

	<p style="text-align: center;"><b>Environment Committee</b></p> <p style="text-align: center;"><b>27 January 2015</b></p>
<p style="text-align: right;"><b>Title</b></p>	<p><b>Highways Planned Maintenance Programme.</b></p>
<p style="text-align: right;"><b>Report of</b></p>	<p>Commissioning Director for Environment.</p>
<p style="text-align: right;"><b>Wards</b></p>	<p>All</p>
<p style="text-align: right;"><b>Status</b></p>	<p>Public</p>
<p style="text-align: right;"><b>Enclosures</b></p>	<p>Appendix A: Proposed Works by Wards during 2015/2016  Appendix B: Risk Management  Appendix C: Not used.  Appendix D: Traffic Management Measures Review</p>
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## Summary

This report seeks the Committee's approval for the Highway Planned Maintenance Works Programme for 2015/2016 and subsequent years. The programme has been prepared by drawing on condition survey data and, using whole life costing and deterioration modelling, proposes cost effective maintenance treatments with the aim to tackle the backlog of highways maintenance and, at the same time, keep pace with the rate of deterioration of road and pavement assets.

## Recommendations

1. That the list of roads for carriageway resurfacing, footway relay and other highway maintenance works in the Borough for 2015/2016 and subsequent years; as listed in Appendix A attached to this report, be approved.

**That subject to the overall costs being contained within agreed budgets, the Commissioning Director for Environment be authorised to instruct Re to :**

- i) give notice under Section 58 of the New Roads and Street Works Act 1991 of the Council's intention to implement the highway works shown in Appendix A by advertising and consulting as necessary with public utility companies and Transport for London (TfL) for schemes proposed to be implemented during 2015/2016;**
- ii) implement the schemes proposed in Appendix A by placing orders with the Council's term contractors or specialist contractors appointed in accordance with the public procurement rules, and or the Council's Contract Procedure Rules as appropriate;**
- iii) commission condition assessments of carriageways and footways within all constituent areas to determine the overall condition and appropriate measures to be considered in future programmes;**

- 2. That the Committee agree that changes to the priority listing where a new assessment highlights a higher priority including new entries will be delegated to the Commissioning Director and reported back to the next available Environment Committee.**

## **1. WHY THIS REPORT IS NEEDED**

- 1.1** This report is needed to provide the appropriate Council authority and approve the planned maintenance programme for 2015/16 and subsequent years.
- 1.2** Going forward, this report aims to increase substantially the percentage of carriageway and footway treated every year by using more planned preventative type treatments and less costly, reactive treatments. Using optimum maintenance strategies and treatments such as Bitumen Preservative, Surface Dressing and Micro-Asphalt the aim is to treat at least 5% of the whole of the network per year over the next five years, thereby increasing customer satisfaction and substantially reducing highway maintenance service requests.

## **2. REASONS FOR RECOMMENDATIONS**

- 2.1 The recommendations are required to enable Regional Enterprise (Re) officers to implement the planned maintenance programme for 2015/16 and also plan the programme for future years.
- 2.2 The Highways Act 1980(HA 1980) sets out the main duties of the highway authorities in England and Wales. Highway maintenance policy is set within a legal framework. Section 41 of the HA 1980 imposes a duty to maintain highways which are maintainable at public expense and almost all claims against authorities relating to highway functions arise from an alleged breach of this section. The HA 1980 sits within a much broader legislative framework specifying powers, duties and standards for highway maintenance.
- 2.3 The Council has a duty to ensure that the statutory functions and responsibilities in relation to highways are discharged. The Authority also has a duty to ensure a safe passage for the highway user through the effective implementation of the legislation available to it, principally the HA 1980, and in particular Section 41, of the Act.
- 2.4 Planned highway maintenance is generally funded by Borough Capital Funding. Capital allocations are also made by Central Government through the LIP process taking into account factors such as road length, classification, traffic figures and road condition data derived from the condition indicators, UK Pavement Management System (UKPMS), National Road Maintenance Condition Survey (NRMCS) and condition surveys. Revenue allocations funding, which covers mostly reactive maintenance, is generally provided from a combination of local council tax and other Government Revenue Support Grants. It is important to ensure that realistic benefit is obtained for highway maintenance from contributions in respect of new developments. Funding is further sought from Private Developers, secured as planning obligation under S106 of the Town and Country Planning Act 1990 and from the Community Infrastructure Levy.
- 2.5 The programme proposed by this report was based on condition surveys covering 25% of the roads and footways, carried out in the autumn of 2014 by independent consultants, as per the recommendations of the 2010 Task and Finish Group. The surveys on the Borough roads have been carried out by Cormorant Surveys/Appia by using the L B Ealing Framework contract, which the Council agreed to adopt. The condition surveys on the Council's principal roads are commissioned through the London Borough of Hammersmith and Fulham and financed by TfL. Highway officers and inspectors have contributed to the process by providing an independent assessment of the condition of the highway, following a visual survey. Officers inspected all the individual roads suggested by members of the public, Ward Councillors and Highway Inspectors as requiring maintenance.

