an increase in the 2010-11 revenue budget. The increase would be within the delegated authority of Cabinet to vary the approved budget by up to £0.5M within the financial year. There have been no variations to the budget approved by Council on 25 February 2010 prior to this meeting.

Outcome of Consultation

60. The remedial programme identified in this report is required to fulfil our statutory duty of maintaining the highway in a safe condition. The remedial programme has not been subject to external consultation. However, residential properties will be notified in advance of any

resurfacing works within their street that will impact upon access.

APPENDIX 1
Remedial Programme

RESURFACING

Ward	Location	Fault/Problem	Solution	Cost
Sadberge & Whessoe	Riverside Drive, Gt Burdon	Potholes & delamination	Plane & Resurface	£19,600
Haughton East	Winchester Way (part)	Extensive potholes	Plane & Resurface	£20,250
Sadberge & Whessoe	Abbey Road, Sadberge	Potholes & delamination	Plane & Resurface	£23,880
Heighington & Coniscliffe	A6072 Redworth to Shildon (Part)	Extensive potholes	Plane & Resurface	£22,025
Heighington & Coniscliffe	Staindrop Road (urban)	Extensive potholes	Plane & Resurface	£68,753
Park East	Lakeside	Extensive potholes	Plane & Resurface	£17,136
Eastbourne	Emley Moor Road	Extensive potholes	Plane & Resurface	£52,103
Hummersknott	Edinburgh Drive	Extensive potholes	Plane & Resurface	£54,750
Harrowgate Hill	Longfield Road / Whessoe Road	Extensive potholes	Plane & Resurface	£37,300
Central	Barton Street & Allan Street	Extensive potholes	Plane & Resurface	£102,488
Hummersknott	Nunnery Lane	Extensive potholes	Plane & Resurface	£30,425
Haughton West	Littlebeck Drive	Potholes & delamination	Plane & Resurface	£33,470
Middleton St George	Church Lane, Middleton One Row	Extensive potholes	Plane & Resurface	£10,840
Hurworth	Avon Road Est (part) Hurworth Pl	Potholes & delamination	Plane & Resurface	£26,328
			Total	**£519,348**

PATCHING WORKS

Location	Area	Cost
Over 350 locations around the Borough with approximately 1250 individual defects identified.	586.2 sq.m in total	**£91,447**

Total Cost	**£610,795**

Notes:

1. Delamination is the loss of bond between layers of surfacing encouraging large areas of surface to fail.
2. The estimates have included judgements for an element of Traffic Management. However, depending on the final details of the traffic management the costs outlined in this table could increase or decrease.
3. The cost of a permanent repair has been calculated using £156 sm. The total area can increase due to further deterioration between making safe phase and final reinstatement.
4. Details of individual patching repairs in Wards will be circulated to Ward Councillors and published on the Councils website.

APPENDIX 2
Preventative Programme

Ward	Location	Fault/Problem	Solution	Area (sq/m)	Cost	Status
Haughton North	Galloway/ Annadale/Tayside	Surface fretting	Bitumac	3155.00	£6,890.75	Works Complete
Haughton North	Shetland Drive Estate	Surface fretting & potholes	Ralumac	3415.00	£12,636.00	Works Complete
Harrowgate Hill	Princess Road	Surface fretting & potholes	Ralumac	1609.00	£5,977.53	Works Complete
North Road	Havelock Street	Surface fretting & potholes	Ralumac	986.00	£1,326.78	Works Complete
Park East	Southend Place	Surface fretting & potholes	Ralumac	250.00	£1,105.65	Works Complete
Lascelles	Melsonby Crescent	Surface fretting & potholes	Ralumac	4902.00	£17,237.61	Works Complete
Hummersknott	Baydale Road	Surface fretting & potholes	Ralumac	3129.00	£11,481.21	Works Complete
Bank Top	Florence Street	Surface fretting & potholes	Ralumac	124.00	£399.62	Works Complete
Cockerton West	Rosedale Crescent	Surface fretting & potholes	Ralumac	1716.00	£6,027.84	Works Complete
Eastbourne	Cotherstonemoor Drive	Surface fretting & potholes	Ralumac	305.00	£1,193.92	Works Complete
Lingfield	Teal Road/ Heron Drive	Surface fretting & potholes	Ralumac	700.00	£3,151.72	Works Complete
Mowden	Westfield Drive/Osbourne Close	Surface fretting	Bitumac	3250.00	£8,174.27	Works Complete
			Total	**23,541.00**	**£75,602.90**	

