

## **CABINET**

**30 OCTOBER 2012**

### **ROAD MAINTENANCE FUNDING**

Portfolio Holder: Councillor Phil Filmer, Front Line Services

Report from: Robin Cooper, Director of Regeneration, Community and Culture

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#### **Summary**

This is a referral report from the Regeneration, Community and Culture Overview and Scrutiny Committee for Cabinet's consideration on the issue of road maintenance funding.

#### **1. Budget and Policy Framework**

- 1.1 Under section 41 of the Highways Act, the Council has a duty to maintain the highway. As a guideline, Authorities have a general duty of care to users and the community to maintain the highway in a condition fit for its purpose.
- 1.2 The highway network is graded upon usage and risk (road hierarchy), which results on whether a particular road is inspected yearly or, weekly by a dedicated team of highway inspectors. Most defects highlighted by the inspectors are "safety defects" (trips or potholes) and orders for repairs are raised with the contractor for immediate or 28 day repair dependent upon locations and severity.
- 1.3 Medway's Transport Asset Management Plan sets strategic objectives and includes items relating to improving the condition of carriageways, footway, structures and traffic signals.
- 1.4 Budgets for highway maintenance are set at the beginning of each financial year. This includes schemes relating to road and pavement resurfacing, repairs / strengthening of structures and improvements to traffic signals.

#### **2. Background**

- 2.1 At a Regeneration, Community and Culture Overview and Scrutiny Committee meeting on 28 June 2012, Members considered a Council Plan 2011/2012 End of Year Monitoring Report. The Committee agreed that it

would “welcome further information into the variable scenarios of road maintenance depending on future weather conditions and budget increase/decreases in order that Members could make ‘smart’ decisions on how best to spend the resources.” Officers advised that this budget also included pathways, structures and signals and that the maintenance of these had to be considered alongside road maintenance.

- 2.2 The information in paragraphs 2.3 - 5.0 below was considered by the committee in response to Members’ request for further, more detailed information.
- 2.3 In 2007, the Service Manager for Highways highlighted to the Directorate Management Team and Members that the accumulated backlog associated with Highways maintenance was in the order of £12 million and that the assets were in a state of decline with the existing funding levels.
- 2.4 Following this, the Council appointed consultant Mouchel to undertake a further study into this area, their report showed an accumulative funding shortfall of £13.95 million and accumulating at around £2.15 million per annum.
- 2.5 Within this context information is not readily at hand to compare other Local Authorities and their valuation regarding any accumulated backlog in maintenance. However, recent financial reporting requirements for Whole Government Accounting will involve councils reporting annually on their highway assets, both in terms of Gross Replacement Costs (GRC) and also the Depreciated Replacement Costs (DRC), which will identify the gap between a “new” highway network compared with the condition now. Medway’s figures are GRC £ 1.40 billion and DRC £1.16 billion.
- 2.6 The Annual Local Authority Road Maintenance (ALARM) Survey 2012 reports that the total projected shortfall in road maintenance budgets for one year only to keep roads in a reasonable condition for Local Authorities in England (excludes London) is £627 million which equates to £5.3 million per Authority per year.
- 2.7 National Indicators show a clear decline in the condition of the carriageway network in the UK against the current levels of funding.
- 2.8 NI 168 – Principal Roads where maintenance should be considered.  
The indicator measures the percentage of the local authority’s A-road and principal carriageways where maintenance should be considered.  
The performance indicator is derived from a survey of the surface condition of the local authority’s classified carriageway network, using survey vehicles that are accredited as conforming to the SCANNER (Surface Condition Assessment for the National Network of Roads) specification and processing software that is accredited as conforming to the UKPMS (UK Pavement Management System) standards. Results are reported for 100% of the network surveyed in both directions, where this is not physically possible to survey all parts of the network, grossed-up figures from shorter surveys (at least 90% of the total requirement) will be permitted.

- 2.9 The reported results for NI 168 utilising the RAG system (Red, Amber, Green) are:

2009/10

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 3.42 miles  | 4.1%  |
| Amber: Plan investigation soon  | 14.86 miles | 17.9% |
| Green: Generally good condition | 64.96 miles | 78.0% |

2010/11

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 4.12 miles  | 5.3%  |
| Amber: Plan investigation soon  | 14.29 miles | 18.3% |
| Green: Generally good condition | 59.72 miles | 76.4% |

2011/12

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 4.09 miles  | 5.8%  |
| Amber: Plan investigation soon  | 14.85 miles | 20.9% |
| Green: Generally good condition | 51.98 miles | 73.3% |

Indicating a year on year increase of the principal road network that should be considered for maintenance.

- 2.10 NI 169 – Non-Principal classified roads where maintenance should be considered.

The indicator measures the percentage of the local authority's B-road and C-road carriageways where maintenance should be considered. The performance indicator is derived from a survey of the surface condition of the local authority's classified carriageway network, using survey vehicles that are accredited as conforming to the SCANNER (Surface Condition Assessment for the National Network of Roads) specification and processing software that is accredited as conforming to the UKPMS (UK Pavement Management System) standards. Results reported are a combination of (a) 100% of the B-class network surveyed in both directions; and (b) 100% of the C-class network surveyed in one direction, where this is not physically possible to survey all parts of the network, grossed-up figures from shorter surveys (at least 90% of the total B-road requirement and 80% of the C-road requirement) will be permitted.

