



Cabinet
9 April 2018

**Report from the Strategic Director of
Regeneration and Environment**

Highways Capital Scheme Programme 2018-19

Wards Affected:	All
Key or Non-Key Decision:	Key
Open or Part/Fully Exempt:	Open
No. of Appendices:	3
Background Papers:	None
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1.0 Purpose of the Report

1.1 To approve the Highways Capital Scheme Programme 2018-19.

2.0 Recommendations

2.1 That the Cabinet approves the proposed highways maintenance programme for 2018/19 as detailed in Appendix B.

2.2 That any changes to this and future highways capital programmes, are approved by the Strategic Director of Regeneration & Environment in consultation with the Cabinet Member for Environment.

3.0 Detail

3.1 Summary

3.1.1 In 2017/18 approximately £6.2m has been spent improving the condition of Brent's highways, including resurfacing an estimated of 6.44 miles of road and reconstructing

about 7.54 miles of pavement. This equates to about 2% of the road network and 1.5% of the pavements. This investment includes £5.3m of Brent capital (carry forward of £0.45m from 16/17, a base 17/18 allocation of £3.5m and an additional £1.35m) and £0.90m of TfL capital funding for Principal (A road) maintenance.

3.1.2 During 2018/19 it is proposed to allocate £3.5m of Brent capital to maintain the highway network, subject to approval of the Budget and Council Tax report.

3.1.3 Normally, in addition to £3.5m of Brent capital in 2018/19, TfL would add funding for Principal Road (A-road) improvements. However, in November 2017 TfL published details of their new five-year Business Plan and between 2018/19 and 2019/20 investment in proactive planned renewals on both the Borough Principal Road Network (BPRN) and TfL Road Network (TLRN) has been “paused”. Consequently TfL reported the Principal Road Network (PRN) and Bridge Strengthening and Assessment Maintenance programmes will not receive any funding in 2018/19 which represents a loss of £882,000 funding for the PRN. They have since requested boroughs to submit two locations for consideration of maintenance through their Borough Principal Road Network (BPRN) programme. Brent has submitted Wembley High Road and Kilburn High Road. We will find out at the end of April if these schemes have been selected.

3.1.4 This report sets out recommendations for how Brent’s £3.5m capital budget should be allocated during 2018/19 through a prioritised programme of:

- Major and minor pavement reconstruction;
- Major Road resurfacing;
- Preventative maintenance;
- Improvements to the public realm, and
- Renewal of Road Markings

3.1.5 This programme will be delivered using Brent’s Highway Asset Management Planning (HAMP) approach, which provides a systematic long term methodology for maintaining the borough’s highways. The HAMP approach, which was started in 2014/15, will deliver better value for money through adoption of a sensible and forward thinking maintenance plan. Additional preventative maintenance programming is being proposed, using injection patching on roads, and is being considered in the form of thin surfacing for existing asphalt pavements.

3.1.6 In line with public and member priorities further investment, or re-profiling of investment, in the roads and pavement network will also be considered this year to improve our performance and reduce reliance on reactive maintenance. Additional investment could see re-profiled funding front-loaded at the start of a 10 year cycle, to boost road and pavement condition. The additional investment would be paid off over the remainder of the 10 years the road and pavement condition would still be better than if we did nothing, and in the meantime the borough would enjoy the benefits of the highway in a better condition

3.1.7 Investment is aimed to address the following; achieving greater equality in condition between footways and carriageways; accommodating members’ requests for regenerating High Streets by giving them greater priority, so improving their look and feel; and replacing slabs with asphalt when doing full footway renewals.

