



**Cabinet  
24 April 2017**

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

Wards Affected: All Wards

**Highways Capital Scheme Programme 2017-18**

**1.0 Summary**

- 1.1 In 2016/17 approximately £6.086 m will be spent improving the condition of Brent's highways, including resurfacing of 11 miles of road and reconstructing 6 miles of pavement. This equates to 3.6% of the road network and 1.1% of the pavements. This investment includes £5.185m of Brent capital (an initial allocation of £3.55m followed by additional £2m, with £365k of footway works held over to 17/18) and £901k of TfL capital funding for Principal (A road) maintenance.
- 1.2 During 2017/18 initially it is proposed to allocate £3.5m of Brent capital to maintain the highway network, plus £365k of footway works held over from 16/17, subject to approval of the Budget and Council Tax report to be submitted to Cabinet and Full Council in February 2017.
- 1.3 In addition to £3.5m of Brent capital in 2017/18, TfL have confirmed funding of £0.886m of Principal Road (A-road) improvements. This is slightly less than the 2016/17 Principal road programme value of £0.901 m.
- 1.4 This report sets out recommendations for how Brent's £3.5m capital budget should be allocated during 2017/18 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
- 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.
- 1.6 In line with public and member priorities further investment in the roads and pavement network will also be considered this year to improve our performance and reduce reliance

on reactive maintenance. Future proposals and priorities to cover a medium term (up to 5 years) approach will see more miles of road maintained each year and our customers will have greater visibility as to the relative status of their roads.

- 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.

## **2.0 Recommendations**

- 2.1 That the Committee notes the proposed highways maintenance programme for 2017-18 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 Last Year's Highways Maintenance Investment 2016/17**

- 3.1 Brent's annual highways maintenance investment programme consists of Brent capital funding, which is used to fund the roads maintenance programme for local roads; capital funding provided by Transport for London, which is used to deliver principal (strategic) road maintenance
- 3.2 By 31 March 2017, approximately £6.086m will have been spent on maintaining Brent's highway infrastructure funded through £5.55m of Brent capital, and £0.901 million of principal road maintenance investment, with £365k of footway works held over to 17/18. Appendix A provides details of the works delivered, which will result in (amongst other things):
- 11 miles of roads being resurfaced; and
  - 6 miles of footways being reconstructed.
- 3.3 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. Whilst 12 out of 15 footway reconstruction schemes on the original have been successfully completed, delays in order to consider representations from residents about the programme have meant that three schemes have been held over to the 2017/18. It is proposed that the remaining 2016/17 funding is carried over to 2017/18 and these schemes (Medway Gardens, Manor House Drive and Grosvenor Gardens) are carried out using this remaining funding and any 2017/18 funding required to complete the schemes.
- 3.4 Members will 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).

## 4.0 Managing Highways Assets

4.1 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 bn

4.2 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%

4.3 Unclassified roads make up 80% of all borough roads and currently 24% of Brent's unclassified roads are in need of substantial maintenance. Classified roads are in a better condition. Latest condition surveys also indicate 49% 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

4.4 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.

4.5 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.

4.6 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

- 4.7 The strategy initially involves introducing a programme of major resurfacing works along with preventative maintenance, which will take the form of thin surface repairs to seal roads against water ingress and improve their anti-skid properties.
- 4.8 During 2017/18 it is expected that this ongoing work will produce a programme of works priorities to cover the medium term up to 5 years from 2017/18. Proposals arising from this work for priority schemes and budget allocations for 2017/18 and future years will be submitted to a later meeting of the Cabinet. This will be the next step in long-term programme development for which a 10 year programme period is recommended to maximise the benefits. This is an aspiration that we will continue to work towards.
- 4.9 During 2016/17 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.
- 4.10 Preventative maintenance is appropriate where the deterioration in the surface (as measured highway condition survey data) has not yet resulted in a problem 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.
- 4.11 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.
- 4.12 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.
- 4.13 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.
- 4.14 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 flowing programme elements

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

- 4.15 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
- 4.16 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.