- 2.11 The reported results for NI 169 are:

2009/10

B class Roads:

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 2.35 miles  | 7.1%  |
| Amber: Plan investigation soon  | 8.72 miles  | 26.3% |
| Green: Generally good condition | 22.09 miles | 66.6% |

C class Roads:

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 7.67 miles  | 12.4% |
| Amber: Plan investigation soon  | 19.99 miles | 32.2% |
| Green: Generally good condition | 34.43 miles | 55.5% |

## 2010/11

### B class Roads:

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 3.03 miles  | 9.9%  |
| Amber: Plan investigation soon  | 9.10 miles  | 29.7% |
| Green: Generally good condition | 18.56 miles | 60.5% |

### C class Roads:

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 7.38 miles  | 12.9% |
| Amber: Plan investigation soon  | 18.21 miles | 31.7% |
| Green: Generally good condition | 31.84 miles | 55.4% |

## 2011/12

### B class Roads:

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 3.25 miles  | 10.1% |
| Amber: Plan investigation soon  | 9.87 miles  | 30.8% |
| Green: Generally good condition | 18.95 miles | 59.1% |

### C class Roads:

|                                 |             |       |
|---------------------------------|-------------|-------|
| Red: Plan maintenance soon      | 5.57 miles  | 13.8% |
| Amber: Plan investigation soon  | 13.63 miles | 33.8% |
| Green: Generally good condition | 21.11 miles | 52.4% |

Indicating a year on year increase of the Non Principal road network that should be considered for maintenance.

## 2.12 Comparison Tables

### Principal Road NI 168 – South East Local Authorities in percent of all highways in their area where maintenance is needed

| <b>Local Authority</b> | <b>2009/10 (%)</b> | <b>2010/11 (%)</b> |
|------------------------|--------------------|--------------------|
| Medway Council         | 4                  | 5                  |
| Portsmouth             | 4                  | 4                  |
| Reading                | 14                 | 14                 |
| Slough                 | 10                 | 6                  |
| East Sussex            | 10                 | 10                 |
| Kent                   | 6                  | * (not reported)   |

## 2.13 Comparison Tables

### Principal Road NI 169 – South East Local Authorities in percent of all similar highways in their area where maintenance is needed

| <b>Local Authority</b> | <b>2009/10 (%)</b> | <b>2010/11 (%)</b> |
|------------------------|--------------------|--------------------|
| Medway Council         | 11                 | 12                 |
| Portsmouth             | 5                  | 3                  |
| Reading                | 8                  | 8                  |
| Slough                 | 8                  | 9                  |
| East Sussex            | 10                 | 10                 |
| Kent                   | 14                 | * (not reported)   |

### 3. Financial Investment in the Highway Network

- 3.1 Recent investment of £4 million of Prudential Borrowing was spent on resurfacing and the Council has to pay back £500,000 a year for 10 years, this investment has helped in slowing the decline by dealing with around 10% of the backlog which continues to grow year on year.
- 3.2 The Thames Gateway investment in Chatham roads together with the other highway improvement schemes listed below; totalling £24.545 million of additional investment will delay them falling into the Amber or Red category for a good number of years.

3.3 Capital Projects Highways Improvements:

|                                              | <u>£m</u>              |
|----------------------------------------------|------------------------|
| Medway Strategic Bus Corridor Improvements   | 12.457                 |
| Chatham Centre Waterfront: Road Improvements | 3.610                  |
| Corporation Street                           | 0.299                  |
| Highways Schemes                             | 8.179                  |
| <u>Total</u>                                 | <u>£24.545 million</u> |

- 3.4 The current maintenance investment in road resurfacing for 2012/13 is £1.275 million; the consequence of which, according to the National Performance Indicators will result in a further decline in the network of approximately 1% this year and if new resources are not identified we would expect a year on year decline to continue.
- 3.5 An additional investment of £1 million - £1.275 million per annum would arrest this decline and prevent the National Indicators worsening and would through proper targeting start to show a reduction over a ten year plan in the number of roads requiring maintenance.
- 3.6 Targets need to be challenging but realistic in comparison to investment and the newly approved NI 168 target of 6% and NI 169 of 13% are rational with a 0.25% decrease for both performance indicators in 2013/14.
- 3.7 One of the greatest risks to the long-term condition to the highway is water penetration and reduction in structural integrity, which shortens the life of the road considerably. Members will be aware that Utilities have a statutory right to excavate the highway to install and maintain their services. Some of the Utility companies are under Regulator direction to improve their mains, others like the gas suppliers must replace old cast iron mains within a reasonable period to minimise risk to life and property. As a result these companies regularly dig up the roads and it is imperative that the Highway Authority controls the management of this operation. Medway has an Inspector to check a proportion of the reinstatements and a programme of coring or radar surveying of others is also carried out. If a reinstatement fails to comply with the required standard, the cost of the survey is recovered from the utility, together with a small penalty. If the reinstatement complies with the required specification, no income is generated. The way in which this is done is regulated nationally. However, legislation is very much biased in the favour of the Utility companies with very little power for the highway authority and limited income.

