



Highway Maintenance Plan

Carriageways and Footways

Routine and Reactive Maintenance

Planned Maintenance

April 2018

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Introduction

This Highway Maintenance Plan (HMP) contains the key elements of Haringey's highway maintenance practices in relation to reactive, routine and planned capital maintenance as also reflected in the Council's wider Highway Asset Management Strategy. It describes the current processes and procedures that are utilised to maintain carriageway and footways.

Record Keeping

The Council uses the suite of CONFIRM software produced by Pitney Bowes to collect, store and access all records about its highway assets.

Safety Inspections

Inspector's reports will feed into reactive maintenance responses in accordance with current investigatory levels and into the prioritisation model for planned maintenance of both carriageways and footways.

The frequency of footway and carriageway safety inspections is as follows: -

ROAD CLASSIFICATION	INSPECTION FREQUENCY
PRINCIPAL ROADS	1 month
CLASSIFIED ROADS	6 months
UNCLASSIFIED ROADS	6 months
FOOTPATH	6 months

We also recognise that although some parts of the network fall into the road classifications with 6 monthly frequencies these need more frequent inspections due to their location or volume of pedestrian traffic. Therefore, roads around Tottenham Hotspur football club, and shopping areas with high pedestrian footfall as set out below also will be inspected on a monthly basis.

Match Day Roads	
Bromley Road	N17
Park Lane	N17
Worcester Avenue	N17

Shopping Areas	
Myddleton Road	N22
Lymington Avenue	N22
Brownlow Road	N11
Station Road	N22
Wightman Road	N4
Wightman Road	N8
Crescent Road	N22
Palace Gates Road	N22
Muswell Hill Broadway	N10
Dovecote Avenue	N22

Condition Surveys

Borough Roads Condition Surveys:

All of our roads have been assessed through machine surveys or by visual inspection over a two-year inspection cycle.

Reactive Maintenance

A new reactive maintenance strategy has been introduced which reflects current national guidance on best practice. This strategy sets out a robust defect inspection, recording, and rectification regime for safety inspection to address faults that represent a risk to all road users. It defines the way in which defects are prioritised, in order to ensure the safety of the travelling public whilst minimising unnecessary “early stage” repairs to minor defects. Once a defect exceeds the investigatory levels, it is then risk assessed based on impact and probability, and this defines the risk factor and response time required.

The approach to prioritisation and identification of works will also contribute to improving the footway condition in the borough. A short section repair programme will be particularly helpful, as it provides an investment budget each year that can be used to target lengths of footway that have multiple defects. Those lengths of footway could then be repaired as part of a wider capital maintenance programme, as opposed to piecemeal reactive repairs of individual defects as and when they are inspected or reported.

Reactive Maintenance – Investigatory Levels

- Any items presenting a defect equal or exceeding the investigatory levels set out below, shall be recorded as a defect by the inspector, and assessed in accordance with the risk posed by the defect.
 - Carriageway
 - A pothole 25mm or deeper over 100sqcm or more within 1m of the kerb or within a formally marked cycle lane
 - A pothole 50mm or deeper over 100sqcm or more elsewhere
 - Spalling of concrete 50mm or deeper over 400sqcm or more
 - Crowning of 50mm or more over a 3m length
 - A depression of 50mm or more
 - Rutting of 50mm or more
 - A gap or crack 20mm or wider which is also 50mm or deeper and is also 500mm or longer
 - Pedestrian Crossing
 - A trip of 25mm or more
 - Footway/Shared Path/Cycle Track
 - A trip of 25mm or more
 - A pothole 25mm or deeper over 100sqcm or more
 - A rocking slab or block with 25mm or more movement
 - A gap or crack 20mm or wider which is also 25mm or deeper and is also 200mm or longer
 - Damaged, misaligned, missing or defective street furniture likely to create a hazard
 - Height clearance less than 2.1m to footway below signs
 - Kerbing
 - A unit dislodged by 50mm or more horizontally
 - A unit sunk by 25mm or more compared to an adjacent unit
 - A unit rocking with 25mm or more of movement
 - A missing unit
 - Ironwork
 - A missing gully grate, or a missing inspection cover which is maintained by Haringey
 - A blocked gully likely to create a hazard
 - A broken or cracked gully grate likely to create a hazard

- Road Markings
 - 30% loss of effective safety related markings
- Fencing, Safety Fencing and Barriers
 - A damaged, misaligned or defective item likely to create a hazard
 - A missing item likely to create a hazard
- Signs, and street name plates
 - A damaged, misaligned or defective item likely to create a hazard
 - A missing item likely to create a hazard
 - Obscured, dirty or faded items likely to create a hazard

Any defective apparatus not maintained by Haringey, but is on the Haringey network will be referred onwards to the appropriate body or company.