3.2 Last Year's Highways Maintenance Investment 2017/18

- 3.2.1 In 2017/18 Brent's annual highways maintenance investment programme consisted of Brent capital funding, which is used to fund the roads maintenance programme for local roads; and capital funding provided by Transport for London, which is used to deliver principal (strategic) road maintenance
- 3.2.2 By 31 March 2018, approximately £5.75 m will have been spent on maintaining Brent's highway infrastructure funded through £ 4.85 m of Brent capital, and £0.9 m of principal road maintenance investment. Appendix A provides details of the works delivered, which will result in (amongst other things) 6.44 miles of roads and 7.54 miles of footways being reconstructed.
- 3.2.3 Members will recall that as part of the additional £2m highways investment approved at the May 2016 Cabinet, it was resolved that the default surfacing material for footway reconstruction is now asphalt rather than slab paving, with concrete block paving used at vehicle crossings and street corners. By using asphalt, we are able to make our limited resources stretch further, meaning more pavements can be repaired, making the borough a safer, more accessible place to live.
- 3.2.4 Members will also recall that Brent entered into an 8 year contract on 1st April 2013 to provide a range of highway services, including planned and reactive maintenance works. Our provider for highways maintenance services was procured through the London Highways Alliance Contract (LoHAC).

3.3 Managing Highways Assets

- 3.3.1 Highway infrastructure is the most visible, well-used and valuable physical asset owned by the Council. Brent's highways assets include:
- 505 km (315 miles) of roads;
 - 847 km (529 miles) of pavements;
 - 53 bridges and structures;
 - 24,500 road gullies;
 - 10,000 street trees; and
 - 22,848 street lights and other illuminated street furniture.

The value of this asset is estimated at around £3.8 billion

- 3.3.2 The table below sets out the condition of Brent's roads by indicating the percentage of each length of road type where maintenance should be considered.

Year	% of roads where maintenance should be considered		
	A class roads	B and C class roads	Unclassified roads
2008/2009	8%	9%	23%
2009/2010	11%	9%	23%
2010/2011	9%	7%	27%
2011/2012	9%	6%	26%
2012/2013	8%	9%	20%
2013/2014	13%	11%	21%
2014/2015	16%	16%	21%
2015/2016	6%	10%	21%

2016/2017	6%	5%	24%
2017/2018	22%	7%	21%

- 3.3.3 Unclassified roads make up 80% of all borough roads and currently 21 % of Brent's unclassified roads are in need of substantial maintenance. Classified roads were in a better condition, but the latest A-Road survey shows significant deterioration in condition; this could be due to a number of factors (e.g. increased wear and tear due to rising traffic levels, combined with a historical lack of investment). Latest condition surveys also indicate 50 % of the all pavements are in need of substantial maintenance. There are a number of factors affecting the deterioration of roads and pavements, and it is impossible to disaggregate the various effects.
- 3.3.4 As time goes on roads that are currently in good condition will deteriorate, just like any physical asset such as a house or a vehicle. To keep on top of the deterioration of our asset we must invest continually in maintenance.
- 3.3.5 Up until 2014/15 Brent adopted a “worst-first” approach to highways asset management. We identified the worst condition roads and developed one year programmes of road resurfacing and reconstruction.
- 3.3.6 To improve the way we maintain our highways, the council adopted the Highway Asset Management Plan (HAMP) in February 2014. The HAMP sets out a strategy based on the need to repair our assets on a regular basis, before they fail, so as to extend their lifespans and reduce higher long term repair costs, and provide the best value for money to local people.
- 3.3.7 The strategy initially involves introducing a programme of major resurfacing works along with preventative maintenance, which will take the form of thin surface treatment to seal roads against water ingress and improve their anti-skid properties.
- 3.3.8 During 2017/18 we have assessed the network to determine the current condition both for roads and pavements. We have then taken account of a range of factors to define relative priorities for maintenance. We have used a scoring system to identify roads and pavements suitable for various maintenance treatments that assessed the following:
- Network Condition - condition-based on outcomes of annual condition surveys and inspection programmes;
 - Network hierarchy and traffic usage, including proximity of local schools / colleges;
 - Risk - Level of risk in terms of numbers of accident claims, historic pothole repair records and/or collision history; and
 - Value for Money - The cost effectiveness of preserving roads that have not yet fully deteriorated and fixing those which have.
- 3.3.9 Preventative maintenance is appropriate where the deterioration in the surface (as measured highway condition survey data) by has not yet resulted in a problems with the underlying structure of the road. Similarly, major resurfacing is required when deterioration has progressed further and so more extensive (and more expensive) repairs are necessary
- 3.3.10 We continue to take account of councillor nominations for road maintenance and, where a number of schemes attract the same or similar scores, we prioritise councillor nominated schemes earlier in our proposed maintenance programmes. We may also deviate from priority order where, for instance, a section of road in relatively good

condition may be resurfaced if it is on a street where the rest of the road needs maintenance and it would be illogical, or impractical, not to resurface the whole street.