- 3.8 There are three stages to routine inspections these are classified as Category A, Category B and Category C.
- A Undertaken during the progress of the works
  - B Undertaken within the six months following interim or permanent reinstatement
  - C Undertaken within the three months preceding the end of the guarantee period.
- 3.9 Medway receives funding from each of the statutory undertakers for carrying out 10% sample inspections. The annual charge is determined from the average over the previous three financial years for each undertaker.
- 3.10 Additional Inspections also take place that are not part of the sample inspections, these are not chargeable unless there are defects found at Category B and C.
- 3.11 The breakdown of inspections notices and defects, for the latest full year period is shown below.

**Table 1**

|  |    | <u>Road openings in Medway</u><br><u>1 April 2011 to 31 March 2012</u> |         |  |
|--|----|------------------------------------------------------------------------|---------|--|
|  |    |                                                                        |         |  |
|  | A  | NOTIFICATIONS – Type                                                   | AMOUNTS |  |
|  | 1  | Major Works                                                            | 738     |  |
|  | 2  | Standard Works                                                         | 1850    |  |
|  | 3  | Minor Works                                                            | 12596   |  |
|  | 4  | Immediate Urgent                                                       | 1530    |  |
|  | 5  | Immediate Emergency                                                    | 661     |  |
|  | 6  | Bar Holes (minor openings for tracing gas leaks)                       | 264     |  |
|  | 7  | Others                                                                 | 2       |  |
|  | 8  | TOTAL OPENINGS                                                         | 17641   |  |
|  |    |                                                                        |         |  |
|  | 9  | Subsequently Withdrawn                                                 | 4509    |  |
|  | 10 | Lapsed Works                                                           | 0       |  |
|  |    |                                                                        |         |  |
|  | 11 | TOTAL NOTIFICATIONS                                                    | 22150   |  |
|  |    |                                                                        |         |  |
|  | 12 | ACTUAL INSPECTION UNITS                                                | 15665   |  |
|  |    |                                                                        |         |  |
|  | B  | INSPECTIONS - Type                                                     |         |  |
|  | 1  | Sample                                                                 | 4818    |  |

|  |   |                                  |      |  |
|--|---|----------------------------------|------|--|
|  | 2 | Routine                          | 944  |  |
|  | 3 | Third Party Reports              | 41   |  |
|  |   |                                  |      |  |
|  | 5 | TOTAL INSPECTIONS                | 5803 |  |
|  |   |                                  |      |  |
|  | C | DEFECTS - Inspection Type        |      |  |
|  | 1 | Sample                           | 108  |  |
|  | 2 | Routine                          | 293  |  |
|  | 3 | Third Party Reports              | 35   |  |
|  | 4 | Investigatory                    | 0    |  |
|  |   |                                  |      |  |
|  | 5 | TOTAL DEFECTS                    | 436  |  |
|  | 6 | Defect rate (sample inspections) | 2.2% |  |
|  | 7 | Defect rate (total inspections)  | 7.5% |  |
|  |   |                                  |      |  |

- 3.12 At present, the council has two full-time street works posts, plus an additional equivalent 1.5 posts that have been taken on to deal with the workload.
- 3.13 Any requirement to increase the levels of inspection would be at Medway Council's cost, estimated at 8.5 additional staff to undertake 100% inspections. Part of this outlay would be recovered initially from the increased defect charges, however in the longer term as defects diminish so will the additional income. It is also worth noting that there are estimated future savings due to the potential longer life and increased structural integrity of both the carriageway and footway. In October, to assist the inspection data and assess the quality of reinstatements, Medway will recommence with its reinstatement/coring programme, in this process a sample core is drilled into the reinstatement and sent off for analysis.
- 3.14 Medway will also be employing ground-penetrating radar to assess the depths of reinstatements to ensure compliance with the required specification.

### 3.15 Responsive Highway Maintenance

**Table 2**

| <u>Statistics for Highway Inspectorate</u> |                                         |                                                                 |                                             |
|--------------------------------------------|-----------------------------------------|-----------------------------------------------------------------|---------------------------------------------|
|                                            |                                         |                                                                 |                                             |
|                                            | Number of defects repaired with Viafix* | Numbers of orders raised with Volker Highways for minor repairs | Percentage of orders meeting Response Times |
| August 2011                                | 25                                      | 411                                                             | 100.00                                      |
| September                                  | 82                                      | 468                                                             | 100.00                                      |
| October                                    | 14                                      | 438                                                             | 99.93                                       |
| November                                   | 25                                      | 406                                                             | 99.89                                       |
| December                                   | 21                                      | 407                                                             | 99.30                                       |
| January 2012                               | 51                                      | 609                                                             | 99.77                                       |
| February                                   | 54                                      | 359                                                             | 99.73                                       |
| March                                      | 52                                      | 448                                                             | 99.71                                       |
| April                                      | 27                                      | 399                                                             | 99.73                                       |
| May                                        | 108                                     | 598                                                             | 99.78                                       |
| June                                       | 82                                      | 456                                                             | 99.41                                       |
| July                                       | 102                                     | 352                                                             | 99.62                                       |
|                                            | 643                                     | 5351                                                            |                                             |

\* Viafix is a cold applied material, which offers an immediate repair solution to any pothole or similar defect giving a lasting repair.

