

REPORT TO: CITY DEVELOPMENT DEPARTMENT – 26 SEPTEMBER 2011

REPORT ON: ROAD MAINTENANCE PARTNERSHIP PERFORMANCE FOR 2010/11

REPORT BY: DIRECTOR OF CITY DEVELOPMENT

REPORT NO: 431-2011

1 PURPOSE OF REPORT

- 1.1 This report provides an update on progress and performance of the Road Maintenance Partnership between Dundee City Council and Tayside Contracts on the delivery of Road Maintenance and Minor Works Services to 31 March 2011.

2 RECOMMENDATION

- 2.1 It is recommended that the Committee notes the content of this report and agree that the Director of City Development be remitted to report back annually to the Committee with the ongoing progress and performance of the Partnership.

3 FINANCIAL IMPLICATIONS

- 3.1 There are no direct financial implications arising from this report.

4 BACKGROUND

- 4.1 Reference is made to Article VI of the Planning and Transport Committee of 9 March 2009 when approval was given to establish a formal Partnership with Tayside Contracts for a 3 year period to 31 March 2012.
- 4.2 An Executive group comprising two senior officers from Dundee City Council and Tayside Contracts meet on a quarterly basis to review performance of the Partnership against a number of agreed criteria. The following provides a summary of performance against agreed criteria and the Department's Service Plan 2007-2010.
- 4.3 The approved Service Plan 2007-2010 detailed three overarching service objectives which are listed below. Priorities identified by the Executive Board and the Road Maintenance Partnership (RMP) Manager to assist in meeting these objectives have been developed through various working groups within the partnership and progress in each of these areas is noted as follows:

1 IMPROVE THE OVERALL MANAGEMENT AND MAINTENANCE OF THE ROAD ASSET.

A process of Lean Service Reviews has been ongoing within the Partnership in particular looking at the resourcing, programming and quality elements of projects. The aim is to effect change based on facts rather than assumptions within a reduced period of time compared to natural progressive change. This process has reduced waste and remedial works, which in turn has improved efficiency and reduced costs.

A Public Sector Improvement Framework (PSIF) review of the Partnership was carried out in 2009/10 as part of the Dundee City Council Pathway to Improvement process. The review was reported to the Improvement and Efficiency Board in April

2010. The overall score achieved by the Roads Maintenance Partnership was 321 which indicates that it is an improving service with some best practice evident. An updated assessment of the PSIF process will be conducted in 2011/12 and it is believed continued progress will have been made following the initial review.

Service Improvement: Identification of areas of potential improvement and implement as appropriate.

Quality: Ensure all works are carried out to an agreed level of quality, with measures put in place to collate and analyse information.

An overall focus on quality has been identified as a critical area for development over the agreed 3 year period of the partnership, this with a view to providing a right first time high quality service in all areas of the partnership.

In 2010/11 quality check sheets developed through the Business Improvement Techniques (BIT) group were used to monitor the quality of structural resurfacing works. Of the 21 jobs carried out, 52% were completed with no reported defects on completion, 28% were completed with one minor defect on completion and the remaining 20% were completed with 2 to 3 minor defects. These results were extremely positive and achieved by putting a high emphasis on delivering a quality service. It is the intention to continue gathering this information for all structural works in 2011/12 and also expand out to cyclic/minor works. Once sufficient information has been gathered this will be analysed to establish trends and measures will be put in place to rectify any reoccurring issues.

Pothole Repairs: These continue to be an important focus for the Partnership both in terms the quality of the repair and the speed of the repair depending on its category and location.

In 2010/11, there was a continuing trend of increased number of pothole repairs compared with the previous year with a 56% increase in the number of potholes repaired compared to 2009/10. In 2009/10, 14,552 potholes were filled compared to 22,713 in 2010/11 (this includes 'find and fix' rhino). This can be attributed to the severe winters experienced in 2009/10 and 2010/11 and the adverse effect this has had on the condition of the overall road network.