- 2.6 Schemes have been prioritised based on the known condition and in the interest of achieving best value for investment in the highway infrastructure. In order to achieve best value, the proposed treatments include surface dressing and micro asphalt programme with patching as required, as well as a surfacing programme. As previously mentioned, 25% of the road and footway network has recently been visually surveyed and defects have been recorded. For the remaining 75% of the network the UKPMS will assume certain deterioration over the last year and therefore extrapolate the condition of the carriageway and footway. These defects form the condition rating, or Road Indices, which classify every carriageway condition and footway into Red, Amber and Green. Each of the 2,000 plus roads in the borough has been ranked with a "Hierarchy Factor" which covers the amount of traffic carried, the presence of schools, hospitals, etc. Those that are ranked highest are likely to be prioritised for inclusion in the 2015/16 programme in accordance with the available budget. The benefit of the ranking process will be that should additional funding become available during the year the next highest ranked road will be brought into the programme.
- 2.7 Under Section 58 of the New Roads and Street Works Act 1991, the Highway Authority is required to issue a formal three-month Notice of its intention to carry out substantial road works on the public highway. This requirement is aimed at preventing or restricting streets being dug up soon after they have been resurfaced or closed for major works. This is a legal notice which is served on all the statutory undertakers who carry out work in the Borough. The Highways Authority is required to commence the works within one month of the date specified in the notice. The restriction on statutory undertakers carrying out street work applies for a period of 36 months after the works have been implemented. However, statutory companies can still carry out emergency and service connection works by just notifying the Highway Authority. The Notice will be published in the London Gazette and sent to all the utility companies for co-ordination.
- 2.8 The Traffic Management Act 2004 introduced a new series of Strategic Roads for London where the London Boroughs retain highway and traffic authority responsibilities but for which Transport for London (TfL) has oversight. This requires the Council to notify TfL, or both TfL and neighbouring boroughs if the proposed maintenance works are likely to affect traffic operations on a strategic road in its own area. The Council aims to implement all the schemes safely, with minimum traffic congestion and TfL will be provided with the necessary information within the stipulated timescales. The contractor will have in place a Health and Safety Plan for implementing these schemes safely.
- 2.9 Appendix A lists all the carriageway treatments and footway relay works in each ward which are intended to be undertaken during 2015/2016 and subsequent years. Where appropriate, the table shows the section of the street that will be treated. Relevant information about the work in each location will continue to be provided in advance to residents by letter and signing. In order to maximise improvement to the street scene, action will be taken to tidy up associated infrastructure and generally reduce street clutter.