- 3.16 The spreadsheet indicates figures for Viafix repairs and orders for minor works. These figures have been extracted from Covalent and relate to the Highway Inspectorate only.
- 3.17 The Viafix column in Table 2 indicates the actual number of defects repaired, using the product whereas the order figures are the number of orders raised. Each order may contain several separate locations, therefore the 5,351 figure is the minimal number of defects repaired.
- 3.18 Locations with defects requiring immediate response are attended within one hour of notification and made safe until a permanent repair is completed.
- 3.19 Locations where defects are present but no immediate danger to users of the network but requires repair – orders are raised on either 24 hour, 7 day or 28 working day turnaround (depending on how the defect is assessed). The completion of works orders on time is a Key Performance Indicator for the contract and the percentage of orders that have met the specified completion date are recorded in the matrix. The completed percentage figure represents all planned and responsive orders placed with the contractor.



### 3.20 Spray Paint Markings on roads – Defined Users

|                       |                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| White Paint           | Medway Highways<br><br>Defects for repair are marked in white paint to indicate to Volker Highways the exact location and extent of the repair required |
| Blue Paint            | Water Supply Undertaker                                                                                                                                 |
| Yellow Paint          | South Eastern Region of British Gas                                                                                                                     |
| Red or Black Paint    | Electricity Generating Boards                                                                                                                           |
| Green or Silver Paint | Telecommunications                                                                                                                                      |

## 4. Advice and analysis

- 4.1 Highways have invested in a system called J-CAM, (Jacobs Carriageway Asset Management) which takes the UK Pavement management System (UKPMS) data in CONFIRM (highways Asset management system) and enters that data into a model of the councils network, from this model we can predict what resources we need over the coming “x” years to either maintain the network to a predetermined condition or conversely if we specify what resources will be spent on the asset, the model will predict the condition the network will be in over “x” years, so that reliable informed decision making can take place.
- 4.2 CONFIRM is a modular software solution for the maintenance and management of public infrastructure assets and services including Highways, Lights, Structures, Street Works, Property Maintenance, Grounds, Trees, Cleansing and Waste and provides an audit trail for works and service enquiries.
- 4.3 Enabling Highways to record all its highway assets and associated values, as well as run the Term Maintenance and Street Lighting Contract through it, which includes the ordering and payment of works, the recording of highway inspections and defects and the incorporation of the National Street Gazetteer.
- 4.4 Asset management information provided through this Gateway enables informed decision-making in the allocating of funding required to meet maintenance predictions.
- 4.5 The prediction and optimisation module of J-CAM provides forward predicting modelling and investment optimisation for the highway network, thereby generating schemes that are likely to represent a programme of works spanning a number of years linked to the level of investment required and the impact on the network.
- 4.6 Optimisation is achieved by predicting when a scheme deteriorates sufficiently to require a more expensive treatment and programming treatment in the correct year to avoid this. The optimised programme of works produced enables the level of investment to be calculated.

4.7 There are three models available to use in the system:

Budget Model – highlights the carriageway condition for fixed funding over time. Funding can be allocated per road class over a user-selected period of time. When allocating a specific budget over a selected number of years, the change in National Indicators highlights the percentage of network at risk.

Target Model – calculates the funding needs to achieve required National Indicators over time using various treatments.

Backlog Model – allows officers/member to set target reductions in treatments in the remaining programme of work (backlog) over a specified time period for A and B & C class roads separately. Showing the funding needs to achieve set backlog targets over time.

4.8 Each Model shows the following outputs at the end of the optimisation run:

- i) Overall funding profile necessary to achieve desired outcome
- ii) The mix (including length and costs) of treatment required achieving a desired outcome
- iii) Revised treatment summary table at the end of the specified time period.

4.9 This system (JCAM) is currently being calibrated and populated with Medway data and over the coming year will be trialled in Medway to ensure that in future years officers and in turn members will be able to see the condition of all roads/pavements in Medway and will be able to take informed decisions based on technical condition data.

## 5. Risk management

| Risk              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Action to avoid or mitigate risk                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Highway condition | <p>The highway condition is depreciating with current level of funding, if current funding levels are maintained the risk would be ranked as a C2, which is a Significant Likelihood of the road condition worsening with an impact on the network as Critical, as in years to come the roads will eventually fail.</p> <p><b>Likelihood</b><br/>A Very high    B High<br/>C Significant    D Low<br/>E Very low    F Almost impossible</p> <p><b>Impact:</b><br/>1 Catastrophic (Showstopper)<br/>2 Critical        3 Marginal<br/>4 Negligible</p> | <p>Details of a plan are contained in the Medium Term Financial Plan for the following three years and also this report highlights to Members the current situation.</p> <p>Members should be aware that this service is not going to fail this or next year, but decision on actions and funding taken now will affect the road network in say 10 years time.</p> <p>Highways maintenance is a long term strategy.</p> |