3.3.11 As a result of member feedback from business, we are now prioritising our High Streets to assist regeneration by improving the look and feel of the environment.

3.3.12 Part of the £2m additional funding approved at the May 2016 Cabinet was to procure a highway asset management (AM) tool. Increased level of investment to maintain the highway network is one step forward in delivering an asset management approach; and the next step is being more efficient in how and where the investment is spent. To enable this, we had to be more intelligent with our decision making. This requires confidence in our information and the ability to analyse it, including budget vs condition level modelling scenarios.

3.3.13 The AM tool uses the Council's Survey data to produce scenario-based asset management programmes both on an annual basis and for the long term (5, 10, 15 etc. year programmes) It can:

1. Calculate Asset Condition vs Budget scenario-based programmes taking into account the deterioration of the asset
2. Calculate road and footway condition at the end of a projected term.
3. Calculate the budget required to achieve a given target of road and footway condition at the end of a projected term, taking into account the deterioration of the asset

It can also produce annual road and footway maintenance programmes, including suggested treatments, for defined budgets to give optimum condition, taking into account deterioration of asset. Officers have used this function of the AM tool to draw up the following programme elements.

- Major resurfacing of B, C and unclassified roads;
- Preventative maintenance of unclassified roads
- Major footway reconstruction

3.3.14 In previous years the approach was to split the unclassified carriageway resurfacing budget in the ratio 30:70 between the preventative maintenance and major resurfacing treatments. This year budgets have not been ring-fenced in that way, as the AM tool produces maintenance programmes within the overall budget, including suggested treatments, to give optimum condition.

3.3.15 Investment is aimed also to address the following; achieving greater equality in condition between footways and carriageways; addressing localised conditions in an area patching programme to extend the life of roads; accommodating members' requests for regenerating High Streets by giving them greater priority, improving their look and feel; and replacing slabs with asphalt when doing full footway reconstructions.

3.3.16 In line with public and member priorities further investment, or re-profiling of existing investment, in the roads and pavement network will also be considered this year to improve our performance and reduce reliance on reactive maintenance. Additional investment could see re-profiled front-loaded funding at the start of a 10 year cycle, to boost road and pavement condition. The additional investment would be paid off over the remainder of the 10 years the road and pavement condition would still be better than if we did nothing, and in the meantime the borough would enjoy the benefits of the highway in a better condition

3.4 Highways Investment during 2017/18

3.4.1 Carriageway Resurfacing

- a) The 2018/19 carriageway maintenance programme is shown in Appendix B. Roads have been prioritised from the results of an independent network condition survey, with input from local engineering staff, who assess the road against the wide range of factors noted above.
- b) In summary the proposed carriageway resurfacing programme of £1.1m includes:
 - £0.920m to improve the condition of the borough roads (i.e. B, C and Unclassified roads) divided between major resurfacing and preventative maintenance schemes (see Appendix B for list of streets that have been selected):
 - £0.150m to resurface short sections of road (300m or less) that have deteriorated and are in need of resurfacing, but where the whole street is generally in good repair;
- c) Normally in addition to £3.5m of Brent capital in 2018/19, TfL would add funding for Principal Road (A-road) improvements. However, in November 2017 TfL published details of their new five-year Business Plan. Between 2018/19 and 2019/20 investment in proactive planned renewals on both the Borough Principal Road Network (BPRN) and TfL Road Network (TLRN) had been revisited. An allocation of circa £3m per annum for the next two years has been retained for the BPRN to continue condition surveys and deal with high priority sites. TfL, working with the boroughs through the London Technical Advisors Group (LoTAG), will agree how this allocation will be targeted to the highest priority sections of road. For the whole of London this programme allocation is anticipated to be £11m.
- d) Brent have now been asked to submit applications for two schemes in 2018/19. When submitting applications we have been asked to consider not only road condition but the Mayor's Transport Strategy, coordination opportunities, local factors such as schools, businesses, etc., that support our proposed schemes. Taking into account these additional criteria the two schemes considered top priority are A404 Wembley High Road (Ecclestone Place to Park Lane) £326,000 and a new item A5 Kilburn High Road (Willesden Lane to Christchurch Avenue) £234,000.
- e) In Autumn 2017, a successful pilot programme of injection patch repairs was carried out on unclassified roads (side roads). A large number of potholes can be treated quickly with this process. A pothole repair can be done in about two minutes – the normal time it usually takes a conventional repair gang to do the job would be 10-15 minutes. Overall 1621 defects were repaired in 25 days in 167 roads at an average of 65 repairs a day. That's nearly 10 repairs per road. We are aware of only two complaints about the work and for a new treatment of this nature, this is a remarkably low number of complaints. Given this success, it is proposed to allocate £100k to deliver a borough wide programme of injection patching pothole repairs through our 2018/19 Highways Capital Maintenance Programme. This will require a procurement exercise to award the work.
- f) It has become apparent that there is marked deterioration of road surface condition in bus bays and in bus lanes on main roads. Wembley High Road is an example. Accordingly, additional targeted surveys were commissioned in 2017/18 to gather

