

Winter 2009/10 and 2010/11 Highway Damage in Hammersmith and Fulham Government Grant

During the 2009/10 winter season Hammersmith and Fulham, along with much of the remainder of the country, experienced the worst weather in more than thirty years. This included two periods of snow, in December 2009 and January 2010 and prolonged periods of below freezing weather.

Additionally during the 2010/11 winter the country also experienced an extremely cold spell of weather that lasted for over a month from the end of November, resulting in the coldest December across the UK in over a hundred years. Road surface temperatures fell below zero on nearly every night of this period. There was more cold weather in January 2011 but the rest of the winter was relatively mild.

The impact of ice and snow has a severe detrimental impact on roads and footways and the problems with 'pot holes' was widely reported in the media.

As a consequence the government announced that £100m in 2009/10 and a further £200m in 2010/11 would be provided to local highway authorities to help combat the impact of the severe weather. This money is to be made available to local authorities by way of a grant for maintenance purposes. Hammersmith and Fulham's share of the £100m and £200m grants is £58,800 and £170,921 respectively. It is a condition of these grants totalling £229,721 that details of how this money is spent are published on the council's website.

Much has been made in the media of 'pot hole' which are early signs of significant deterioration in the fabric of the road construction. As roads age, under the action of traffic and all weather conditions they tend to exhibit a range of typical defects. One of the early signs of deterioration is cracking. This may only be the top surface of the overall construction but such roads will disintegrate or 'pothole' during cold weather under the action of water and freezing.

Once a road has reached this pot holed condition any repair is likely to only be a stop gap measure which is both uneconomic and have a high carbon footprint. The labour and plant element of such repairs is very high in comparison to the material utilised for such a repair and as a consequence pot hole repairs have a high carbon footprint.

The road maintenance regimes adopted in Hammersmith and Fulham have been robust and carried out in accordance with best practice. Despite cut backs in expenditure, the local roads in Hammersmith and Fulham have enjoyed adequate levels of funding and are generally well maintained. There are of course some exceptions to this.

The highway maintenance operations have to address two fundamentally requirements, firstly measures to ensure that the fabric of the road is maintained in a safe condition and secondly that the fabric of the asset is maintained a minimum cost.

The formation of potholes, which are a safety hazard, are clearly a failure of the first measure of keeping the road in as safe condition. They are also a failure of the

second requirement because once a road has deteriorated to such an extent to require pot hole repairs, it is effectively beyond economic repair.

The maintenance strategy adopted in Hammersmith and Fulham is set out in the council's approved highway maintenance plan – copies of which are available for inspection.

The safety repair element of the service is carried out by four highway inspectors whose job is to regularly walk every street in the borough to identify dangerous and broken surfaces which are in need of repair. This reactive service ensures that any dangerous defects are dealt with within prescribed timescales. There is no budget limit on this service but the more money spent on such reactive work reduces the resources available for planned work.

The maintenance of the fabric of the asset is carried out when a road shows early signs of deterioration, particularly when surface cracking first appears. If repairs are carried out at this time then the benefits can be clearly shown in figure 1. below.

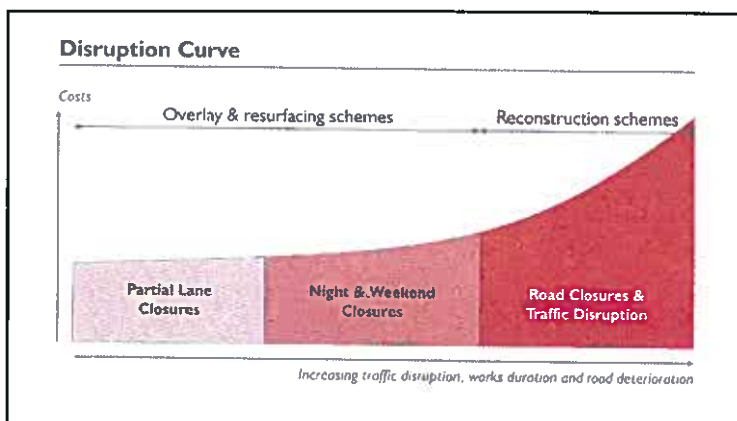


Figure 1. Disruption – Cost Curve

This shows that roads can be more economically repaired during the early stage of deterioration with least disruption to road users. Also the road can be completely rejuvenated to give a full life expectancy by this method at minimum cost. The secret of this strategy to regularly inspect your roads to identify those which are at the point of critical deterioration as shown in Figure 2 below.

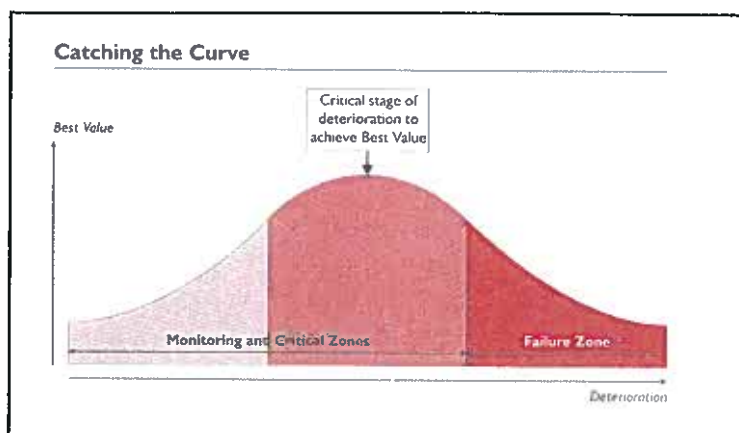


Figure 2 Best Value – Critical Intervention Curve

The analysis of roads at the critical stage of deterioration is determined through annual condition surveys which give rise to the production of a planned maintenance works programme. All streets on the programme are generally maintained a minimum whole life costs and with minimum disruption.

Part of the overall maintenance strategy, as set out above and in the Highway Maintenance Plan is to maximise planned maintenance and correspondingly to minimise reactive work. This makes best use of the financial resources available and maximises the road renewal as against extending localised repairs.

The overall condition of roads in Hammersmith and Fulham following the severe weather in the 2009/10 winter season is not as bad as many roads elsewhere in the capital. The bulk of the pot holes have already been identified by the highway inspectors for urgent repair. The inspectors identify up to around a thousand defects a month for repair and whilst this number may have slightly increased following the winter snow and ice, the numbers of defects are now returning to normal.

The cost of a pot hole repair, which is always seen as a short term expedient, is around fifty pounds per square metre. Road resurfacing costs between ten and twenty five pounds a square metre. Where road requires full reconstruction the unit cost can increase to over eighty pounds a square metre. This helps to demonstrate that resurfacing provides the best maintenance solution for road repairs.

The council resurfaces around thirty streets a year seeks to maximise this number in order to make best use of resources. As a consequence officers consider that the best use of the government grant is to spend the money on two resurfacing schemes. Details of the specific sites will be identified during the coming months as the 2010/11 and 2011/12 planned maintenance programme develops.

It will therefore be possible to maintain an additional seven streets beyond the resources allocated for the current works programme in the current year. This will include Faroe Road, Chiddingstone Street, Bamborough Gardens, Musgrave Crescent, St Peters Square, Tamworth Street and Hurlingham Gardens.

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