- 2.10 Traffic Management Measures Review-see Appendix D annexed, detailing the procedure of appraisal process and consultation / governance arrangements in relation to the removal and subsequent assessment relating to physical measures that are removed as part of the re-surfacing works. The review assesses any identified amendments to existing traffic calming or management measures to ensure quantifiable benefit to the community.
- 2.11 The highways maintenance backlog has been estimated using the 2011/12 condition surveys, at £97.3 million and the funding required to address this maintenance backlog using the traditional maintenance treatments was estimated at £19.6 million per year, over a five year period. Clearly, under the current tough economic climate this level of funding is not available. Adopting HAMP principles marks a move away from “worst first” approach to maintenance operated by the Council so far. Re officers have therefore recently reviewed the highway maintenance treatments to focus on a preventative approach to maintenance, as explained to a Members working Group on the 2<sup>nd</sup> of October 2014. Therefore, alternative treatments, cheaper than the traditional treatments, which will preserve and extend the life of carriageway for a number of years, by minimising the whole life costs of the highways, have been considered. These treatments include sealing of carriageway cracks and joints, other localised treatments of carriageway cracks, surface dressing, patching, micro surfacing/micro asphalt-preceded by localised patching, if appropriate. It should be emphasised that, in accordance with highway asset management principles, the preventative type treatments (carriageway sealing, surface dressing, micro asphalt) are targeted on Amber condition roads or Green condition roads to stop them deteriorating into Red, which will require a more expensive treatment. All these treatments are incorporated in the current term maintenance contract. A number of potential roads have been identified as suitable for these treatments and are therefore proposed as shown in Appendix A.
- 2.12 The Council’s highway structures are some 74 bridges and culverts. With the exception of two load assessments funded by LoBEG this financial year, the last Load Assessment carried out was some twenty years ago. Consequently, the validity of the old load assessment has now ceased and there is a need to carry out new load assessments on some 60 structures. The cost of each load assessment is estimated at £8,000-£10,000 per structure, requiring an initial investment of £480-£600K. It should also be noted that some of the assessed structures are likely to require strengthening measures and an allowance of £500k per year has been made for this.
- 2.13 The Flood and Water Management Act 2010 places several additional duties to all Local Authorities; one of these duties is to prepare and maintain an asset register of flood related structures and another is to coordinate and reduce all types of flooding. Our knowledge of the 3 watercourses for which the Council is responsible is at best sketchy. A serious flooding event took place on 27<sup>th</sup> of June 2009 that resulted in the closure of the A406 NCR. Another flooding event that resulted in property flooding took place in June 2012. Both these flooding events relate to Decoy Brook where it is known that

some culverted sections have deformed and this presents a serious risk of flooding. An allowance of £250k per year has been made for carrying out surveys of all the Council's watercourse which also includes for flood alleviation measures. It should also be noted that Council officers have made other bids to DEFRA/EA for other flood related funding.

- 2.14 In recent years the road markings on the road network have been maintained on a responsive basis. Considering the important role they play in reducing road accidents, it is proposed that this practice is improved by introducing a cyclic programme to renew all road markings in the Borough every five years. It has been estimated that this will cost some £150K per year. This will ensure that all road markings are renewed regularly thereby keeping the road network in a safe condition. Until this cyclic programme is established it will be necessary to also carry out responsive road marking renewals.

### **3 ALTERNATIVE OPTIONS CONSIDERED AND NOT RECOMMENDED**

- 3.1 The alternative option of recommending planned maintenance based on the old approach of "worst first" has been considered and rejected because this is an unsustainable approach and is associated with expensive short term reactive repairs.

### **4 POST DECISION IMPLEMENTATION**

- 4.1 Once the Committee approves the recommendations, Re officers will plan, consult and implement the approved planned maintenance schemes by raising relevant orders with the Council's term contractor. Re officers will also carry out condition surveys to prepare next year's list.

## **5 IMPLICATIONS OF DECISION**

### **5.1 Corporate Priorities and Performance**

- 5.1.1 The proposed planned maintenance programme will contribute directly to two of the three Corporate Objectives of the Council's 2013 - 16 Corporate Plan by:
- promoting responsible growth, development and success across the borough;
  - Improving the satisfaction of residents and businesses within the London Borough of Barnet as a place to live, work and study.
- 5.1.2 The proposed planned maintenance programme will also contribute to the Council's Health and Wellbeing Strategy by making Barnet a great place to live and enable the residents to keep well and independent.
- 5.1.3 Highways are the Council's most valuable assets and are vital to the economic, social and environmental wellbeing of the Borough as well as the

general image perception. They provide access for business and communities, as well as contribute to the area's local character and the resident's equality of life. Highways really do matter to people and often public opinion surveys continually highlight dissatisfaction with the condition of local roads and the way they are managed. Public pressure can often result in short term fixes such as potholes for example, rather than properly planned and implemented longer term solutions. The proposed 2015/16 Programme aims to stop short term repairs that provide poor value for money and often undermine the structural integrity of the asset.