Notes:

1. These works were planned for summer 2009. The specialist contractor was unable to visit during the programmed dates due to inclement weather. The winter conditions resulted in further deterioration and a requirement to increase the specification and thus an increase of approximately £10k on costs.
2. This work has been funded from the 2009/10 Highway Maintenance revenue budget.
3. Bitumac is a micro-asphalt (slurry seal solution) and Ralumac is a higher specification micro-asphalt.

Phase	Estimated Cost/Actual Cost
Initial Reaction	Temporary repairs already undertaken have approximately cost £50,000.
Remedial Programme	Proposed permanent patching = £91,447 Proposed resurfacing = £519,348
Total	**£660,795.20**
Preventative Programme	Micro-asphalt = 23,541 sq.m at a cost of £75,602.90 funded from 2009/10 revenue budget. Further works are planned from the 2010/11 budget.

Funding Available	Amount
2 February 2010 Cabinet release for accelerated repairs.	£100,000
Department for Transport (DfT) – Budget announcement. Grant amount in lieu of claims for Emergency Capital Funding.	£148,500
Total	***£248,500***
Deficit	***£412,295***

The funding of the remedial programme is essential to prevent further deterioration, higher ongoing sporadic maintenance costs and potential insurance claims. A series of funding options have been assessed from within existing Highways and Transportation budgets to examine how the deficit maybe funded. The following series of funding assessments provide options to fund this deficit.

Analysis of Funding Options – Revenue Budgets

The revenue budget for highway maintenance in 2010/11 consists of 3 main components totalling £827k:-

(i) **Routine Maintenance (£448k)** – This budget is utilised to repair issues identified with street furniture, footways and highways as a result of highway inspections. This is generally classified as reactive maintenance and tends to be isolated safety repairs. This budget is historically fully committed each year on statutory activity to ensure the highway is kept in safe condition. However, historically every April/May there is a programme of approximately £40k of permanent patching undertaken to address the impact of adverse weather through the winter months.

An amount of £40k from the Routine Maintenance budget is considered in the funding options to address the impact of the adverse weather.

(ii) **Carriageway Works (£128k)** – The majority of this budget is utilised to undertake preventative works on roads that are failing.

Timing of preventative works is critical in terms of achieving value for money. As an example the preventative programme of micro-asphalt works identified in Appendix 2 costs approximately £3.20 per square metre. In comparison if repairs are such that a new surface is required then the costs escalate to £20-£30 per sq m and if repairs reach foundation levels of the road the repairs can cost in excess of £120 per sq m. It is imperative that roads are repaired at the most opportune time to ensure a cost effective solution is delivered and maximum value for money is achieved. This programme helps manage the condition of 'amber' roads from moving into the 'red' category and impacting on performance indicators.

In 2010/11 it is proposed to undertake a similar programme of micro-asphalt works. A total of between 20,000-30,000 sq m of works will be prioritised from the list below. The list is not in a prioritised ranked order; this will be undertaken on further inspection and investigation:

Road Number	Ward	Location	Area
B6279	Heighington &Coniscliffe	Denton Cross Roads to Summerhouse Cross Roads	3326
B6279	Heighington &Coniscliffe	East of Thornton Hall towards Walworth Crossroads	10024
B6275	Heighington &Coniscliffe	Denton Cross Roads to A67 Piercebridge	17380
B6275	Heighington &Coniscliffe	Bolam Cross Roads to A68	7020
C38a	Hurworth	Neasham Road – Strait Lane to A68	9304
Unc 55/5	Hurworth	Strait Lane – Neasham Road to Church Lane	8644
C37	Sadberge & Whessoe	Bishopton to Whinney Hill – Boundary to Stoney Flatt Farm	8644
Unc	College	Uplands Road, Darlington	2938
Unc	Hurworth	Emmerson Road, Hurworth	1398
Unc	Hummersknott	Tees Grange Avenue, Darlington	1271
Unc	Park East	Eden Crescent, Darlington	2787
Unc	Hurworth	Wayside, Hurworth	1421