## **5.0 Highways Investment During 2017/18**

### **5.1 Carriageway Resurfacing**

- 5.1.1 The 2017/18 carriageway maintenance programme is shown in Appendix B, and in map form in Appendix D. Appendix E illustrates the location of principal and other classified roads within Brent for information. 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.
- 5.1.3 In summary the proposed carriageway resurfacing programme of £1.1m includes:
  - £0.950m 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;
- 5.1.5 Each year Brent is provided with an allocation from TfL to renew principal (A class) roads in the Borough. This programme of works is developed through an assessment of need taken from the most recent condition surveys provided by, and reviewed by, TfL. A draft programme for principal road renewals is contained in Appendix B.
- 5.1.6 TfL have allocated "A" road funding of £0.886m to Brent for 2017/18. TfL requests that Boroughs include an additional 25% to their provisional allocation (which was £0.900m) to enable them to put forward one or more reserve schemes. This provides an opportunity for additional schemes to be delivered each year if additional funding becomes available. This "reserve" bid adds a further £0.225m (approx.) to the provisional programme value to make a total A Road bid value of £1.125m. Members should note that reserve scheme funding relies on TfL funding availability and is not guaranteed.

- 5.1.7 It is proposed to utilise up to £5,000 of capital funding for carriageway resurfacing to undertake asset condition surveys during 2017/18. These surveys will assist to prepare a long term asset management programme and confirm future year's capital programmes.

## **5.2 Footway Repairs**

- 5.2.1 The latest survey of the condition of the borough pavements indicates that overall 49% are in need of maintenance
- 5.2.3 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 has been kept for the 2017/18 programme. In future, in order to best achieve the desired levels of service, further refinement using the Brent Asset Management Tool will allow better analysis of data and consequent optimisation of funding allocation, and hence the split will change over time. Appendix B contains details of the footways which have been prioritised for improvement.
- 5.2.4 Given the priorities evidenced by the Horizons information, this year we will be carrying out preventative maintenance to pavements already surfaced in asphalt. This will help improve the overall condition of the pavements and is evidence that we will maintain pavements once they have been converted to asphalt.
- 5.2.5 As we did in the 2016/17 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 would 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. The advantage of this was that the footway was continuous for the full length of the street and not interrupted (visually) by vehicle crossings. The disadvantage of this is that cars are driving over slabs. 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.
- 5.2.6 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.
- 5.2.7 It is proposed to utilise up to £25,000 of capital funding for footway improvements to undertake asset condition surveys during 2015/16. These surveys will be used to confirm future year's capital programmes.

## **5.3 Reducing the risk of flooding in Brent**

- 5.3.1 Gully cleaning is prioritised to prevent local flooding, with both scheduled and reactive gully cleansing activities taking place. There are approximately 20674 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.

5.3.2 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.

5.3.3 Gullies are also cleaned on a reactive basis in response to reports from members of the public or Councillors of blocked gullies.

5.3.4 In the future, once the existing regime has yielded as much as it can in terms of cleansing, it will be made more efficient. Measurements of silt levels are being taken when gullies are cleaned and will indicate whether the existing cleansing frequency is too great or too little. The regime can then be redesigned to be more efficient so that the silt level doesn't become unacceptably high and block the gully.

5.3.5 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

5.3.6 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:

<b>Flood Management Scheme</b>	<b>Proposed works</b>	<b>Cost Estimate</b>
Various locations in highway	Installation of Land Drainage	£10K
Barham Park		£20K
Silk Stream (Barnet agreement)	Trash screen cleaning at A5 Hendon	£15K
Tramway Ditch, Stag Lane, NW 9	Inspect and clear watercourses	£1K
Northwick Park, Kenton		£8K
Various location	Installation of new gullies to prevent flooding	£25K
Reactive gully cleaning and various works undertaken through maintenance programme	Clean and repair gullies, replace missing covers, CCTV survey	£47K
LoDEG	Drainage Engineering Group Subscription	£1k
Total		£127K

## 5.4 Investing in Public Realm

5.4.1 The Public Realm programme involves three areas of highways capital programme investment:

- a. Works to strengthen and protect footways and soft verges;

- b. Works to improve areas of “marginal” land that are part of the public highway but are not footways, verges or carriageways; and.
- c. Works to reinstate abandoned tree pits.

It is proposed to allocate £125k of the 2017/18 capital budget to these areas of work.

## 5.5 Improving Brent’s bridges and structures

5.5.1 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 allocated by Transport for London on a regional priority basis. The London Bridge Engineering Group is currently reviewing the pan-London programme and funding will be confirmed towards the end of this financial year.

