



Highways Committee

16 October 2017

Report from the Operational Director of Environment Services

For Action

Wards Affected: ALL

The Mall Petition

1.0 Summary

- 1.1 On 30th March 2017 the Council received a petition entitled "Put an end to the Infrastructure problem on The Mall, Harrow (HA3 9TG)". The petition was signed by 61 signatories.
- 1.2 The petition stated that a major concern was the intense vibration of the houses due to the road surface, which causes damage. The petition asserts that speeding is also a contributing factor. The road safety record of The Mall is then discussed. The petition says flooding is another major contributing factor and the drainage system is not well equipped to handle heavy rainfall.
- 1.3 The flooding in The Mall and Brent North catchment, including L. B. Harrow has been on-going for many years. The group known as Brent North and Harrow Flooding working group was formed many years ago in order to identify the root cause of flooding in this catchment.
- 1.4 Vibration is caused by vehicles hitting surface defects, which then is transmitted through the ground to the buildings. According to the Building Research Establishment "Although vibrations induced in buildings by ground borne excitation are often noticeable, there is little evidence that they produce even cosmetic damage (such as small cracks in plaster)" The conclusions of their research should provide some assurance on that point
- 1.5 Several severe road defects have been identified on The Mall and have either been repaired or are ordered for completion; this will reduce the vibration in the locality of the defects. However, given that the total length of The Mall is affected by cracks, this will not solve the more general vibration problem.
- 1.6 The current highway condition survey shows around 85% of The Mall is in "Green" (good) condition. Consequently there are currently no plans to resurface The Mall. In any case given that the Mall is nearly a kilometre long, the cost of resurfacing would be very high, around £265,000. So if we are to address the vibration problem, we need a more affordable solution.

- 1.7 One option we can try in an effort to improve the situation is to fill cracks in the road surface, a cause of vibration, along with localised areas of reconstruction are carried out on the 15% of the road not in “good” condition. This would be at an estimated total cost of £80,000. The alternative is waiting for the road to become a priority for full depth resurfacing at some uncertain point in the future.
- 1.8 If the recommendation is confirmed, this £80,000 scheme would be put forward as part of the Highways Capital Maintenance programme for 2018 / 19 for approval at Cabinet.

2.0 Recommendations

- 2.1 That the Committee notes the petition which asks the council to put an end to the Infrastructure problem on The Mall, Harrow (HA3 9TG)
- 2.2 That the Committee notes the long term nature of the drainage problem and the work being done with other agencies to solve the problem.
- 2.3 That in response to the Petition, the Committee approves the affordable solution proposed to alleviate the vibration i.e. that a) the joints are treated along the full length of The Mall and b) localised areas of reconstruction are carried out on the 15% of the road not in “good” condition; at a total approximate cost of £80,000. The crack filling is expected to be a medium term solution in lieu of expensive full depth resurfacing. It is proposed that the scheme would be put forward as part of the Highways Capital Maintenance programme for 2018 / 19, to be approved at Cabinet.
- 2.4 Additionally in response to the Petition, that the Committee authorises traffic speed surveys to be carried out along the Mall to ascertain whether average speeds are consistent with the speed limit. The Committee notes that should a speeding issue be identified, appropriate low cost remedial measures, for example additional warning signs or SLOW carriageway markings, will be considered in the shorter term (all to be done within existing budgets)

3.0 Background

The Petition

- 3.1 On 30th March 2017 the Council received a petition entitled “Put an end to the Infrastructure problem on The Mall, Harrow (HA3 9TG). The petition was signed by 61 signatories. The main points of the petition are summarised below
- 3.2 The petition stated that one of the major concerns was that most houses vibrate intensely on a daily basis due to the surface of the road. The petition then states that due to this vibration, cracks in the road, houses, pavements and driveways have worsened over the past 6 years and says to date no proper action has been taken.
- 3.3 The petition asserts there are about 200 double decker buses on The Mall on a daily basis; that this has had a tremendous impact on the houses resulting in costs for repairs to damage caused by the vibration.
- 3.4 The petition asserts that speeding is also a contributing factor towards the damage to the houses, as cars and vans (especially HGV vehicles and buses) going above the 30 mph speed limit increase the damage to the road and the houses.