Continued …

Road Number	Ward	Location	Area
Unc	North Road	Linacre Way, Darlington	2063
Unc	Harrowgate Hill	Kirkfield Road / Melrose Avenue, Darlington	3987
Unc	Harrowgate Hill	Washbrook Drive	900
Unc	Haughton West	Riverside Drive	1092
Unc	Haughton West	Baltimore Way	1205
Unc	Mowden	Chase Close	1269
Unc	Northgate	Sun Street	1081
Unc	Northgate	Melville Street	394
Unc	Pierremont	Harrison Terrace	1527
Unc	Pierremont	Major Street	1141
Unc	Cockerton East	Rye Hill	410
Unc	Cockerton West	Malvern Crescent	4242
Unc	Heighington & Coniscliffe	North Lane, Killerby	3285
Unc	Heighington & Coniscliffe	Bridge End, Piercebridge	381
Unc	Pierremont	Farrer Street	710
Unc	Northgate	Westbrook Terrace	523
Unc	Eastbourne	Burnside Road Shops Layby	165
Unc	Eastbourne	Lowmoor Road	1049
Unc	Eastbourne	Carlton Moor Crescent	2037
Unc	Lingfield	The Mead	1645
Unc	Bank Top	Dickinson Street	1072
		Total	**104335**

Some of the budget is utilised to undertake works where roads have failed and need repairing. It is intended that Firthmoor Crescent and Ingleby Moor Crescent be investigated for resurfacing this year from this budget.

We have had two fairly severe consecutive winters. Whilst, it is an option to defer works planned from this budget the risk is that another severe winter could expose weaknesses in these surfaces and result in much more expensive repairs next year. It is unlikely that the DfT will provide further additional money in subsequent years to address the impact of severe weather. Therefore, it is not recommended that this budget be considered for inclusion in the funding options.

(iii) **Scheme Works (£251k)** – This budget is primarily utilised to undertake a repair programme on footways where routine maintenance is rising to levels where it is not economical to continue individual repairs and more substantial schemes are required. The schemes planned for 2010/11 are listed below:-

Ward	Scheme	Location/comments	Budget (£k)
Sadberge & Whessoe	Sadberge – Church Row	Localised resurfacing to prevent surface water run-off into private properties and reduce the risk of flooding.	2
North Road	Whessoe Rd/ Westmoorland St (FW)	Resurfacing to reduce footway flooding and potential damage to adjacent properties	7
Harrowgate Hill	Scott Terrace (S)	Rear Lane resurfacing – Lane is only access for vehicles and pedestrians to properties – poor condition.	20
Heighington & Coniscliffe	Judith Close (FW)	Paving flags broken and bitmac breaking up throughout	20
Harrowgate Hill	Verge Hardening	Laburnum Rd & Waltham Close linked to public transport improvements.	25
Harrowgate Hill	Fulford Place (FW)	Disintegrating throughout – uneconomical to continue with sporadic reactive maintenance	20
Lingfield	Shearwater Ave. area PH3 (FW)	Next phase – uneconomical to continue with sporadic reactive maintenance of paving flags. Replace with bitumen surfacing.	25
Various	Verge Hardening	Highest ranking scheme from list of verge hardening requests. Adverse weather has resulted in significant damage to verges throughout the Borough and a pressure on reactive maintenance budgets to keep them safe.	25
Cockerton East	Auckland Avenue Ph4 (FW)	Final phase of footway replacement – uneconomical to continue with sporadic reactive maintenance	25
Hurworth	Friars Pardon – Hurworth (CW)	Carriageway uneven & breaking up.	20
Mowden	Barnes Road Ph3 (FW)	Phased Footway replacement – uneconomical to continue with sporadic reactive maintenance	35
Central	Eastmount Road Ph3 (FW)	Phased Footway replacement – uneconomical to continue with sporadic reactive maintenance	20
KEY :- DP = Deep Patching S = Carriageway Surfacing FW = Footpath works VH = Verge Hardening			

Any deferral would result in accepting increased risk of further deterioration, higher ongoing sporadic maintenance costs and potential insurance claims. Therefore, it is not recommended that this budget be built into the funding plan options to address the impact of the adverse weather.