## **6. Regeneration, Community and Culture Overview and Scrutiny Committee**

- 6.1 The Regeneration, Community and Culture Overview and Scrutiny Committee considered this report on 4 October 2012.
- 6.2 The Assistant Director, Front Line Services introduced the report setting out the background, in particular highlighting that in 2007 it had been identified that the highway maintenance accumulated backlog was around £12 million and that the roads were in a state of decline with the existing funding levels. Following this, a study was carried out which reported a funding shortfall of £13.95 million. However, recent one off investment of £4 million had been spent on resurfacing which had helped to slow the decline by dealing with around 10% of the backlog, which continued to grow year on year.
- 6.3 The Committee was advised that the current maintenance investment on road resurfacing for 2012/2013 was £1.275 million; the consequence of which would result in a further decline in the road network of approximately 1% this year and a similar decline expected each year after that. An additional investment of £1 million - £1.275 million per annum would stop this decline and would, through proper targeting, start to show a reduction over a ten year plan in the number of roads requiring maintenance. The Assistant Director reminded Members that this problem was not specific to Medway but an issue for many Local Authorities across the country but that Medway compared well against other authorities in the South East region.
- 6.4 Members were further advised that there was a significant volume of work created through the number of notifications from the utility companies, particularly as there had been substantial work recently from Southern Water and South East Gas networks and the council was working closely with one of these about the quality of their reinstatement work. The law allowed the statutory undertakers (utility companies) to make a temporary repair following the completion of their work and the company then had six months to replace it properly. The council did not carry out 100% inspections of all replacement works; it would take another 8.5 full time members of staff to achieve that. However, the highway inspectors were about to use new ground-penetrating radar technology to assist them, which produced a 3D map of the work carried out beneath the surface without having to take a core sample.
- 6.5 The Committee commended officers on the thorough and detailed report and discussed a number of issues including:
- The use of the chemical repair 'Viafix' by the highway inspectors, with 643 potholes repaired instantaneously in 2011-2012 and Members were pleased to note that none of the repairs using 'Viafix' (which began two years ago) had required further work carried out on them;
  - The level of maintenance on Medway's roads was very important to residents (reported through the council's opinion polls and directly to Ward Members) as it had a real consequence on their physical environment;

- If the budget continued in its present form, then the actual structure of some roads (the foundations, rather than the surface) would become affected with a higher financial consequence for the council;
- The problem of poor road structure with less funding than required to maintain it, particularly harsh winters and exacerbated through poor reinstatements by some of the utility companies was accumulating liability for the future;
- The law favoured the statutory undertakers, particularly with regard to only being required to make a temporary reinstatement and to complete it properly within six months and, with the roll out of high speed broadband, the government's stance was probably to relax these laws further;
- The total defect rate in the report seemed very low and Member's concluded from this that many of the defects were not being seen by inspectors as only a small sample were inspected;
- The need to tighten up the inspection regime now, to avoid a backlog of problems in 5-10 years time. If funding could be found now, it would solve huge structural and financial problems and create savings in the future;
- If an additional 8.5 staff were employed to carry out 100% inspections, what would be the cost benefit analysis to the council and the impact on its assets. (If 8.5 staff was not possible, then how many additional staff would be required to make a significant impact). If 100% inspections were possible, it should result in the utility companies acting quickly to reinstate the roads/pavements to the durable quality required. At the moment, it seemed that a lot of the repairs required were around the edges of the utility company's reinstatements, which could leave the council with a significant liability not of its own making;
- Resurfacing of pavements and number of claims against accidents on pavements, although Members noted that the number of claims against the council had decreased over the past few years and trip hazards were dealt with in a timely manner. The number of these attributable to utility company works was unknown;
- The technology being employed by the Council to allocate resources across the road network and the use of the 3D ground penetrating radar, although the JCAM technology would not be fully functional until 2013/2014 and the benefits of this were untried.
- The Chief Finance Officer advised that the financial pressure on highways was shown within the Medium Term Financial Plan, which was used as a starting point to prepare the annual budget. However, this pressure was part of an overall larger gross deficit for 2013/2014.

6.6 The Committee referred the report to Cabinet for consideration as part of the budget setting process for 2013/2014 and asked officers to advise on the cost benefit analysis of potential additional investment in utility reinstatement inspections.

6.7 The Committee requested a Briefing Note on the options available to the Council to manage the utility companies (including information such as how long after a permanent reinstatement is made does the council have to enforce the utility company to re-do the work, if it is sub-standard) and

requested that this information is provided to Cabinet for deliberation along with this report.

- 6.8 The Committee requested that a report be submitted (to the Regeneration, Community and Culture Overview and Scrutiny Committee) in due course on the use of the JCAM technology.

## **7. Director's comments**

### **Highways resurfacing**

- 7.1 Members requested from officers a report detailing the investment being made by Medway on highway resurfacing and how officers were prioritising this work. A report was presented to Regeneration, Community and Culture Overview and Scrutiny Committee on 4 October 2012. The main point on the resurfacing element was that officers considered that an additional £1.275m year on year would be required to halt the decline in the principle road condition national indicators NI168 and NI169 as detailed in this report. Members were advised that the service manager in highways and parking services had highlighted this issue in the council's Medium Term Financial Plan and that Members are aware of this issue and should consider the request informatively, which is why Overview and Scrutiny asked for this report to be forwarded to Cabinet.