Pothole KPIs

| Potholes | Cat 1 | Cat 2 | Cat 3 | Find & Fix (F&F) | Total Cat 1, 2, 3 & F&F | Find & Fix Rhino | Total of All Potholes |
|----------|-------|-------|-------|------------------|-------------------------|------------------|-----------------------|
| 2008/09 | 57 | 2081 | 4138 | 0 | 6276 | 2015 | 8291 |
| 2009/10 | 104 | 6719 | 6131 | 0 | 12954 | 1598 | 14552 |
| 2010/11 | 91 | 6130 | 10689 | 4218 | 21128 | 1585 | 22713 |

Further information in relation to the pothole process is contained within Appendix 1.

Asset Management: Establish a computerised asset management system and the production of a Roads Asset Management Plan.

This has continued to be progressed over the past year in line with the SCOTS Asset Management project and a first draft Roads Asset Management Plan and Life Cycle Plan has been developed in relation to the carriageway and footway asset. The computerised asset management system is also under development with trials carried out gathering inspection information electronically. This has not progressed as quickly as first envisaged, however it is the intention to have this fully operational by the end of 2011.

Grit Bins: In order to assist with enquiries and as part of the asset management process, all grit bins within Dundee have been entered on to the corporate GIS system. This information is available for members of the public and elected members to readily locate grit bins within their area. As part of the winter review of 2009/10 an automated request sheet was implemented to allow members of the public to identify when grit bins are empty, enabling a more co-ordinated and effective approach in servicing grit bins. As part of the winter maintenance review for 2010/11, the policy of grit bin provision has been reviewed with a view to improving public self help.

Gully Cleaning Operations: The use of GPS on gully emptying vehicles was introduced to help monitor the service, obtain a clear record of how many and where the gullies are. It is intended to use this information along with route optimisation software to establish and to develop an improved emptying regime based on need rather than frequency, in the most effective and efficient manner possible.

2. ACHIEVE BEST VALUE IN THE PROCUREMENT OF ROAD MAINTENANCE WORKS

Maintenance strategy: As part of a Tri Council remit (Dundee City Council, Angus Council & Perth & Kinross Council), a maintenance strategy group was set up to establish if a common maintenance strategy could be developed across the three council areas, providing efficient service delivery during a time of potentially decreasing budgets. This is an ongoing process with consideration being given to increasing the use of alternative processes such as slurry sealing of footways, delivering more for less. Rationalising the surfacing materials used to provide consistency across the three areas will help reduce production costs at source. Consideration is also being given on how to ensure resources can be fully utilised and available for use during the working day.

A review of the form of treatment used to maintain the adopted asset has provided a year on year increase in the area of adopted carriageway treated. There would have been the same increased level of footway treatment (24,669 sqm), however due to the exceptional weather experienced there were a large number of footway schemes necessarily deferred and carried over into the 2011/12 programme.

| Area of Footway & Carriageway Treated | 2008 09 Actual Completed Areas | 2009 10 Actual Completed Areas | 2010 11 Actual Completed Areas |
|---------------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Total Footway Treatment m2 | 24,111 | 27,985 | 14,312 (24,669) |
| Total Carriageway Treatment m2 | 86,884 | 100,035 | 127,664 |

3. MINIMISE THE ADVERSE IMPACT ROAD MAINTENANCE HAS ON THE ENVIRONMENT

Baldovie Ash: Recycling of ash waste from the Baldovie Waste to Energy Plant in bituminous road materials was introduced in October 2010. 460 tonnes of ash was used bringing savings in waste disposal costs to the Council of £45,000. It is envisaged that these savings will increase in 2011/12 when the material will be used for a full financial year.

Recycled Aggregates: These are used in all road and footway sub-base layers within works carried out by the Partnership. Recycled aggregates from bituminous planings are recycled back into bituminous mixes manufactured by Tayside Contracts.

Tayset: This cold mixed bituminous bound material using recycled materials was developed by Tayside Contracts and is being utilised by the Partnership in appropriate situations.

Gully Waste: A successful full scale site trial was completed in 2010 involving composting waste products from the reed bed recycling system for gully waste in Forfar. A business case is to be developed to consider the construction of a purpose made facility within Dundee.