Analysis of Funding Options – LTP Capital Budget – Maintenance Block

The Local Transport Plan (LTP) maintenance block allocates approximately £1.1M to spend on highway structural maintenance after an element has been taken for bridge maintenance. This budget is used to target areas identified from condition surveys and engineering assessment. This budget is key to ensuring performance on National and Local indicators. The planned work for 2010/11 is below:

Ward	Scheme	Location/Comments	Budget (£k)
Heighington & Coniscliffe	Royal Oak Ph1 (DP)	Houghton le Side crossroads to Royal Oak – high speed principal road with failing areas of c/way	50
Heighington & Coniscliffe	B6279 to Boundary Ph2 (DP)	Deep patch to repair structural damage. Surface dress to seal other elements of surface.	85
Central	Barton Street PH1 (S/DP)	Barton Street and Allan Street have been identified in the areas significantly affected by the winter and have significantly deteriorated. They were exhibiting signs of failure prior to winter and had been included on the provisional schemes list. It is proposed that these schemes identified in the remedial schedule are funded from the LTP. £102.5 built into funding plan.	102.5
Central	Allan Street (DP & S)		
Haughton West	Thompson Street East (DP)	Significant failures – complete deep patching and junction of Wylam Avenue	70
Central	Priestgate (DP & S)	Failure of surface in heavily trafficked and populated town centre location. Planning to link works to closures of Priestgate for Kings Head refurbishment to minimise disruption to bus services.	50
Haughton West	Salters Lane North (F)	Footway replacement – uneconomical to continue with sporadic reactive maintenance	40
Central	Cleveland Street (FW, DP &)	Havelock St to Wards Trading Estate Entrance – Significant failures – deep patching & surfacing	110
Haughton North	Whinbush Way (DP)	Structural failures – start at Barmpton Lane in conjunction with Whinbush Way Ph1 FW	80
Haughton North	Whinbush Way Ph1 (FW)	Sparrowhall Dr to Shetland Dr, replace flags. Lift FW where possible Bus Stop – V70's (paving slabs)	30
Lingfield	McMullen Road Ph1 (DP & S)	Structural failure – Allington Way junction area	50
Heighington & Coniscliffe	Piercebridge to High Coniscliffe Ph2 (S)	Resurfacing to address texture issues.	75
Harrowgate Hill	Whessoe Road Ph3 (S)	Burtree Lane, final phase to address texture issues.	60
Lascelles/Eastbourne	Geneva Road Ph4 (VH &)	Next Phase – Cemetery to Neasham Rd to address carriageway integrity and deterioration. Verge hardening works incorporated into the scheme.	85
Harrowgate Hill	North Road Ph5 (FW)	Footway works to address poor condition.	40
Central	Freemans Place (S)	This is a key node on the network and showing signs of failure. There are plans for the TVBNI scheme to undertake work at this location and this would potentially include surfacing. This is a number of years away and subjective whether a limited amount of maintenance now would prevent more significant failures in the future years have a more significant impact on traffic congestion.	65
Lingfield/Bank Top	Yarm Road Ph5 (S & FW)	Footway works – various areas between Hundens Lane and The Broadway on the outbound side of Yarm Rd. CW on outbound lane between Hundens Lane and Geneva Rd (approx 260m)	75
Various	Cycleway Maintenance	Ongoing cycle track maintenance to prevent deterioration as network ages. No other specific budget for cycle track maintenance.	25
KEY :- DP = Deep Patching S = Carriageway Surfacing FW = Footpath works VH = Verge Hardening			