5.5.2 Although funding has not been confirmed, the Structure Programme 2017/18 bid Total is £345k, made up for bids as follows:

North End Road (B62) Bridge Strengthening	£250k
Princess Frederica School Wall feasibility	£45k
Twybridge Way N (B49 & B50) Bridge Strengthening	£275k
Load assessments depending on results of 16/17 PI results	

## 5.6 Renewal of Road markings

5.6.1 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.

5.6.2 Renewal of those road markings which are required for enforcement are managed by the Parking & Lighting Service.

## 6.0 **Financial Implications**

6.1 The table below summarises the proposed allocation of Brent capital funding for highways maintenance during 2017-18:

Schemes	% of cway & fway Capital Budget	Amount (£ 000's)
<b>BRENT CAPITAL – 2016/17 Footways</b>		
Funding brought forward, due to delays in footway scheme implementation		365
<b>BRENT CAPITAL – 2017/18 Footways</b>		
Major footway reconstruction		1825
Crossover conversion		50
Footway upgrades – short sections		150
Improvements to the public realm		125
<b>Sub-total 2017/18</b>	<b>65%</b>	<b>2150</b>



<b>BRENT CAPITAL – 2017/18 Carriageways</b>		
Major resurfacing of B, C unclassified roads; Preventative maintenance unclassified roads		950
Road resurfacing – short sections		150
Renewal of Road Markings		50
<b>Sub-total 2017/18</b>	<b>35%</b>	<b>1150</b>
<b>Highway Structures</b>		<b>200</b>
<b>2017/18 Sub Total Brent Capital</b>		<b>3500</b>
<b>2017/18 TfL Funding for Principal Roads**</b>		<b>886</b>
<b>TOTAL 2017/18 HIGHWAY MAINTENANCE PROGRAMME</b>		<b>4386</b>

*\*\*value could increase if TfL agree to deliver reserve schemes.*

- 6.2 The provisional allocation for 2017/18 assumes the same division of funding.
- 6.3 It is proposed to utilise up to £5k of carriageway maintenance allocation and £25k of footway allocation to undertake condition surveys during 2016/17. These surveys will assist preparation of a long term asset management programme.
- 6.4 Flood risk management expenditure is within the ENS revenue budget and as such is not reflected in the capital programme of works. The DEFRA flood grant was incorporated into the ENS revenue base a number of years ago and the grant taken centrally. As such all required expenditure will be contained within the revenue budget.
- 6.5 A bid for capital funding will be submitted to the London Bridge Engineering Group of the as detailed in section 5.5 Notification on the progress of the bid is due to be received towards the end of this financial year. The 2017/18 capital programme does not include any funding from this source. TfL allocates funds purely for assessments, strengthening, etc. Funding for general and principal inspections needs to be sourced from elsewhere.
- 6.7 The HAMP approach to provide a systematic long term methodology for maintaining the borough's highways will continue to be furthered during 2017/18. 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.

## **7.0 Legal Implications**

- 7.1 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.

## **8.0 Diversity Implications**

- 8.1 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.
- 8.2 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.

- 8.3 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.
- 8.4 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
- 8.5 We make sure of the visibility of the required signage, also where temporary work is being carried out.
- 8.6 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.

### **Background Papers**

**None**

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## APPENDIX A

### Unclassified Roads Resurfaced during 2016/17

Unclassified Roads Resurfaced (£1217k)	Length (m)	Ward
Limesdale Gardens	345	QBY
Park Chase	410	TOK
Vivian Avenue (Chalfont Avenue to Monks Park)	228	TOK
Verney Street	305	WHP
Elspeth Road	95	WEM
Barnhill Road (section near Waterside Close)	60	BAR
Canterbury Terrace	120	KIL
Wycombe Road	140	ALP
Bathurst Gardens (property no 2 to Wrottedley Road)	510	KGN
Buck Lane (Hay Lane to Highfield Avenue)	287	FRY
Winchelsea Road (Knatchbull Road to Farm Road)	206	STN
Brownlow Road	290	HAR
Melrose Avenue	899	DNL
Eton Avenue (Charterhouse Avenue to Repton Avenue)	230	SUD
Oakdale Avenue	160	KEN
Maybank Avenue (Greenbank Avenue to Harrow Road)	365	SUD
Langler Road	225	QPK
Sudbury Hill Close	255	NPK
Warfield Road	90	QPK
Burrows Road	312	QPK
Fairlight Avenue (Minet Avenue to Acton Lane)	95	HAR
Geary Road (Cullingworth Road to Park Avenue North)	271	DNL
Mostyn Avenue	263	TOK
Ballards Road	306	DOL
Mordaunt Road	245	STN
Mostyn Gardens	132	QPK
Perrin Road	135	NPK
Buckingham Road	292	KGN
West Way	321	WHP
Ebrington Road	380	KEN
Athlon Road	254	ALP
Fawood Avenue (Brentfield Road to Marshall Street)	191	STN
Cumberland Road	101	QBY
Hazeldean Road	192	STN
<b>Total km</b>	<b>8.71</b>	
<b>Miles</b>	<b>5.44</b>	