### **Utility Reinstatement Inspections**

- 7.2 The Regeneration, Community and Culture Overview and Scrutiny Committee asked officers to asked officers to advise on the cost benefit analysis of potential additional investment in utility reinstatement inspections. It is not possible to produce a cost benefit analysis without extensive investigations and comparisons with other authorities. The LGA media release below sets out the context of this difficulty. The full year cost of an additional officer would be approximately £30,000 but the benefits are much more difficult to value. Improved compliance means a longer life for roads and less maintenance but it is impossible to accurately quantify the benefit that arises from a specific number of extra inspections given that each site will be different. For example an excavation in a single street may extend through two or more forms of road construction (concrete and tarmac), either or both of which may have been repaired previously and at different times. Other, previous and later excavations will also have an impact on the overall life of the road as will the nature of the ground underneath.

- 7.3 *LGA media release - 20 April 2011*  
*Contractors digging up roads on behalf of utility companies are failing to properly patch them up, leaving councils to foot the bill for £70 million worth of damage. In England and Wales last year, workmen dug two million holes in the roads, leaving a trail of tailbacks and expensive repairs behind them. Some 360,000 were not completed to the agreed specification, with work either over-running, or roads not restored to their original condition. The Local Government Association (LGA), which represents about 350 councils in England and Wales, is calling for councils to be given stronger powers to ensure roadworks are timed to cause the minimum disruption to motorists, and to guarantee roads are repaired properly once work has finished. Repairing damage wreaked on roads by utility companies costs council taxpayers an estimated £70 million per year, figures show*

- 7.4 Even though the benefits cannot be accurately established, the cost of additional inspections can be set against early failure of the road and reduction in useful life. Given the thousands of openings that take place each year and the potential risk of a failure requiring early replacement or more expensive repair works with costs potentially in the tens of thousands of pounds, it is considered highly probable that the benefits could exceed the costs. Having said that the use of an additional 8.5 fte inspectors could provide the 100% inspection regime. In terms of economic operation, this approach would be unusual as inspecting a sample of the works would be the method adopted by most Authorities. In that context, a pilot scheme increasing the staffing for inspection by up to 2 fte to see the outcome based on a matched reduction in the costs of the Highways maintenance budget would demonstrate if this was a viable approach.

### **Utility Companies**

- 7.5 The Regeneration, Community and Culture Overview and Scrutiny Committee also requested a Briefing Note on the options available to the Council to manage the utility companies (including information such as how long after a permanent reinstatement is made does the council have to enforce the utility company to re-do the work, if it is sub-standard).
- 7.6 This is very large subject issue and is covered by several acts that are not easy to précis, such as the New Roads and Streetworks Act, the Specification for the Reinstatement of Highway, the Code of Practice for inspections, and the Traffic Management Act. These acts detail the relevant legislation and powers of local authorities regarding this issue.
- 7.7 Public Utility companies, however, do have a duty to maintain their apparatus, and to upgrade their apparatus to ensure continued supply for customers.
- 7.8 Dealing with a substandard reinstatement: reinstatements usually take place in temporary form initially, and are then made permanent (in some circumstances e.g. traffic sensitive routes we insist on straight to permanent reinstatements) this period is a maximum of 6 months. The guarantee period starts from the completion of the permanent reinstatement, if a defect is found then this needs to be rectified. Any such defect needs to be found during guarantee period, this is usually 2 years but can extend to 3 years, a defect can be found at any time during this period.

## **8. Financial and legal implications**

- 8.1 The financial risks and potential pressures associated with the condition of the highways are detailed within the report.
- 8.2 The financial costs associated with the development and operation of JCAM is all contained within the existing highway maintenance budget. Members may note that the financial planning process (Medium Term Financial Plan) has identified an additional resource requirement but this is in the context of an associated budget deficit of £12.3 million for the Council.
- 8.3 The Council has a number of duties under the highways legislation, primarily under section 41 of the Highways Act 1980 to maintain adopted highway.

## **9. Recommendation**

- 9.1 The Cabinet is asked by Regeneration, Community and Culture Overview and Scrutiny Committee to note the report and give consideration to an additional investment of £1.275 million per annum through the budget setting process for 2013/2014.

## **10. Suggested reasons for decision**

- 10.1 To enable the Cabinet to look at the issue of future quality of road maintenance and the funding required in detail.

### **Lead officer contact**

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### **Background papers**

Mouchel Study 2007

Please contact lead officer.





# Regeneration, Community and Culture Overview and Scrutiny Committee

BRIEFING NOTE – No.6/12

Date: 22 October 2012

Briefing paper to: All Members of the Regeneration, Community and Culture  
Overview & Scrutiny Committee

## **Purpose:**

At the last meeting of the committee Members asked for a briefing note on the monitoring and inspection of utility works in the public highway in Medway.

## **Monitoring and Inspecting Utility Works in the Public Highway in Medway**

### **Background**

It must be recognised that the Statutory Undertakers have a right to maintain their apparatus and meet their statutory obligations under their own governing legislation, Medway is a growing area and upgrades to Statutory Undertakers are required to ensure safe and uninterrupted supplies to residents.

This briefing note is a snapshot of the current standards and an overview of the streetworks area, for detailed information on the acts and legislation, it is suggested that the links (which are not exhaustive) and background documents are used.

Medway is experiencing ongoing replacement to the existing cast iron water and gas mains to ensure supply and reduce leakage, the condition of some mains has in fact been so poor that delays in highway occupation have been reported to the Health and Safety Executive (HSE).