Reactive Maintenance - Response Times

Inspection:

Emergencies will be inspected within 2 hours of being notified. All other defects will be inspected within 10 working days.

Subsequent Action:

The response time for rectifying a defect will depend on the defect categorisation, which will be determined at the time of inspection according to the risk the defect poses to road users.

There are four categories of defects used in Haringey used by Highways Inspectors each with their own pre-set correction period.

- **Category 1** - defects where, based on an assessment require urgent attention. We aim to make these safe within two hours of assessing the defect.
- **Category 2(H)** - defects, which, following a risk assessment, are deemed not to represent an immediate or imminent hazard or risk of short-term structural deterioration. Such defects may have safety implications, although of a far lesser significance than Category 1 defects, but are more likely to have serviceability or sustainability implications i.e. within 7 days.
- **Category 2(M)** - defects, which, based on an assessment of the risks involved taking into account the nature and location, a longer response time would be acceptable i.e. within 28 days.
- **Category 2(L)** – low priority defects where, following a risk assessment, are deemed not to not require remedial action for the time being but could be the

subject of further works when a suitable budget is available and should be completed within 28 days of the instruction.

Treatments (Reactive Maintenance)

Carriageways:

For potholes requiring urgent attention, a temporary repair is made with cold applied proprietary pothole repair bitumen, with a permanent standard carriageway defect treatment following on.

Standard carriageway defect treatment (typically potholes) – defect treatments in carriageways will consist of cutting back the defect to sound construction and infilling with 10mm bituminous macadam. Use of Haringey approved permanent cold applied materials are considered in certain circumstances, and areas where the standard carriageway defect treatment is impractical for health and safety reasons or uneconomical.

Patching – Where a number of potholes exist within a small area or the area includes other surfacing defects, larger patch repairs may be considered.

Footways:

Paving – Defective artificial stone paving (ASPs) will be re-laid wherever possible, ASPs that cannot be relayed will be taken up and disposed of, with new ASPs laid to match existing. In circumstances where tree pits are pushing up paving slabs and which cannot effectively be re-instated, will be replaced with bituminous macadam. Tree pits will be temporarily re-instated, until planting is feasible.

Bituminous Macadam - treatments in bituminous macadam footways will consist of cutting back the defect to sound construction and infilling with 6mm or 10mm bituminous macadam.

Planned Maintenance

Scheme Prioritisation – Carriageway Maintenance

For the carriageway (road surface), we identify:

- 1) Roads that are currently in very poor condition and are in need of structural repair requiring full resurfacing / reconstruction; and
- 2) Roads that have poor surface / ride quality but which are structurally sound and which can therefore be treated with lower-cost thin surfacing to extend their working lives.

We have implemented Partial Lifecycle Planning, involving the development of a programme of thin surfacing treatments on roads that are not necessarily in the worst condition, but where investment now will extend their lifecycles and reduce costs in the long-term. These are identified through assessment of the surface condition index.

As all of our roads have been assessed through machine surveys or by visual inspection over a two-year inspection cycle, we have up to date information on the condition of our roads and understand which are in need of major repairs and which are showing signs of surface deterioration alone.

We will be increasing the life span of our roads by identifying the point at which we can refresh the road surface to prevent more serious defects developing. On these roads, we replace the thin surface layer and fix areas where the road structure is damaged.

This means that our annual carriageway maintenance programme consists of two distinct programmes of work;

- 1) Reconstruction schemes and
- 2) Preventative maintenance schemes.

To maximise the benefits of highways asset management, at least a period of at least 10 years is recommended and we will work towards this aspiration. Only by projecting forward the anticipated need over a relatively long period can the best whole life options be identified. We have developed an initial a 2-year programme of both structural and preventative maintenance. This will be the first step towards long-term programme development.

Under the HAMP process, we utilise condition surveys to determine which roads will be suitable for preventative maintenance. Roads with high (i.e. poor) structural scores are prioritised for the major resurfacing scheme programme.

We then list roads with high surface defect scores, i.e. with few underlying structural problems, but high levels of surface defects. These roads form a first draft preventative maintenance programme for “thin surfacing” treatments.