condition data from bus bays and bus lanes, so we can understand the condition of these areas separately from the surrounding road surface. Once analysed, we can produce a prioritised list of costed schemes to assess the size of the problem, and then appropriate funding can be sought. In line with good asset management practice, we will be seeking to widen the palette of treatments we use by identifying a product or products more suitable to resist the particular challenges faced by road surfaces in bus bays and bus lanes.

- g) It is proposed to utilise up to £5,000 of capital funding for carriageway resurfacing to undertake asset condition surveys during 2018/19. These surveys will assist to prepare a long term asset management programme and confirm future year's capital programmes.

3.4.2 Footway Repairs

- a) The latest survey of the condition of the borough pavements indicates that overall 50% are in need of maintenance.
- b) In previous years, the funding split in the main Highways Capital Scheme Programme between roads and pavements was roughly 50:50. Given the disparity in the overall condition between roads and pavements (pavements being in worse condition) one of the objectives of the 2016/17 £2m additional Highways Investment Programme, was achieving greater equality in condition between roads and footways. Therefore the split was altered to 65:35 in favour of pavements, and this overall ratio was kept for the 2017/18 and now for the 2018/19 programme. Appendix B contains details of the footways which have been prioritised for improvement.
- c) As we did in the 2017/18 programme, it is proposed to set aside £50,000 to systematically replace slabs across vehicle crossings with concrete or asphalt, reducing the amount of cracked and broken slabs requiring repair. We aim to do whole streets at a time. At some point in the past, it appears the practice in Brent was that vehicle crossings were built with two materials. The front section (nearest the kerb) was of tarmac / concrete construction. At the back, the footway slabs carried on over the vehicle crossing. In the past when cars were smaller and lighter, this may not have been a problem. However, now we are finding that slabs are damaged on a regular basis which creates hazards for pedestrians and is a drain on revenue maintenance budgets.
- d) In line with good asset management practice, officers are looking into widening the palette of treatments we use on footways by considering the implementation in 2018/19 of the appropriate use of thin surface treatments on existing asphalt footways (i.e. similar to carriageways, this would be a "preventative maintenance programme" for footways). An in-year decision will be taken on what treatments are ultimately deployed on asphalt footways.
- e) Similarly to the issues with short sections of road that are in poor condition, short lengths of footway that are in poor condition can cost a significant amount in reactive maintenance repairs, as well as being a cause of accident claims. It is therefore proposed to invest £150k of this year's overall budget to resurface short sections of footway
- f) It is proposed to utilise up to £25,000 of capital funding for footway improvements to undertake asset condition surveys during 2018/19. These surveys will be used to confirm future year's capital programmes.