Highway Authorities are unable to prevent these works being carried out, and can if there is a risk of danger, be reported to the Health and Safety Executive. The Highway Authority does however have the responsibility to coordinate and manage the works in terms of its effect on the highway, and the network.

The reinstatement requirements are also set by legislation and Statutory Undertakers (utility Companies) are only obliged to carry out the minimum set by the Specification for Reinstatement of Openings in the Highway (SROH). Most reinstatements are initially of an interim nature and are subsequently replaced by a permanent reinstatement, the maximum period for interim to permanent

reinstatement is 6 months, but most are reinstated permanently long before this time.

### **Co-ordination and current control of work**

Utility company and Medway's own works account for approximately 20,000 excavations in Medway's roads and footways each year, this is a significant amount, and other authorities with this number of openings have much greater resources to monitor and control this area.

The co-ordination, monitoring and inspecting of these works is managed by a small sub team within traffic management area.

This traffic management team is responsible for managing, coordinating and inspecting these activities to ensure the Statutory Undertakers (utility Companies) and highway contractors comply with the New Roads and Street Works Act

1991 (NRSWA) and Traffic Management Act 2004 (TMA), Specification for the Reinstatement of Highways (SROH), and associated Codes of Practice.

We hold quarterly meetings with all the adjacent Highway Authorities and the Statutory Undertakers to establish future works programmes and coordinate major works. Additionally, ad hoc meetings are held with individual works promoters to discuss individual schemes and enable us to impose restrictions on working hours and traffic management and any other reasonable request.

At these quarterly meetings the performance of Statutory Undertakers (Utility Companies) is discussed, and the number of defects in the previous quarter is provided.

To ensure performance, and due to previous issues, monthly meetings are taking place with the contractors working on behalf Southern Water. Additionally the contractors working on the water metering programme have been subject to their works being stopped in Medway; re commencing only where conditions to ensure adequate performance established.

In addition the Department for Transport has recently introduced a "scorecard" where Highway Authorities have to report the performance of the Statutory undertakers, in order that an overall picture of the general performance of the Statutory undertakers is monitored.

### **Minimising Disruption**

Through the quarterly and ad hoc meetings ways of reducing the impact of streetworks is always explored, and whilst some degree of disruption is inevitable, every effort is made to reduce this, e.g. night time or off peak working, additional resources to minimise duration. A recent example of this is in Aruthesa Road where Morrisons gas and water were replacing both gas and water mains at the same time thus reducing disruption.



It should also be noted that approximately 50% of the roadworks taking place are Medway Council's own works.

### Fixed Penalty Notices

Under the New Roads and Street Works Act 1991 and The Street Works (Registers, Notices, Directions and Designations) (England) Regulations 2007 local authorities have a duty to co-ordinate street works, and undertakers (mostly utilities) have a duty to give notice of their intended (non-emergency) works, with traffic management plans, up to three months in advance.

Undertakers not complying with the noticing requirements can be served with a fixed penalty notice under The Street Works (Fixed Penalty) (England) Regulations 2007.

### New Roads and Streetworks Act, Section 74 over run charges

Statutory Undertakers who take too long to complete their road works face charges under section 74,

All Statutory Undertakers who dig up the road must agree a time frame for their works, this is often challenged.

If a firm overstates this period and has not negotiated the additional time with the Highway Authority (there has to be exceptional reasons for this) then they face an 'overrun charge' for each additional day they spend on the road.

The maximum daily overrun charge was £2,500, depending on the type of works and the sort of street being occupied. From 1st October 2012 this has risen on the busiest roads to £5,000 a day for the first three extra days, rising to £10,000 a day from the fourth extra day onward.

### Defects

If a defect is found the Statutory Authorities then should complete the remedial works within 17 working days, after which the HA can resurfaced the works, and charge £47.50 for every re-inspection every 17 days thereafter, until the remedial works have been completed satisfactorily.

If the defect is dangerous, the Statutory Authorities have 2 hours from the time of notification to carry out the remedial works after which time the Highway Authority can intervene and carry out the remedial works on their behalf and recover the costs from the Statutory undertakers.

At times it can be deemed necessary for the Highway Authority to carry out an emergency repair without affording the Statutory Undertakers the opportunity to effect the repair (e.g. if significant incident reports have been received).

## Inspection of works

Statutory Undertakers are obliged to pay the Highway Authority to inspect their works, but only for up to 30% of their works, 10% at each of 3 stages of the life cycle of the works:

- (a) Whilst work is in progress
- (b) Up to 6 months after the work is completed
- (c) Within 3 months before the end of the guarantee period (2 years)

These inspections are carried out by Medway streetworks inspectors and supplemented by consultant streetworks inspectors. The amount of inspections to be carried out is agreed with each authority being based on an average of previous year's openings.

These sample inspections generate approximately £100,000 per year, and inspections above this level are not rechargeable, but if defects are found at category b and c inspections, financial penalties can be imposed.

The Highway Authority when carrying out and inspection of the works can issue various defects for incorrect signing and guarding these are non chargeable, when the works are in progress and noncompliance of the Specification for Reinstatement of Openings in the Highway (SROH), which are chargeable defects once the permanent or interim reinstatement has been completed.

In addition to the statutory inspections, we carry out ad hoc inspections where a reinstatement failure is observed, or if complaints are received.