Performance - Key Performance Indicators

- 4.4 KPI's relating to the approved Service Plan 2007–2010 have been monitored and financial KPI's have been established for various structural maintenance works and minor works. Overall performance has been good and in the main there has either been a decrease in costs or costs maintained at a steady state. The KPIs are discussed in more detail in Appendix 1.
- 4.5 As yet it has not been possible to compare against external markets, however through the development of KPIs through the Society of Chief Officers Transport Scotland (SCOTS) it is the intention to benchmark through this process. Through the recently formed tri-council maintenance strategy group, it is proposed to establish KPI's that can be monitored across the three council areas of Dundee, Angus and Perth & Kinross.

Future Areas to be Developed

- 4.6 A number of further areas of potential development have been identified and will be actively pursued:
- Continue to monitor and review the quality of service provided through the partnership, focusing on operational quality and customer perception.
 - Review the delivery of the minor works elements of the partnership, to ensure an effective and expedient response in accordance with current national standards and best practice.
 - Continue to develop systems and processes to ensure a right first time quality service is being delivered.
 - Continue the review of the current procedures for pothole repairs with a view to increasing the % of first time permanent repairs.

- Continue to work together to establish further KPI's and drive down the unit cost of repairs, reinvesting efficiency savings back into the road network.
- Continue to establish a computerised asset management system and produce a comprehensive Roads Asset Management Plan.

5 CONCLUSION

- 5.1 The Partnership has continued to develop and has progressed well over the past year. Performance has been good and there are many positive developments and improvements either taking place or identified for review offering opportunities for continued efficiency savings.
- 5.2 The present Road Maintenance Partnership arrangement meets the Scottish Government's objective to increase partnership working in line with its Efficient Government agenda.

6 POLICY IMPLICATIONS

- 6.1 This Report has been screened for any policy implications in respect of Sustainability, Strategic Environmental Assessment, Anti-Poverty, Equality Impact Assessment and Risk Management. There are no major issues.

7 CONSULTATIONS

- 7.1 The Chief Executive, Depute Chief Executive (Support Services), Director of Finance and the Managing Director of Tayside Contracts have been consulted and are in agreement with the contents of this report.

8 BACKGROUND PAPERS

- 8.1 None.

Mike Galloway
Director of City Development

Fergus Wilson
City Engineer

FW/DMcK/EH

12 September 2011

Dundee City Council
Dundee House
Dundee

PROGRESS AND PERFORMANCE REPORT

1 Priority Areas Developed to Date

1.1 **Pothole Repairs**

The table below details the number of potholes that have been repaired between April 2009 and March 2011, with the targeted response and actual response information. This is compared against the same period in 2008/09 & 2010/11. This information ties in with the approved Departmental Service Plan 2007–2010 key objective of *“Improving the overall management and maintenance of the road asset”*.

| Summary of Roads Maintenance Partnership Cat 1, 2 & 3 Pothole Repair Performance (Rhino Find & Fix & Severe Weather Find & Fix are not included) | | | | | | | |
|---|-------------------------------|------------------------------|----------------------|--------------------------|---------------|----------------------------|-----------------|
| 2008/09 | Target time taken to complete | Average time taken to repair | No. Repaired In Time | No Repaired Outwith Time | % Target Time | % Completed in Target Time | Total Completed |
| Cat 1 | 3 Hrs | N/A | 57 | 0 | 90.00% | 100% | 57 |
| Cat 2 | 3 Days | N/A | 1998 | 83 | 85.00% | 96% | 2081 |
| Cat 3 | 28 Days | N/A | 4055 | 83 | 80.00% | 98% | 4138 |
| | | Total | 6,110 | 166 | 97% | N/A | 6,276 |

| 2009/10 | Target time taken to complete | Average time taken to repair | No. Repaired In Time | No Repaired Outwith Time | % Target Time | % Completed in Target Time | Total Completed |
|---------|-------------------------------|------------------------------|----------------------|--------------------------|---------------|----------------------------|-----------------|
| Cat 1 | 3 Hrs | 0.36 | 104 | 0 | 90% | 100% | 104 |
| Cat 2 | 3 Days | 3.19 | 5446 | 1273 | 85% | 81% | 6719 |
| Cat 3 | 28 Days | 8.17 | 5927 | 204 | 80% | 97% | 6131 |
| | | Total | 11,477 | 1477 | 89% | N/A | 12,954 |

| 2010/11 | Target time taken to complete | Average time taken to repair | No. Repaired In Time | No Repaired Outwith Time | % Target Time | % Completed in Target Time | Total Completed |
|---------|-------------------------------|------------------------------|----------------------|--------------------------|---------------|----------------------------|-----------------|
| Cat 1 | 3 Hrs | 0.54 | 91 | 0 | 90% | 100% | 91 |
| Cat 2 | 3 Days | 2.98 | 5212 | 918 | 85% | 85% | 6130 |
| Cat 3 | 28 Days | 6.78 | 10325 | 364 | 80% | 97% | 10689 |
| | | Total | 15,628 | 1,282 | 89% | N/A | 16,910 |