3.4.3 Reducing the risk of flooding in Brent

- a) Gully cleaning is prioritised to prevent local flooding, with both scheduled and reactive gully cleansing activities taking place. There are approximately 20641 road gullies in the borough. These are cleaned as part of a cyclic maintenance programme procured through the London Highways Alliance Contract (LoHAC). The cleaning cycle includes:
- High-priority (regularly blocking) gullies cleaned every six months;
 - 1,300 medium-priority gullies cleaned each year; and
 - 14,100 gullies cleaned every eighteen months as part of a rolling programme.
- b) The cleansing frequencies depend on the likelihood of gullies filling up with silt. Monitoring of the contractor's performance continues and the contractor has remained on programme. On-site monitoring of cleansing indicates that last year's improvement in the quality of cleansing has been maintained with monitoring scores of 100% (i.e. all gullies are being cleaned well). Hard to reach gullies (i.e. where there are parked cars over them, or on busy corners) are subject to repeat attendance until cleaned; if necessary other measures (e.g. suspending parking bays) will be considered where necessary.
- c) Gullies are also cleaned on a reactive basis in response to reports from members of the public or Councillors of blocked gullies.
- d) Small scale schemes are implemented to address localised flooding problems such as broken gullies or gully pipes, or localised gully capacity problems. Larger scale capacity problems are within the remit of Thames Water who are responsible for the main drainage system. Whilst maintenance helps, rainfall which is more intense than the capacity of the network can cope with will still result in localised flooding, which will nevertheless dissipate away down the drains given time
- e) We are anticipating similar funding from Defra for flood risk management as was received in 2016/17 which translates into a revenue budget of £127k. This will be used for alleviating flooding in the borough and for improvements/upgrades to existing highway drainage as per the following proposed works programme:

Flood Management Scheme	Proposed works	Cost Estimate
Various locations in highway	Installation of Land Drainage	£20K
Silk Stream (Barnet agreement)	Trash screen cleaning at A5 Hendon	£15K
Tramway Ditch, Stag Lane, NW 9	Inspect and clear watercourses	£2K
Northwick Park, Kenton		£10K
Various location	Installation of new gullies to prevent flooding	£30K
Reactive gully cleaning and various works undertaken through maintenance programme	Clean and repair gullies, replace missing covers, CCTV survey	£49K
LoDEG	Drainage Engineering Group Subscription	£1k
Total		£127K

3.4.4 Investing in Public Realm

- a) The Public Realm programme has in the past involved three areas of highways capital programme investment, with a usual allocation of £0.125m:
- i. Works to strengthen and protect footways and soft verges, particularly at junctions to mitigate the effects of vehicle overrun;
 - ii. Works to improve areas of “marginal” land that are part of the public highway but are not footways, verges or carriageways; and.
 - iii. Works to reinstate abandoned tree pits.

In view of the backlog of tree stumps requiring grinding out and the remaining tree pits reinstating, this year it is proposed to allocate all of the Public Realm £0.125m to grinding out tree stumps and reinstating abandoned tree pits.

3.4.5 Improving Brent’s bridges and structures

- a) The Council are responsible for 67 highway structures, including 52 bridges and 13 culverts. The majority of bridges are small structures spanning brooks. Funding for bridge maintenance is normally allocated by Transport for London on a regional priority basis.
- b) The £0.200m Brent capital will be used for the following in 2018/19:
- Princess Frederica School Wall Assessment & Interim Measures £45k
 - Twybridge Way N & S (B49 & B50) Bridge Feasibility £20k
 - Hillside Culvert over Canal Feeder (C03) Assessment £40k
 - Further load assessments depending on results of 17/18 Principal Inspection (PI) results
- c) The Council’s £76k revenue budget will be distributed across numerous structures for routine cyclic maintenance as well as the 2018/19 Principal Inspection programme. The Council’s £200k capital budget will be distributed across numerous ongoing structural investigation and improvement schemes which include:
- Ealing Road Bridge over Grand Union Canal Special Inspection & Feasibility Study

- Kenton Road/Woodcock Hill Culvert over Wealdstone Brook Special Inspection & Feasibility Study
- Forty Avenue Bridge over Wealdstone Brook Special Inspection & Feasibility Study
- Neasden Lane Bridge over River Brent Special Inspection
- Harp Island Close Bridge Special Inspection & Feasibility Study
- Mead Platt over Mitchell Brook Culvert Special Inspection & Feasibility Study
- Grange Museum Footbridge VRS upgrade