### Preventative Maintenance during 2016-17

Preventative Maintenance (£761k)	Length (m)	Ward
Wakemans Hill Avenue	603	FRY
The Croft	260	SUD
Village Way	420	WHP
Napier Road	227	WEM
Chaplin Road (Belton Road to Villiers Road)	171	WLG
Grendon Gardens	375	BAR
Lewgars Avenue	250	FRY
North Way	362	QBY
Aboyne Road (Neasden Lane to Annesley Close)	85	WHP
Bryan Avenue (Donnington Road to Rowdon Avenue)	290	BPK
Copland Avenue	200	SUD
Copland Close	49	SUD
Lancaster Road	245	DNL
Windermere Avenue (Ennerdale Gardens to Coniston Gardens)	298	PRE
Kinch Grove	125	BAR
Lyon Park Avenue (Woodstock Road to property no 196/198)	266	WEM
The Crossways	350	BAR
All Souls Avenue (Bathurst Gardens to Herbert Gardens)	312	BPK
Dobree Avenue	342	BPK
Gardiner Avenue	130	MAP
Minet Gardens	64	HAR
Priory Gardens	275	NPK
<b>Total km</b>	<b>5.70</b>	
<b>Miles</b>	<b>3.56</b>	

### Non-Principal Classified B&C Roads Resurfaced during 2016/17

Carriageway Resurfacing (£281k)	Length (m)	Ward
Stag Lane (Roe Green to Princes Avenue)	514	QBY/FRY
Neasden Lane (Lansdowne Grove to High Road Willesden)	751	WHP/DNL
Roe Green	514	FRY
<b>Total km</b>	<b>1.78</b>	
<b>Miles</b>	<b>1.11</b>	

**Short Sections Resurfaced during 2016/17**

<b>Short Sections Carriageway Resurfaced (£150k)</b>	<b>Length (m)</b>	<b>Ward</b>
Gervase Close	117	BAR
Ilex Road (Roundwood Road to no 15)	185	DNL
Northwick Hospital (Exit Road)	65	NPK
Alverstone Road	249	BAR
Wood Close	103	WHP
Linden Avenue (Dagmar Gardens to Station Terrace)	82	QPK
Wood Lane (Blair Avenue to Glenwood Avenue)	148	WHP
Woodhill Crescent (Donnington Avenue to Southwell Road)	101	KEN
<b>Total km</b>	<b>1.05</b>	
<b>Miles</b>	<b>0.66</b>	

**Principal A Roads Resurfaced during 2016/17**

<b>Principal (A Road) Maintenance Programme (£901k)</b>	<b>Length (m)</b>	<b>Ward</b>
A404 Manor Park Road (Craven Park Road to Crownhill Road - also 400mts of footway resurfacing completed)	200	HAR
A4005 Ealing Road (Carlyon Road to Alperton Lane)	255	ALP
A404 High Street Harlesden (Furness Road to 139)	360	KGN
A4003 Willesden Lane (Walm Lane to Sidmouth Road)	230	WLG
<b>Total km</b>	<b>1.045</b>	
<b>Miles</b>	<b>0.65</b>	

**Major Footway Reconstruction completed in 2016/17**

<b>Major Footway Reconstruction (£2153k)</b>	<b>Length (m)</b>	<b>Ward</b>
Regal Way (Westward Way to Shaftesbury Avenue)	958	KEN
Chandos Road	460	DNL
Townsend Lane (Kingsbury Road to Kingsmead Avenue)	1572	FRY
Elthorne Road	610	WHP/FRY
Mallard Way	744	WHP
Chalfont Avenue (Oakington Manor Drive to Brent Way)	162	TOK
Geary Road (Cullingworth Road to Park Avenue North)	542	DNL
Mostyn Avenue	652	TOK
Woodcock Hill (Kenton Road to Dovedale Avenue)	958	KEN
Princes Avenue (Berkeley Road to Honeypt Lane)	490	QBY
High Road Willesden (Walm Lane to Huddlestone Road)	854	MAP
Tokington Avenue (Northchurch Road to Elsley Primary School)	430	TOK
<b>Total km</b>	<b>8.43</b>	
<b>Miles</b>	<b>5.27</b>	