The number of potholes being repaired by the rhino process giving a permanent first time repair has increased on the previous year by 30%, although the percentage in relation to the number of potholes has not increased. The reason for this is down to the volume of potholes occurring following the recent severe weather and the physical amount of repairs the process can carry out in a day.

The process has been carried out on a find and fix basis working within specific areas and also to carry out first time permanent repairs on Cat 2 & 3 potholes. The reason for doing this is to maximise the productive working time of the apparatus.

| Summary of Roads Maintenance Partnership Cat 1, 2 & 3 Performance - All Pothole Repairs (ie Including all Rhino & Find & Fix) | | | | | | |
|--|--|----------------------------------|--------------------------------|------------------------|-------------------------|-----------------------|
| Potholes | Total Cat 1, 2, 3 & F&F in temp material | Total Cat 1, 2, 3 & F&F by Rhino | Total Cat 1, 2, 3 & F&F in HRA | Total Find & Fix Rhino | Total Potholes by Rhino | Total of All Potholes |
| 2008/09 | 6276 | 0 | 0 | 2015 | 2015 | 8,291 |
| 2009/10 | 10424 | 884 | 1646 | 1598 | 2482 | 14,552 |
| 2010/11 | 8826 | 1674 | 10628 | 1585 | 3259 | 22,713 |

Although it has not been possible to establish if the revised strategy of dealing with potholes has had a direct correlation in reducing public liability claims received, the situation is monitored closely with the Council's insurance team through team quarterly reviews.

The average cost of a find and fix repair has remained at a steady level confirming best value is continuing to be provided.

Summary of Rapidr Rhino Find & Fix, Unit Cost per/patch

| Job Type | 2007 08 Actual for all Jobs (Unit Rate) | 2009 09 Actual RMP Jobs | 2009 10 Actual RMP Jobs | 2010 11 Actual RMP Jobs |
|----------------------------|--|-------------------------------|-------------------------------|-------------------------------|
| Monthly Rapid Rhino Orders | £50.89 | £36.11 | £35.44 | £37.24 |

Gully Cleaning Operations

In comparison to 2009/10 figures there has been a small increase in the number of gullies cleaned but there has been a significant reduction in the unit cost of cleaning the gullies. Significant effort has gone into ensuring that productive periods of work are achieved. Although there has only been a small increase in the number of gullies cleaned, this can be attributed to the severe winter experienced where there was a period of approximately two months where no gully cleaning operations were carried out.

Gully Cleaning Performance

| | Gullies Cleaned 2007/08 | Gullies Cleaned 2008/09 | Gullies Cleaned 2009/10 | Gullies Cleaned 2010/11 |
|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Gully Cleaning | | | | |
| Total for Year | 37,133 | 34,182 | 24,563 | 25,860 |
| Cost Per/Gully | £4.24 | £4.35 | £5.67 | £4.66 |

2 **Progress Against Departmental Service Plan Objectives**

Detailed below are further KPI's measured which tie in with the approved Departmental Service Plan 2007–2010.

2.1 Achieve Best Value in the procurement of road maintenance works

- Average base cost of a pothole repair
- Average base cost per metre square of carriageway resurfacing

| Average Cost | 2007/08 (Unit Rate Actual) | 2008/09 (Actual) | 2009/10 (Actual) | 2010/11 (Actual) |
|--|----------------------------------|---------------------|---------------------|---------------------|
| Pothole patch repair (temporary Cat 1, 2,& 3) | £26.27 | £23.27 | £14.28 | £11.61 |
| Pothole patch repair (Permanent - Rapidrhino) | £50.89 | £36.11 | £35.44 | £37.24 |
| Square metre of carriageway resurfacing | £17.49m2 | £16.84m2 | £15.71m2 | £18.03m2 |

Although there has been an overall relative reduction in costs in these areas, comparison with other authorities is required, to obtain a true measure. Work is continuing to establish KPI's associated with the Society of Chief Officers Transport Scotland (SCOTS) and the adjoining two authorities. It is evident that work is required to ensure KPIs are developed with these bodies that can be measured and compared consistently across authorities.