## **5.2 Resources (Finance & Value for Money, Procurement, Staffing, IT, Property, Sustainability)**

- 5.2.1 Funding is being sought from all possible sources to address the on-going deterioration of the non-principal local roads, to improve the condition of footways and eliminate the backlog of repairs. An examination of the Planned Maintenance Budgets over the last 10 years shows a gradual reduction of the level of spending over recent years. This reduction of planned maintenance, the result of the tough economic climate, has contributed to the planned maintenance backlog. In addition, as funding reduces, the ability to provide a satisfactory level of investment in the road network decreases and this in turn generates increasing levels of reactive cost and works.
- 5.2.2 A bid for carriageway resurfacing and footway relay works on the Borough's principal roads was included in the Local Implementation Plan (LIP) 2015/16 submitted to Transport for London (TfL) in September 2014. TfL confirmed a total grant allocation of £4.653 million in December 2014 and the breakdown of the approved grant is as follows:

<b>Programme</b>	<b>Allocation (£'000)</b>
Corridors, Neighbourhoods and Supporting Measures	£3,300
Principal Road Maintenance	£1,243
Local Transport Funding	£100
Major Schemes	Nil

TfL approved £ 1,243k grant for the 2015/16 programme maintenance of the principal road network. The approval process has taken into account the condition of the principal road network based upon the annual road condition

surveys. TfL's Financial Guidance procedures will be followed when implementing works and seeking reimbursement of costs.

- 5.2.3 The total Council budget allocation for planned maintenance carriageway and footway works in the combined areas for 2015/16 is not known at the time of writing. However the Council agreed on the 16<sup>th</sup> of December the following funding for highways maintenance.

Proposal	2015/16 £'000	2016/17 £'000	2017/18 £'000	2018/19 £'000	2019/20 £'000
Borough wide highways maintenance incl. Borough wide signs and lines programme.	15,000	13,000	8,000	8,000	6,365

Total £50,365

Bearing in mind the need of the road network and the current maintenance backlog, the following percentage split between Carriageways, Footways, Structures, Drainage and Road Markings is proposed:

Asset	Proposed Approximate Percentage Spent
Carriageways (Resurfacing 15%, Micro Asphalt 20% & Surface Dressing 25%- approximately)	60%
Footways	30%
Structures, Drainage, Signs and Road Markings	10%
Total	100%

The amount of the available funding will determine the extent of the schemes that would be delivered in the year. The schemes that exceed this figure will be added on the Reserve List. The LIP funded allocation will be additional to the above figures.



Members will need to be aware that the report titled Implementing the Parking Policy, also on the committee agenda this evening, is seeking a decision as to whether a Parking Footway Programme, estimated to cost between £1.5m and £2.5m, should be funded from the Footways allocation set out above.

5.2.4 Officers have prioritised schemes in order to get the maximum benefit and value for money. The Prioritisation has been done in accordance with the condition of the network, as measured by the Road Condition Indices of the independent surveys, and the Efficiency factor, which is the ratio of the length of the defects over the length of the section of the road. Council officers, will visit all the proposed roads to independently assess the condition of the road and verify that the recommended treatment is appropriate. The importance of the individual road, as measured by the Road Hierarchy Factor, will also be considered. Any proposed changes to the priority lists, where a new assessment highlights a higher priority including new entries, will be communicated to the Commissioning Director for Environment who will have delegated authority to approve those changes and report back to the next available Environment Committee..

5.2.5 The following three main treatments are included in the Appendix A:

Surface Dressing: This treatment is applicable at an early stage of the deterioration process and is aimed at sealing carriageway cracks, thereby arresting further deterioration, and reinstating the skidding resistance of the road. It involves spraying hot bitumen on the road and rolling in chippings to provide a new running surface. Typical life expectancy 8-10 years

Micro Asphalt involves overlaying a thin surface layer of 15-30 mm and may involve removing or planing some of the old surface, particularly at the channels. Some carriageway patching may be required before this treatment is applied but essentially this treatment is applicable where the road surface is still sound. In addition to sealing the carriageway and providing a new running surface this treatment can also restore some of the shape of the road. This treatment is not really applicable to heavily trafficked roads. A typical life expectancy is 8-10 years.