Following the expiry of the guarantee period, currently 2 years or 3 years for major excavations the Highway Authority assumes the responsibility for the reinstatement as part of their ongoing routine maintenance. Therefore if a defect exists and is not detected then this will be a future financial burden to the authority.

## **Co-ordination and future control of works**

### Lane Rental

These schemes are designed to ease road congestion. Local highway authorities may charge utility companies for each day road works are carried out at peak time on a given road, thereby giving them an incentive to complete works quickly and at times when they will cause the minimum disruption, however at present Highway Authorities must have a permit scheme in operation before a lane rental scheme is considered.

## Coring of Reinstatements

Sample cores are taken of the permanent reinstatement, these cores are visually inspected and if required they can be tested in a laboratory. If the reinstatement is found to be defective then the reinstatement is done again, the cost of the coring is reimbursed and additional inspections (chargeable) are undertaken.

Medway in 2011 did its first initial sample coring of utility reinstatements in various footways in 2011.

We are at present putting together a coring programme for carriageway and footway works and will be using on a trial basis a ground penetrating radar instrument to target substandard reinstatements.

## Permit Schemes

Many authorities are establishing streetworks permit schemes that allow additional control from the current “noticing” scheme for Statutory Undertakers and Highway works.

Essentially the present noticing scheme allows those seeking to work on the highway, once notices have been submitted and the official timescales adhered to unless there are good reasons for refusal then works may start. Additional controls may be imposed through informal agreement with those working on the highway, in addition if these notices are not refused within a certain time period (three working days) they are automatically approved.

However with a permit scheme and conditions are laid down in the permit and conditional upon its issue. Financial penalties can be brought against not complying with the conditions of a permit; the permit could also be revoked.

Medway is currently investigating whether this would be a feasible option, however due to the additional work involved in establishing and running a permit scheme, this additional control could be at a considerable cost to the authority.

## **Future financial liabilities**

In the 2012 report from the asphalt industry alliance, which published the latest Annual Local Authority Road Maintenance Survey, stated that:

*Across the board, authorities report that 83 per cent of road openings for utility works are reinstated in accordance with specifications.*

*Authorities estimate that nearly 18 per cent of their maintenance budgets are spent on premature maintenance due to utility openings. Nearly 60 per cent of authorities believe that deep trenching for this type of work reduces road life by 30 per cent or more.*

*84 per cent think that a standardised means of costing the long term damage caused by this kind of work would help them manage their highway maintenance budgets.*



A report from the Transport Research Laboratory in 2009 stated that:

*Studies have shown that utility trenching can have a detrimental effect on both the surface condition and the underlying structure of highways, thereby shortening their service lives. In the UK, there is also increasing political and public concern regarding the negative impact of reinstatement patches on the visual appearance of the nation's highways. Analysis of data obtained from reinstatements in carriageways is reported. This estimated that the median reduction in the service life of the pavement structure due to trenching is 17 per cent. The additional maintenance costs incurred by highway authorities due the premature deterioration in the structural and surface condition of carriageways have been estimated assuming this service life reduction. Also, the additional maintenance costs incurred due to the premature deterioration in the structural, surface and visual condition of footways has been estimated assuming a 10 per cent service life reduction due to trenching.*

## **Moving Forward**

In addition to the measures already in progress:

- We will be recommencing a coring programme, in conjunction with the E Spot radar.

The majority of reinstatement failures result may not become evident until after the guarantee has expired. Coring is a proactive approach to this; the results from the previous cores taken showed marked differences in performance of the utility companies.

- Increase the number of Streetworks Inspectors

The use of an additional 8.5 fte inspectors could provide the 100% inspection regime. In terms of economic operation, this approach would be unusual as inspecting a sample of the works would be the method adopted by most Authorities. In that context, a pilot scheme increasing the staffing for inspection by up to 2 fte to see the outcome based on a matched reduction in the costs of the Highways maintenance budget could demonstrate if this was a viable approach.

- Impose New Roads and Streetworks Act (NRSWA) Section 58

S58 allows restrictions to be imposed following substantial resurfacing or utility works.

The restriction can prevent any planned utility works for 2 – 5 years depending on the type of resurfacing or works carried out. We are unable to restrict new supplies or emergency works for obvious reasons.

However, the Statutory Undertakers must be given a minimum of 3 months notice by the Highway Authority to enable them to investigate their works programmes and afford them the opportunity to carry out their works prior to ours or delay our works. It is imperative that our works programmes enable this.

- Consider a Permit Scheme and then lane Rental if appropriate.

This would provide additional control of all those wishing to undertake works on the Highway.

## **Background Papers**

New Roads and Street Works Act 1991 (NRSWA)

Traffic Management Act 2004 (TMA)

Specification for the Reinstatement of Highways (SROH)

[http://www.asphaltindustryalliance.com/images/library/files/alarm\\_2012\\_report.pdf](http://www.asphaltindustryalliance.com/images/library/files/alarm_2012_report.pdf)

[http://www.trl.co.uk/online\\_store/reports\\_publications/trl\\_reports/cat\\_highway\\_engineering/report\\_a\\_charge\\_structure\\_for\\_trenching\\_in\\_the\\_highway.htm](http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_highway_engineering/report_a_charge_structure_for_trenching_in_the_highway.htm)