Given the continual increase in bitumen prices it is also necessary to consider inflationary issues.

Inflation – Office for National Statistics – Coated Roadstone Price Index

| Date | 2005 average | 2006 average | 2007 average | 2008 average | 2009 average | 2010 average |
|-------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Index | 100 | 108.2 | 113.8 | 130 | 140.8 | 149 |

The significant reduction in cost per pothole repair can be attributed to the quantity and the general close proximity of potholes to one another during find and fix, particularly the find and fix carried out immediately after the severe winter period. This necessarily enables more repairs to be carried out in a day for the same fixed resource.

2.2 Minimise the adverse impact road maintenance has on the environment

The use of recycled materials is well established on Dundee City Council road maintenance schemes and this has continued to be driven forward throughout the Partnership. No virgin aggregates are used in footway or carriageway sub base layers with recycled materials being used instead.

Recycled Material Information 2007/08 to 2010/11

| Use of Recycled Material | April 07 to March 08 (2007/08) | April 08 to March 09 (2008/09) | April 09 to March 10 (2009/10) | April 10 to March 11 (2009/10) |
|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Material returned for Recycling | 6,663T | 7,577T | 12,598T | 10,327T |
| Recycled Sub Base Used | 2,909T | 3,145T | 2,934.5T | 1,556T |

3 Other Key Performance Indicators

| Summary of Roads Maintenance Partnership Average Cost of Repair/sqm for Structural Works (Rates relate to the base cost with no % add on) | | | | | | | |
|--|---|----------------------------------|----------------------------------|----------------------------------|---|---|---|
| JOB TYPE | 2007 08 Actual for all Jobs (Unit Rate) | 2008 09 Actual RMP Jobs | 2009 10 Actual RMP Jobs | 2010 11 Actual RMP Jobs | 2008 09 Actual Completed Areas | 2009 10 Actual Completed Areas | 2010 11 Actual Completed Areas |
| REMOTE FOOTPATH WORKS | £29.17 | £34.64 | £15.95 | N/A | 4,537 | 7,457 | 0 |
| FOOTWAY SLURRY SEAL | N/A | N/A | £6.46 | £7.19 | 0 | 4,036 | 4,774 |
| FOOTWAY WORKS | £29.12 | £35.99 | £37.45 | £38.16 | 19,574 | 16,492 | 9,538 |
| Total Footway Treatment m2 | | | | | 24,111 | 27,985 | 14,312 |
| RECONSTRUCTION | N/A | N/A | £59.98 | £53.48 | 0 | 3,580 | 1,761 |
| RESURFACING | £17.49 | £16.84 | £15.71 | £18.03 | 49,578 | 60,476 | 50,599 |
| SURFACE DRESSING | N/A | N/A | N/A | £2.06 | N/A | N/A | 42,575 |
| RETREAD | N/A | £9.80 | N/A | N/A | 12,471 | 0 | 0 |
| NIMPACTOCOTE* | N/A | £6.70 | £5.95 | £6.23 | 7,100 | 8,592 | 12,285 |
| RALUMAC** | N/A | £5.20 | £3.90 | £4.14 | 10,683 | 18,223 | 7,013 |
| STANDARD PATCHING | £49.37 | £36.18 | £33.46 | £30.73 | 6,540 | 9,164 | 11,109 |
| RHINO PATCHING | £28.85 | £33.22 | £56.53 | £25.55 | 512 | 129 | 2,322 |
| Total Carriageway Treatment m2 | | | | | 86,884 | 100,164 | 127,664 |

Note:-

The rise in costs across some of the work types is attributed to the increase in material prices and type of materials being used.

In the main there has been a general improvement in the unit cost of works, although it will be necessary to establish base line figures over the next two years to ensure fair comparisons are being made. Given the continual above inflation increase in bitumen prices it will be necessary to reflect these inflationary issues.