Carriageway Resurfacing: This requires the removal and replacement of the surface layer, the cost is based on Hot Rolled Asphalt but other types of surface layers can be used. The treatment depth is around 40 mm but it can be more if the underlying layer also needs replacing. A typical life expectancy is 15-20 years.

Other treatments may also be used either in conjunction with the above treatments or on their own depending on the individual road assessment by experienced officers. These treatments are:

Bitumen Preservative. This involves the application of bitumen emulsion that will seal the micro cracks of the carriageway and arrest deterioration for 3-5 years.

Carriageway Patching. This involves the removal and replacement of a small area of the surface layer to a depth of 40-100 mm.

Carriageway Reconstruction. When the road base, the main structural element or the foundation of the carriageway, fails then it will be necessary to reconstruct the carriageway. This involves removing and replacing the road construction to a depth of at least 220 mm and is therefore costly.

- 5.2.6 The majority of the footways in Barnet are laid in pre-cast paving slabs which are labour intensive and expensive to renew. It is estimated that the cost of replacing just 3% of the Borough footways in a year will be in excess of £8 million. It is therefore proposed that the same asset management principles are also applied on the Footways and, where appropriate, laying footways in asphalt is considered. This will allow treatments, similar to those mentioned above, to be used on footways to seal and protect the footways, reducing responsive maintenance costs and insurance payments.
- 5.2.7 The carriageway and footway estimates given in Appendix A are provisional and may be subject to change following completion of the individual scheme designs. The estimates are based on the contract rates of the London Highways Alliance Contract (LoHAC), which the Council adopted to use as a means to deliver all the highway maintenance. A cost comparison exercise has confirmed that the LoHAC rates offer a saving of some 15% compared to the previous highways term contracts. It is therefore proposed that the LoHAC contract is used to deliver the first year's schemes and, in parallel, a market test is done to assess whether the Council would get better value for money with individual specialist highway treatment term contracts. An allowance has already been made for this process in the Procurement Forward Plan for 2015-16, which will be going to committee in January.
- 5.2.8 Some of the proposed schemes may not be delivered due to future utility or development works. Also some schemes known to be affected by utility works have not been included in Appendix A. Any changes or variations to the highway schemes scheduled in Appendix A will be reported back to this Committee at quarterly intervals, as and when required.
- 5.2.9 There are no staffing ICT or property implications.

### **5.3 Legal and Constitutional References**

5.3.1 None, save those contained in the main body of the report

5.3.2 The Council's Constitution (Responsibility for Functions, Annex A) gives the

Environment Committee certain responsibilities related to the street scene including pavements and all classes of roads, parking provision and enforcement, and transport and traffic management including agreement of the London Transport Strategy Local Implementation Plan.

## **5.4 Risk Management**

5.4.1 Appendix B attached to this report sets out the results of the risks assessed.

5.4.2 The extreme weather encountered over previous winters has resulted in a rapid deterioration of the core fabric of many patched and heavily deteriorated carriageways. The whole life condition of these carriageways is susceptible to further reduction by increased frequency of future extremes of weather unless timely intervention is carried out by a planned programmed of appropriate highway maintenance treatments. The reactive attention to defects or filling of pot-holes has been technically proven to be only a short-term and a superficial remedy to highway damage.

5.4.3 Based on the 2011 condition surveys, the current highway maintenance backlog has been estimated to be £97.3 million. The funding required to address this backlog, based on traditional maintenance treatments, has been assessed to be £20 million per year over a 5 year period. Given the current economic climate this is clearly unsustainable and there is therefore the risk that continuing deterioration of the highway will substantially increase the backlog and/or result in closure of roads. In order to reduce this risk Re officers are proposing the use of preventative type treatments which cost considerably less than the traditional maintenance treatments and are cost effective in extending the life of the highway.