**Short Sections of Footway Resurfacing completed in 2016/17**

<b>Short Sections Footway Resurfaced (£150k)</b>	<b>Length (m)</b>	<b>Ward</b>
Park Parade	155	KGN
High Road Wembley	144	WEM
Wood Close	223	WHP
Empire Way	96	TOK
Egerton Road	34	ALP
<b>Total km</b>	<b>0.65</b>	
<b>Miles</b>	<b>0.41</b>	

## APPENDIX B

### Highways Maintenance Programme 2017/18

#### Non-Principal B&C, Unclassified Borough Roads - Major and Preventative Maintenance Programmes 2017-18

Resurfacing Programme	Length (m)	Estimated Cost (£k)	Treatment	Ward
Dollis Hill Avenue (A5 to 26, 46 to 86 and 117 to Parkside)	678	134	Major	DOL
Furness Road (Wrottesley Road to High Street Harlesden)	315	70	Preventative	KGN
Dicey Avenue	245	33	Preventative	MAP
Salmon Street (from 159-199 only side area off main road)	239	24	Preventative	FRY
Chartley Avenue	322	57	Major	DNL
Mayfields Close	167	17	Major	BAR
Stanley Avenue	415	95	Major	ALP
Chaplin Road (Harrow Road to Width Restriction)	495	89	Major	SUD
Shaftesbury Avenue (Westward Way to end near schools)	570	93	Preventative	KEN
Chamberlayne Road (Okehampton Road to 187)	177	83	B&C	BPK/QPK
Beaumont Avenue (Sudbury Avenue to 46)	355	40	Major	SUD
Dewsbury Road (Cullingworth Road to Hamilton Road)	245	44	Major	DNL
Highfield Avenue	376	64	Preventative	FRY
Richmond Avenue	40	10	Major	WLG
Waylett Place	74	9	Preventative	SUD
Burnley Road (Hamilton Road to 37)	218	30	Major	DNL
Lansdowne Grove	155	27	Major	WHP
Parkfield Road	159	31	Major	WLG
<b>Total km</b>	<b>5.25</b>	<b>950</b>		
<b>Miles</b>	<b>3.28</b>			
<b>Total Area m2</b>	<b>40,280</b>			
Reserve Schemes	Length (m)	Estimated Cost (£k)	Treatment	Ward
Blenheim Gardens	388	46	Major	PRE
Danethorpe Road	244	26	Major	WEM
Drayton Road	429	79	Major	HAR/ KGN
Fawcett Road (Fortunegate Road to St Marys Road)	108	14	Preventative	HAR
Torbay Road	312	49	Major	KIL
Cumberland Avenue	525	145	Major	STN

<b>Total km</b>	<b>2.01</b>	<b>359</b>		
<b>Miles</b>	<b>1.25</b>			
<b>Total Area m2</b>	<b>14,314</b>			

### **Major resurfacing of short sections 2017/18**

<b>Short Sections of Carriageway Resurfacing</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
Sites to be prioritised in-year	TBD	<b>150</b>		-

### **Renewal of Road Markings 2017-18**

<b>Renewal of Road Markings</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
Sites to be prioritised in-year	TBD	<b>50</b>		-

### **Principal (A Road) Maintenance Programme 2017/18 - funded by TfL £0.886m**

<b>Principal (A Road) Maintenance Programme</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
A5 Edgware Road (Bus Garage to Gladstone Park Gdns)	230	97	Major	DOL
A4005 Bridgewater Rd j/w Whitton Avenue East	285	188	Major	ALP
A4089 Ealing Road (High Road to Lyon Park Avenue)	400	191	Major	WEM
A407 Walm Lane (Stanley Gardens to Melrose Avenue)	200	78	Major	MAP
A404 Harrow Road (Monks Park to A406)	160	129	Major	TOK
A5 Edgware Road (Dollis Hill Lane to Geron Way)	225	75	Major	DOL
A404 High Road Wembley (Ealing Road to Napier Rd)	190	128	Major	WEM
<b>Total km</b>	<b>1.69</b>			
<b>Miles</b>	<b>1.05</b>			