3.4.6 Renewal of Road markings

- a) In recent years up until 2015/16 there was no funding allocated for the systematic renewal of road markings. Consequently many road markings had faded beyond the point we would wish them to; those road markings which had faded more than 30% and which are deemed high priority are renewed under the LoHAC contract. However, following on from the practice started in 2015/16 officers recommend the continuation of a £50,000 annual renewal programme. This programme will continue to concentrate on the renewal of those markings most in need of attention (e.g. on main roads and at junctions) before in subsequent years establishing a borough-wide schedule of road marking restoration.
- b) Renewal of those road markings which are required for enforcement are managed by the Parking & Lighting Service.

4.0 Financial Implications

- 4.1 The table below summarises the proposed allocation of Brent capital funding for highways maintenance during 2018-19:

Schemes	% of cway & fway Capital Budget	Amount (£ 000's)
BRENT CAPITAL – 2018/19 Footways		
Major footway reconstruction		1755
Crossover conversion		50
Footway upgrades – short sections		150
Improvements to the public realm		125
Sub-total footways 2018/19	65%	2080
BRENT CAPITAL – 2018/19 Carriageways		
Major resurfacing of B, C unclassified roads; Preventative maintenance unclassified roads		920
Road resurfacing – short sections		150
Renewal of Road Markings		50
Sub-total Carriageways 2018/19	35%	1120
Sub-total 2018/19		3200
Highway Structures		200
Highways Patching		100
2017/18 Sub Total Brent Capital		3500
2017/18 TfL Funding for Principal Roads**		0
TOTAL 2017/18 HIGHWAY MAINTENANCE PROGRAMME		3500

***value could increase if TfL allocate Brent any emergency funding.*

- 4.2 The provisional allocation for 2018/19 assumes the same division of funding.
- 4.3 It is proposed to utilise up to £5k of carriageway maintenance allocation and £25k of footway allocation to undertake condition surveys during 2018/19. These surveys will assist preparation of a long term asset management programme.
- 4.4 Flood risk management expenditure is within the Environmental Service revenue budget and as such is not reflected in the capital programme of works. All required expenditure will be contained within budget.
- 4.5 The HAMP approach to provide a systematic long term methodology for maintaining the borough's highways will continue to be furthered during 2018/19. Future proposals and priorities to cover a medium term (up to 5 years) approach to budget allocations will be developed as part of this process. As such proposals for further priorities will be submitted to a later meeting of the Cabinet for consideration

5.0 Legal Implications

- 5.1 The Highways Act 1980 places a duty on the council to maintain the public highway under section 41. Breach of this duty can render the council liable to pay compensation if anyone is injured as a result of failure to maintain it. There is also a general power under section 62 to improve highways.

6.0 Diversity Implications

- 6.1 The proposals in this report have been subject to screening 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 In addition, the design criteria used in all highway work does take note of the special requirements of various disabilities. These will take the form of levels and grades associated with wheelchair users, for example road crossing points, and for partially sighted / blind persons at crossing facilities. The highway standards employed are nationally recognised by such bodies as the Department for Transport. This programme of works continues the upgrade of disabled crossing facilities at junctions which were not constructed to modern day standards. All new junctions are designed to be compliant at the time of construction.
- 6.3 Strengthened areas of footway are far less susceptible to damage and will therefore aid the movement of pedestrians that may find it difficult to walk on uneven pavements.
- 6.4 We make sure accessibility ramps are provided to aid wheelchair users and those with prams. We make sure high visibility barriers and tapping rails are provided to allow those with visual impairments to negotiate the works as they are in progress
- 6.5 We make sure of the visibility of the required signage, also where temporary work is being carried out.

6.6 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.

7.0 Consultation with Ward Members and Stakeholders

We continue to take account of councillor nominations for road maintenance and, where a number of schemes attract the same or similar scores, we prioritise councillor nominated schemes earlier in our proposed maintenance programmes (see section 3.3.10)

8.0 Human Resources/Property Implications (if appropriate)

None – this programme will be delivered using existing staff resources.

Report sign off:

AMAR DAVE

Strategic Director of Regeneration and Environment