- 3.5 The road safety record of The Mall is then discussed. The petition says there have been numerous accidents which have occurred on the mall, on one occasion in 2015, fatal. It says any children's lives are at risk especially as there is a school on this road and a busy local park. It says it is the council's duty to take action to against the speeding this road.
- 3.6 The petition says flooding is another major contributing factor and the drainage system is not well equipped to handle heavy rainfall. It says the main cause of flooding on The Mall is due to groundwater from the fields, causing houses to become damp and more damage to the road. Consequently, the buses and heavy vehicles increase the damage and vibration because of the water damage to the road.

Discussion of Points Raised in the Petition

- 3.7 Vibration caused by traffic in nearby buildings is induced by two routes. Noise is itself a vibration of the air molecules. Secondly, vibration is caused by vehicles hitting surface defects, which then is transmitted through the ground to the buildings. People can worry about the possible effect that vibration is having on the structure of their houses. It would be logical for the ground vibration to increase with the increasing, number, speed and weight of vehicles. It would also be logical for vibration to be more apparent in the upper floors of a building.
- 3.8 According to the Building Research Establishment "Although vibrations induced in buildings by ground borne excitation are often noticeable, there is little evidence that they produce even cosmetic damage (such as small cracks in plaster)". Officers submit that the conclusions of their research provide some assurance on that point. However, we do understand that vibration can be a nuisance and we do what we can to alleviate it within the financial constraints we operate under.
- 3.9 Brent is committed to the continued reduction of personal injury accidents (PIAs) and improvement of road safety on our roads. To this end our accident reduction programme prioritises locations with the most significant accident problems for the introduction of mitigation measures. A number of issues need to be taken into account when considering any potential road safety schemes within the Borough. One of these is the availability of funding to design and install measures. Every year the Council receives a considerable number of requests for road safety improvements throughout the borough. Over the years the Council have installed a raised zebra crossing near the junction with Preston Hill, pedestrian refuge and traffic islands, and central hatching along the Mall to improve road safety.
- 3.10 The main source of funding to implement safety schemes is Transport for London through the annual (LIP) allocation. Unfortunately the level of funding and resources available to deal with all of these requests is not sufficient to cope with demand. As a result it is necessary to prioritise potential locations for funding in terms of the level of benefit any measures may provide. The nationally recognised method for determining which locations would benefit most from investment in accident reduction measures is through analysis of recorded traffic accident information.
- 3.11 Data on road traffic accidents resulting in personal injury (PIAs) within the Borough is provided on a regular basis by the Metropolitan Police. This data is used to identify locations where significant numbers of PIA's have occurred and through this analysis it is possible to prioritise where measures would be of most benefit in terms of accident reduction. This is in line with the Government's road safety strategy to reduce the number of road traffic accidents nationally. We take into consideration trends along with the circumstances in relation to accidents from the Police reports.