We also take account of a range of factors other than road condition in our decision-making, including:

- ✓ Application of local knowledge and judgement by Haringey engineers to ensure that included roads are a logical fit for the programme;
- ✓ A review of customer requests and complaints;
- ✓ Collision data indicating a high incidence of wet weather accidents (which indicates that the surface condition may be polished and lacking in skid resistance);
- ✓ The hierarchy of the road in terms of its usage and function, such as high volume bus routes or the presence of schools, hospitals etc. and
- ✓ Interfaces with other works programmes, such as local improvement schemes, utilities works or developer funded improvements that may include plans to resurface the road.

We have divided the budget between preventative maintenance schemes and structural based schemes in order to achieve a cost effective balance of preserving roads that have not yet fully deteriorated, whilst fixing those that have. We may deviate from the absolute 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. We also take into account any roads that are nominated for inclusion by Ward Councillors and/or Highways Inspectors.

We allocate a proportion of the annual highway maintenance budget to delivering “short section” route improvements. This is where a section of a route is in poor condition but the overall corridor is in a reasonable structural or surface condition.

We do not define a fixed programme for this “short section” budget each year, but use it to identify and repair lengths of road where there are a significant number of repairs required, and hence where a full resurfacing of the section would be faster and more effective than continual pothole repairs. This short section programme is also used for emergencies, such as where foul weather creates significant damage to a section of road and a localised repair would not be sufficient.

Footway Maintenance

Prioritisation is carried out using the results of condition surveys of the network. As with the carriageway-resurfacing programme, we take into account customer and Ward Councillor requests, although the core programme is based on an analytical assessment of condition and relative risk. The emerging programme is also checked against claims records from trips and falls as well as being reviewed to ensure there are no overlaps with planned improvement schemes or utilities works.

The short section programme (described above) is also used for footway maintenance where there is significant damage to a section of footway and/or a significant number of defects are identified and where a localised repair would not be sufficient.

Carriageway Treatments

Reconstruction:

Full depth reconstruction is expensive and because of the duration of the work can have network management implications. A significant number of Haringey’s unclassified roads require reconstruction with modern bound material to replace original fill material and water bound aggregates previously used as a sub base. This however, would have a significant cost implication and would concentrate the capital programme on a small number of roads to the detriment of maintaining the wider network. Reconstruction will therefore only be undertaken where serious foundation issues exist and on the greater trafficked roads.

Resurfacing:

The depth of resurfacing will depend on the condition and substructure of the road. Where possible planing off and resurfacing to 40mm will be undertaken, but because of the generally poor base layers on Haringey’s borough road network, 100mm is the norm.

Surface Applied Road Surfacing Systems:

Slurry sealing / micro-asphalt treatments may be considered, where failure is identified early and this form of intervention (assessed within the prioritisation model) is appropriate.

Materials:

A concrete asphalt is used on most roads. Hot Rolled Asphalt (HRA) is also used where appropriate.

Strategy for Dealing with Tar:

Coal tar was widely used as a binder in carriageway construction up until the mid-1980s, and exists within the lower layers of some of Haringey's roads. Tar is classified as carcinogenic due to its concentration of Polycyclic Aromatic Hydrocarbons and where it is found in high concentrations.

Core testing of potentially affected roads will be undertaken to determine tar presence and concentration and inform decisions on action to be taken.

Joint Maintenance:

For joint repairs to concrete roads, slurry seals will normally be used.

Footway Treatments

Artificial stone paving (ASP) is the preferred material for use on all borough road planned maintenance. Paving will be laid on appropriate foundations designed to meet the requirements of individual schemes. Fibre reinforced slabs will be used in appropriate locations.

However, there will be circumstances where bituminous asphalt may be used including where there are drainage considerations and where tree roots are creating a problem.

Where artificial stone paving is used in areas where vehicle overrun is anticipated, consideration will be given to an appropriate kerb edge treatment.

Specific lengths of footway requiring renewal will be treated rather than adopting a whole street approach. If it is unlikely that further sections will be renewed then treatment will match existing finishes.

The introduction of sustainable drainage systems (SuDS) will be considered where appropriate.

Vehicle Cross-overs

Subject to appropriate planning permission, opportunity will continue to be taken during footway schemes to invite applications for the construction of footway crossings at a discounted construction cost as part of a borough wide programme to deal with situations where residents drive across the footway illegally.

Contacting Haringey Council

You can now report a highway defect online on Haringey's website - <https://myaccount.haringey.gov.uk/>, this service does require online registration. You can alternatively call Frontline on 0208 489 1335 or also email frontline on Frontline@haringey.gov.uk.

To report dangerous occurrences or emergencies on the highway please call 0208 489 1335 (Monday to Friday from 9am to 5pm), and 0208 489 0000 outside of normal working hours.

If you prefer to write, please write to the following address: -

Frontline

River Park House

225 High Road

London

N22 8HQ