Freemans Place has been identified as starting to show signs of failure. This is a key node on the highway network and any maintenance will cause significant disruption. The scheme has been identified at an early stage to minimise the amount of disruption caused by maintenance. However, there are plans for a TVBNI scheme at this location and this would potentially include surfacing. This is a number of years away and it is subjective whether a limited amount of maintenance now would prevent more significant failures in the future years that would have a more significant impact on traffic congestion. Upon further detailed examination in preparation of this report it is considered that works could be deferred on this location and the funding be built into the funding options to address the impact of the adverse weather. If this option is taken the area would be monitored closely and works reintroduced into the programme early in 2011/12 if required. Ideally, the monitoring will enable the repairs to be deferred until the TVBNI scheme is undertaken.

Analysis of Funding Options – LTP Capital Budget – Integrated Transport Block

The Local Transport Plan (LTP) integrated block provides funding to spend on transport schemes. The funding is not ring-fenced on these types of scheme therefore using elements of this budget on the impact of winter is legitimate spend. However, there are consequences and it will have an impact on the desired outcomes of the LTP. An assessment has been undertaken on elements of integrated block that do not affect Cycle Demonstration Town (CDT) and Tees Valley Bus Network Initiative (TVBNI) match funding commitments. The assessment has taken into account the need protect investment in public transport schemes where investment is needed to address issues with national indicators. The table below is a list of recommendations to be removed from the integrated block programme and the amounts identified built into the funding plan.

Source	Amount	Comments
Car parking improvements	£48,750	Public consultation on the parking strategy and assessment of car parking provision identified a desire to improve the condition of parking facilities in the town centre. A budget allocation was agreed to commence a programme of refurbishments.
Road Safety schemes	£23,000	It is anticipated that the programme of road safety initiatives for 2009/10 will under spend. It is recommended that rather than accrue the under spend into the 2010/11 programme this be built into the funding plan to address the impact of the adverse weather.
Speed management schemes	£25,000	It is anticipated that the programme of speed management initiatives for 2009/10 will under spend. It is recommended that rather than accrue the under spend into the 2010/11 programme this be built into the funding plan to address the impact of the adverse weather.
CCTV grant scheme	£30,500	A match scheme based on a 50:50 grant/commitment from Scarlet Band to fund CCTV on buses to resolve identified anti-social behaviour issues on supported bus routes.
Dropped kerb programme	£7,557	The allocated budget for 2010/11 is £33,000. Requests for work to improve access for mobility impaired people far exceed this budget. It is recommended the budget be reduced, which will mean the requests for improvement works will take longer to deliver.
Network management	£6,000	The allocated budget for 2010/11 is £33,000. The budget is maimed at identifying smallscale works that deliver more efficiency from the highway asset to contribute to managing congestion at key hot spots.
Street lighting	£11,000	This represents the entire budget for new street lighting in the Borough. It is prioritised at locations where crime and anti-social behaviour maybe reduced by the introduction of street lighting.
Local Motion improvements	£23,000	2010/11 budget for small scale improvements comprising of cycle security in schools and workplaces, improved information at the railway station and bus stops, improved security at North Road Station, improvements to footways on routes to Bank Top and North Road Stations and improved pedestrian signage.
Bus Stop Improvements	£30,000	Provision of bus stops has been provided via Housing Growth Point Funding. This releases £30k of planned LTP commitment to improve bus stops in this area following reintroduction of Service 6A/6B
Total	**£204,807**	

Some of the schemes proposed for deferral are associated with the Local Transport Plan's Travel Safety initiatives. This will mean there will not be a budget available from the LTP to address locations where there are proven incidents of crime and disorder where street lighting may assist in reducing incidents. Similarly, a 50% grant contribution to Scarlet Band to provide CCTV on particular supported bus services to address anti-social behaviour issues will not be available to fund from the LTP. It is proposed to reduce the £33k budget for providing a programme of dropped kerbs by £7.6k. There is a substantial list of locations that have been requested to be converted from full kerbs to drop kerbs to improve mobility impaired persons independence and mobility. Many older parts of the highway network were not designed with dropped kerbs and tactile paving to assist mobility and visually impaired people. The programme is developed from requests from this group of people and also with D.A.D to try and improve the highway network. The list of requests is far beyond the budget available and priority must be assigned to the requests. Reducing this budget will mean fewer dropped kerbs will be delivered from the LTP within 2010/11.