- 3.12 We have analysed the latest available PIA data for the Mall covering the 3 year period ending 31/12/2016, the latest data available. Over a 3 year period, a total of 6 accidents were recorded in the Mall. Three accidents occurred near the junction with The Garth, two near the junction with Minterne Road, and one just to the south of Kingsbury Circle. Two accidents involved pedestrians and one accident involved a powered two wheeler. No children were involved in any of the accidents. Four of the accidents occurred during the hours of darkness and four occurred in either wet or icy conditions.
- 3.13 Given the long length of The Mall, the number of accidents recorded is not high in comparison with some other locations within the borough and therefore there are currently no plans for further traffic calming measures. However, we will add this location to our list of potential Local Implementation Plan (LIP) future schemes although funding cannot be guaranteed as other sites with a more acute accident record will need to be given priority for funding and remedial action. We shall also arrange for traffic speed surveys along the Mall to ascertain whether average speeds are consistent with the speed limit. Should a speeding issue be identified, appropriate low cost remedial measures, for example additional warning signs or SLOW carriageway markings, will be considered in the shorter term. To ensure that the speed surveys are conducted under 'typical' traffic conditions, we have waited until the school summer holidays have finished before commissioning the surveys.
- 3.14 The flooding in The Mall and Brent North catchment, including L. B. Harrow has been on-going for many years. The group known as Brent North and Harrow Flooding working group was formed many years ago in order to identify the root cause of flooding in this catchment. This group comprises of Brent, Harrow, Environment Agency and Thames Water. The flooding in this area is mainly due to inadequate capacity in Thames Water sewer network and also in the Wealdstone Brook which is the responsibility of Environment Agency.
- 3.15 At present, Thames Water are preparing a drainage model to establish the flow characteristics and capacity within the public sewer network and the Wealdstone Brook. This drainage study is in its final stages and results are likely to be available by the autumn. It is anticipated that the drainage model will identify flood risk areas and this will enable to identify suitable solutions.
- 3.16 The solutions will comprise of various flood relief schemes in Brent and Harrow but the majority of the problems are arising from Harrow. In Harrow, they have dual manhole system, where both surface water and foul sewer pipes are within one manhole with open channel and during heavy rain, surface water overflows in foul system and this causes sewer network to surcharge. Also, there are number of cross connections between foul and surface water sewers which were installed during the World Wars I and II as emergency precautions, so that if one pipe was damaged by bombing, then it can overflow in to other pipe. The model will also identify locations of these cross connections and will be sealed off as necessary.
- 3.17 One of the solutions will be to separate surface water from foul sewer and provide additional storage in both foul and surface water sewer systems in various locations. Four areas in Harrow are identified and by implementing the schemes, this will drastically reduce the flow entering in Brent and flooding risks will be drastically reduced. The scheme in Brent is likely to be a providing a storage in the Wealdstone Brook in Woodcock Park and in Fryent Country Park and this will be mainly a large pond or enlarging existing watercourse.

3.18 The Mall is subject to flooding at the junction with Preston Hill, which occurs mainly during very heavy rain and last event was on 8th June 2017. On average, this location floods approximately twice a year and this is mainly due to surcharging from the public sewer. There are no specific problems related to blocked gullies in this area. The gullies at The Mall j/w Preston Hill area are classified as “Vulnerable gullies” and they are cleaned twice a year , the last cleansing being in April 2017.

4.0 Maintenance Plans for the Road Surface of the Mall

4.1 There are a number of pavements and roads around the borough that would benefit from maintenance to improve their condition and visual appearance. This is a nationwide issue: the latest “Alarm Survey Report “published by the Asphalt Industry Alliance said that “Local authorities need over £12 billion to bring the network up to scratch” The ongoing imbalance between repair need and resource availability means that repairs have to be prioritised.

4.2 The process for deciding which roads and pavements are programmed for resurfacing is that every year, officers assess the highway network to determine its current condition, using condition surveys carried out by independent consultants. The officers then take account of a range of factors to define relative priorities for maintenance. The Council uses a scoring system to identify roads and pavements suitable for major resurfacing or preventative maintenance that assesses the following:

- Condition based on outcomes of annual condition surveys and inspection programmes;
- Road hierarchy and traffic usage, including proximity of local schools / colleges;
- Level of risk in terms of numbers of accident claims, historic pothole repair records and/or collision history

4.3 Underpinning all this is the fact that there are many more roads and pavements that we would like to resurface than there is funding available to do them.

4.4 Since February 2014 the Council has received 53 Customer Reports regarding the road surface of The Mall. A total of 36 defects of intervention level or greater were identified, of which 20 were prioritised for repair and completed.