*Note: programme identified through the results of a London-wide SCANNER survey and to be funded by TfL. All schemes are subject to co-ordination with internal and external agencies.*



## **Major Footway Reconstruction 2017/18**

<b>Major Footway Reconstruction</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
<b>2016/17 Footways Carried Forward to 2017/18</b>				
Manor House Drive	976	215	Asphalt/Brick	BPK
Medway Gardens	810	155	Asphalt/Brick	SUD
Grosvenor Gardens	270	71	Asphalt/Brick	MAP
<b>Total km</b>	<b>2.06</b>	<b>441</b>		
<b>Miles</b>	<b>1.29</b>			
<b>Total Area m2</b>	<b>5,089</b>			
<b>Footway Reconstruction Programme 2017/18</b>				
High Road Willesden (Huddlestone Road to Strode Road)	912	295	Paving	WGN
Dawpool Road	914	221	Asphalt/Brick	DOL
Dicey Avenue	490	148	Asphalt/Brick	MAP
Harrow Road (Victoria Avenue to Monks Park north east side only)	308	118	Asphalt	TOK
Harvist Road (Salisbury Road to Kingswood Avenue)	368	123	Paving	QPK
Fryent Way (Footway north east side of open space)	1065	83	Asphalt	FRY
Fairway Avenue	888	215	Asphalt/Brick	QBY
Woodgrange Avenue	794	232	Asphalt/Brick	KEN
Stilecroft Gardens	472	83	Asphalt	SUD
Langham Gardens	502	104	Asphalt	NPK
Greystone Gardens	572	127	Asphalt	KEN
Funding to complete 2016/17 Footways (Tokyngton Avenue from Northchurch Avenue to Elsley Primary School completed in 2016/17 as a reserve scheme)		76		
Maintenance to Vehicle Crossings		50		
<b>Total km</b>	<b>7.29</b>	<b>1875</b>		
<b>Miles</b>	<b>4.55</b>			
<b>Total Area m2</b>	<b>18,974</b>			
<b>Reserve Schemes</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
Rugby Road	584	135	Asphalt/Brick	QBY
Park Court	70	15	Asphalt/Brick	TOK
Beechcroft Gardens	966	253	Asphalt/Brick	PRE
Ladore Gardens	642	133	Asphalt	FRY
<b>Total km</b>	<b>2.26</b>	<b>536</b>		

<b>Miles</b>	<b>1.41</b>			
<b>Total Area m2</b>	<b>5,671</b>			

All schemes subject to co-ordination with internal and external agencies.

### **Other footway improvements 2017/18**

<b>Footway Short-section Improvements</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
Sites to be prioritised in-year	TBD	<b>150</b>		-

### **Public Realm improvements 2017/18**

<b>Public Realm Improvements</b>	<b>Length (m)</b>	<b>Estimated Cost (£k)</b>	<b>Treatment</b>	<b>Ward</b>
Sites to be prioritised in-year	TBD	<b>125</b>		-

## APPENDIX C

### WARD ABBREVIATIONS

<u>WARD</u>	<u>ABBREVIATION</u>
- ALPERTON	ALP
- BARNHILL	BAR
- BRONDESBURY PARK	BPK
- DOLLIS HILL	DOL
- DUDDEN HILL	DNL
- FRYENT	FRY
- HARLESDEN	HAR
- KENSAL GREEN	KGN
- KENTON	KEN
- KILBURN	KIL
- MAPESBURY	MAP
- NORTHWICK PARK	NPK
- PRESTON	PRE
- QUEENS PARK	QPK
- QUEENSBURY	QBY
- STONEBRIDGE	STN
- SUDBURY	SUD
- TOKYNGTON	TOK
- WEMBLEY CENTRAL	WEM
- WELSH HARP	WHP
WILLESDEN GREEN	WLG

## **APPENDIX D**

### **MAP OF PROPOSED CARRIAGEWAY AND FOOTWAY RESURFACING PROGRAMME 2016-17**

SEE ATTACHMENT

## **APPENDIX E**

### **MAP OF PRINCIPAL AND OTHER CLASSIFIED ROAD NETWORK IN BRENT**

SEE ATTACHMENT