## **5.5 Equalities and Diversity**

5.5.1 Good roads and pavements have benefits to all sectors of the community in removing barriers and assisting quick, efficient and safe movement to schools, work and leisure. This is particularly important for older people, people caring for children and pushing buggies, those with mobility difficulties and sight impairments. The state of roads and pavements are amongst the top resident concerns and the Council is listening and responding to those concerns by the proposed planned highways maintenance programme.

5.5.2 The physical appearance and the condition of the roads and pavements have a significant impact on people's quality of life. A poor quality street environment will give a negative impression of an area, impact on people's perceptions and attitudes as well as increasing feelings of insecurity. The Council's policy is focused on improving the overall street scene across the borough to a higher level and is consistent with creating an outcome where all

communities are thriving and harmonious places where people are happy to live.

- 5.5.3 There are on-going assessments carried out on the conditions of the roads and pavements in the borough, which incorporates roads on which there were requests by letter, email, and phone-calls from users, Members and issues raised at meetings such as Forums, Leader listens and Chief Executive Walkabouts, etc. The improvements and repairs aim to ensure that all users have equal and safe access across the borough regardless of the method of travel. Surface defects considered dangerous are remedied to benefit general health and safety issues for all.
- 5.5.4 The 2010 Equality Act outlines the provisions of the Public Sector Equalities Duty which requires Public Bodies to have due regard to the need to:
- a) Eliminate unlawful discrimination, harassment and victimisation and other contact prohibited by the Equality Act 2010.
  - b) Advance equality of opportunity between people from different groups.
  - c) Foster good relations between people from different groups.

The broad purpose of this duty is to integrate considerations of equality into day to day business and keep them under review in decision making, the design policies and the delivery of services. There is an on-going process of regularisation and de-clutter of street furniture and an updating of highway features to meet the latest statutory or technical expectations.

## **5.6 Consultation and Engagement**

- 5.6.1 No consultation is proposed or appropriate as the list of proposed planned maintenance schemes has been prepared objectively and is based on the condition of the roads and footways. As mentioned previously, all requests for highways maintenance received in the last year are logged and have been considered in preparing the lists of Appendix A. However the residents will be receiving letter drops to inform them of the forthcoming maintenance works.
- 5.6.2 The Council's Communications Team will be engaged to communicate with the residents via the press, the Council's Barnet First magazine and other media and highlight the Council's investment in highway maintenance as a "good news story".

## **6 BACKGROUND PAPERS**

- 6.1 Cabinet 22 July 2002 decision number item 7 - approved the Planned Highway Maintenance Programme – initial Scheme Prioritisation Procedure.
- 6.2 Task and Finish Groups were subsequently introduced as part of the Overview and Scrutiny arrangements adopted by the Council in May 2009 and the Road Resurfacing Task and Finish Group reported to and agreed by the Cabinet on 12 April 2010 following recommendations: 1) The Council

introduce a Highways Asset Management approach to achieve best value for investment in the highway infrastructure. 2) A full survey is undertaken of the borough footways to enable footway schemes to be prioritised effectively. 3) Footway schemes should be carried out, as far as possible, to consistent standard across the network, using the same materials wherever possible.

- 6.3 The Cabinet on the 4<sup>th</sup> of November 2013, Item 5.4, approved an additional £4 million of funding to be spent on highway maintenance. A list of all the schemes in this programme has been included in the Area Environment Committee reports on 26<sup>th</sup> of March 2014. As a result of efficiencies three more footway schemes have been delivered under this programme: Bridge Lane, Daws Lane and Raleigh Drive.
- 6.4 The Environment Committee on the 24<sup>th</sup> of July 2014 approved a Draft Network Recovery Plan, a Draft Network Management Plan and a Draft Operational Network Hierarchy.
- 6.5 The Environment Committee on the 18<sup>th</sup> of November 2014 considered and agreed in principle a five year Commissioning Plan, involving significant funding for Borough wide highways maintenance, subject to consultation and agreement by the Policy and Resources Committee.
- 6.6 The Council on 16<sup>th</sup> of December agreed, subject to the agreement of the Council's February 2015 Policy and Resources Committee, a capital allocation of £50.365m, spread over the five years 2015/16-2019/20 as shown in paragraph 5.2.3, to be spent on Borough wide highways maintenance.