4.5 The Mall is a long busy road, approximately 960m in length. The construction of the road surface is made up of concrete slabs, which has at some point in the past been overlaid with a layer of asphalt. In between the concrete slabs there are expansion joints, where movement due to thermal expansion and contraction is greatest. Over time this movement causes cracking in the asphalt layer above. Water then gets in and causes further deterioration in the surface layer. As discussed in section 3.7, when surface defects are subjected to traffic loading, ensuing vibration is transmitted to adjacent properties.

4.6 The current highway condition survey shows around 85% of The Mall is in “Green” (good) condition. Consequently there are currently no plans to resurface The Mall, but we are aware of the condition. In February 2017 the Council commissioned a Ground Penetrating Radar survey on the section of road around 88 The Mall. Following this, a substantial repair was carried out at this location. At time of writing in September 2017 officers have already recently repaired three severe defects at a cost of £5000 and officers are planning to repair five more severe localised defects, costs as yet not estimated.

- 4.7 Fixing these severe defects will reduce the vibration in the locality of the defects. However, given that the total length of The Mall is affected by cracking defects, this will not solve the more general problem.
- 4.8 The Mall is not likely to be a candidate for traditional full depth resurfacing in the near future given its overall “good “ condition; in any case given that the Mall is nearly a kilometre long, the cost would be very high, around £265,000. This would include localised areas of reconstruction on the 15% of the road which the condition survey says is not in “good” condition.
- 4.9 This being the case, if we are to address the vibration problem a more affordable solution needs to be identified. Officers are in Brent looking to increase the Council’s range of highway maintenance repair types so the council can derive more value from the money it spends on its highways network and improve its condition
- 4.10 One option we can try is to fill the cracks, in an effort to improve the situation. It will not be as good as full depth resurfacing but should result in an improvement. We know that because of the high thermal movement at the crack locations, the repairs can only be expected to last a few years before the joints deteriorate again, but it is better than the alternative of waiting for the road to become a priority for full depth resurfacing at some uncertain point in the future.
- 4.11 It is therefore recommended that a) the joints are treated along the full length of The Mall and b) localised areas of reconstruction are carried out on the 15% of the road not in “good” condition at a total approximate cost of £80,000.
- 4.12 If approved, this scheme would be put forward as part of the Highways Capital Maintenance programme for 2018 / 19.
- 4.13 If the joint sealing is found to be ineffective from the start, the Council could consider bringing forward full-depth resurfacing in future years, in two or three phases to reduce the cost impact in any one year.

5.0 Legal Implications

- 5.1 Section 41 of the Highways Act 1980 (“the Act”) places a duty on the council as a highways authority to maintain public highways in the borough. Breaching this duty can render the council liable to pay compensation if anyone is injured as a result of failure to maintain it public highways in the borough. There is also a general power which the council can exercise under section 62 of the Act to improve highways. Under section 45 of the Act, the council has the power to obtain materials for the repair of highways that are maintainable at the public expense subject to certain restrictions specified in section 45.

6.0 Financial Implications

- 6.1 The cost of the recommended maintenance works is estimated at £80,000. If approved the scheme would be put forward as part of the Highways Capital Maintenance programme for 2018 / 19, to be approved at Cabinet.

7.0 Diversity Implications

- 6.1 There are considered to be no diversity implications that require full assessment. The works proposed under the highways main programme do not have different outcomes for people in terms of race, gender, age, sexuality or belief.

- 6.2 We make sure of the visibility of the required signage, also where temporary work is being carried out.
- 6.3 We monitor of the quality of the work to ensure that the finished surface is to specification and does not form a mobility hindrance; and that signage and road markings are correctly provided as aid to movement.

Background Papers

None

CONTACT OFFICERS

Jonathan Westell, Highways Contracts & Delivery Manager
Tony Kennedy, Head of Service, Transportation

CHRIS WHYTE

Operational Director, Environment Services