Analysis of Funding Options – Prudential Borrowing

Having regard for the report to Cabinet on 3 November 2009 – Review Of The Medium Term Financial Plan And Proposed Business Model For The Future, Members will be aware of the ongoing challenges the Government faces in balancing the nation's budgets following the investment it has made in responding to the recession and will appreciate that this will have an impact on Local Government funding in future years.

All public sector services are preparing for potentially significant reductions in spend allocations to balance the nation's budget. Using prudential borrowing to fund the whole deficit of £412k would cost approximately £50k per year over 10 years. This would potentially place a pressure into the MTFP and result in a need to find savings from other areas of council's services.

It is not recommended that the whole deficit of £412k is prudentially borrowed. However, options for prudential borrowing have been included in the range of options presented to Members for their consideration.

Funding Option 1 – Within Existing Budget Allocations

Funding Source	Amount	Cumulative Total
2 Feb 2010 Cabinet release for accelerated repairs.	£100,000	£100,000
DfT – National Budget announcement.	£148,500	£248,500
Highway Maintenance Revenue – Routine Maintenance	£40,000	£288,500
Local Transport Plan (Barton St & Allan St) – Maintenance Block	£102,488	£390,988
Local Transport Plan – Maintenance Block (Freemans Place)	£65,000	£455,988
Local Transport Plan – Integrated Transport Block	£204,807	£660,795
Total Estimated Cost of Impact of Adverse Winter		**£660,795**

Funding options 2 and 3 provide prudential borrowing options for Members to consider that replace funding identified from within existing budgets. Members are reminded of the analysis of the funding options earlier in the Appendix and the impacts of funding the deficit from existing budgets when considering options 2 and 3.

Funding Option 2 – From within existing budget allocations and £204,807 of prudential borrowing.

Funding option 2 replaces the deferral of schemes from the Local Transport Plan Integrated Block with a Prudential Borrowing option. This would mean not deferring the schemes identified in the integrated block.

Funding Source	Amount	Cumulative Total
2 Feb 2010 Cabinet release for accelerated repairs.	£100,000	£100,000
DfT – National Budget announcement.	£148,500	£248,500
Highway Maintenance Revenue – Routine Maintenance	£40,000	£288,500
Local Transport Plan (Barton St & Allan St) – Maintenance Block	£102,488	£390,988
Local Transport Plan – Maintenance Block (Freemans Place)	£65,000	£455,988
Prudential Borrowing (£24.8k per year for 10 years)	*£204,807*	*£660,795*
Total Estimated Cost of Impact of Adverse Winter		**£660,795**

Funding Option 3 – From within existing budget allocations and £309,807 of prudential borrowing.

Funding option 3 replaces the following options from the plan with a Prudential Borrowing option:

(1) This would mean not deferring schemes from the Local Transport Plan Integrated Block (£204,307).

(2) Freemans Place (£65k) – This would mean undertaking works to reduce risk of further deterioration rather than monitor the location.

(3) Highway Maintenance - Routine Maintenance (£40k) – The report alludes to the fact that it has not been possible to conclusively close the monitoring and assessment phase and that areas will be forthcoming from areas that Members of the public feel have been missed or have deteriorated since the defect was first identified. This element of funding would provide a contingency to capture any missed locations or undertake further proactive treatments from the micro-asphalt programme.

Funding Source	Amount	Cumulative Total
2 Feb 2010 Cabinet release for accelerated repairs.	£100,000	£100,000
DfT – National Budget announcement.	£148,500	£248,500
Local Transport Plan (Barton St & Allan St) – Maintenance Block	£102,488	£350,988
Prudential Borrowing (£37.5k per year for 10 years)	*£309,807*	*£660,795*
Total Estimated Cost of Impact of Adverse Winter		**£660,795**