



Resources & Public Realm Scrutiny Committee

5 September 2018

Report from the Strategic Director of Regeneration and Environment

Highways Contract Performance

Wards Affected:	All
Key or Non-Key Decision:	Non-Key
Open or Part/Fully Exempt: (If exempt, please highlight relevant paragraph of Part 1, Schedule 12A of 1972 Local Government Act)	Open
No. of Appendices:	6
Background Papers:	Cabinet - LoHAC Lump Sum – Variation of Contract - July 2017
Contact Officer(s): (Name, Title, Contact Details)	<p>Jonathan Westell, Highways Contracts & Delivery Manager jonathan.westell@brent.gov.uk</p> <p>Tony Kennedy, Head of Service, Highways & Infrastructure tony.kennedy@brent.gov.uk</p> <p>Chris Whyte, Operational Director Environment Services chris.whyte@brent.gov.uk</p> <p>Amar Dave, Strategic Director Regeneration and Environment amar.dave@brent.gov.uk</p>

1.0 Purpose of the Report

- 1.1 Brent entered into an eight year contract on 1 April 2013, finishing on 31 March 2021, to provide a range of highway services, including reactive maintenance works, through the London Highways Alliance Contract (LoHAC). The appointed contractor is Conway Aecom.
- 1.2 This report outlines the contractual arrangements in place at present, the measures for auditing the contractor's performance and what the current performance levels are and how the contract is linking in a practical way to the Council's Highways Asset Management Plan.

2.0 Recommendation

- 2.1 That the Committee notes the contents of this report

3.0 Detail

3.1 Executive Summary

Brent entered into an eight year contract on 1st April 2013, finishing on 31st March 2021, to provide a range of highway services through the London Highways Alliance Contract (LoHAC). The contract is used to deliver safety inspections, planned & reactive maintenance, drainage, scheme implementation, highways structures inspections and maintenance.

A key feature of the contract is a lump sum “Find and Fix” mechanism where the contractor delivers the inspection service and rectifies high priority defects. A variation to the contract is being implemented to come out of this arrangement to improve consistency and responsiveness of service.

There is a suite of Performance Indicators which are monitored monthly and are tied in to the payment process so that the monthly amounts certified for payment are directly linked to performance. Auditing by Officers is carried out across all activities of the contract; the on gully cleansing has much improved but timeliness of medium priority repairs remains a concern

A range of repair types are being used in a targeted way as part of our highways asset management programme to improve the longevity of our roads and pavements and make limited resources go further.

3.2 Coverage of Highways Contract

The contract as a document is in eight volumes:

1. **Volume 0 – Invitation to Tender**
Instructions for tenderers (98 pages)
2. **Volume 1 – Framework Agreement**
Contractual clauses detailing how the contract is run (299 pages)
3. **Volume 2 – Service Information**
The contract specification (1149 pages)
4. **Volume 3 - Quality Submission**
Submitted by the contractor at tender stage, sets out how the contractor will approach service delivery. Used in tender evaluation (106 pages)
5. **Volume 4 - Schedule of Rates**
The unit rates of all the different items required for works orders (147 pages)
6. **Volume 5 - Strategic Labour Needs and Training Plan**
Used in tender evaluation (17 pages)
7. **Volume 6 - Equality and Supplier Diversity Submission**
Used in tender evaluation (31 pages)
8. **Volume 7 - Clarifications**
Questions asked and answered at tender stage on the interpretation of the contract, for reference (160 pages)

The contract is used to deliver the following highways works activities, discussed under these headings:

3.2.1 Highways Safety Inspections & Reactive Highway Maintenance

Highways Safety Inspections can be both scheduled and reactive. Reactive highway maintenance includes Emergency Call Outs; repair of potholes, pavement trips, broken bollards, etc.

3.2.2 Planned Highway Maintenance

Resurfacing of roads and pavements; maintenance of highway structures.

3.2.3 Drainage Works

Both scheduled and reactive Gully cleansing; also small drainage schemes

3.2.4 Scheme Implementation

Delivery of highway schemes such as road safety, traffic calming, CPZs, town centre refurbishments.

3.2.5 Highways Structures

Inspection and maintenance of the borough's bridges, culverts, footbridges and retaining walls.

The current range of services called off by Brent is detailed in Appendix 1; which also shows whether the services are provided on a cyclical, lump sum or "Task Order" (works order) basis.

3.2.1 Highways Safety Inspections & Reactive Maintenance

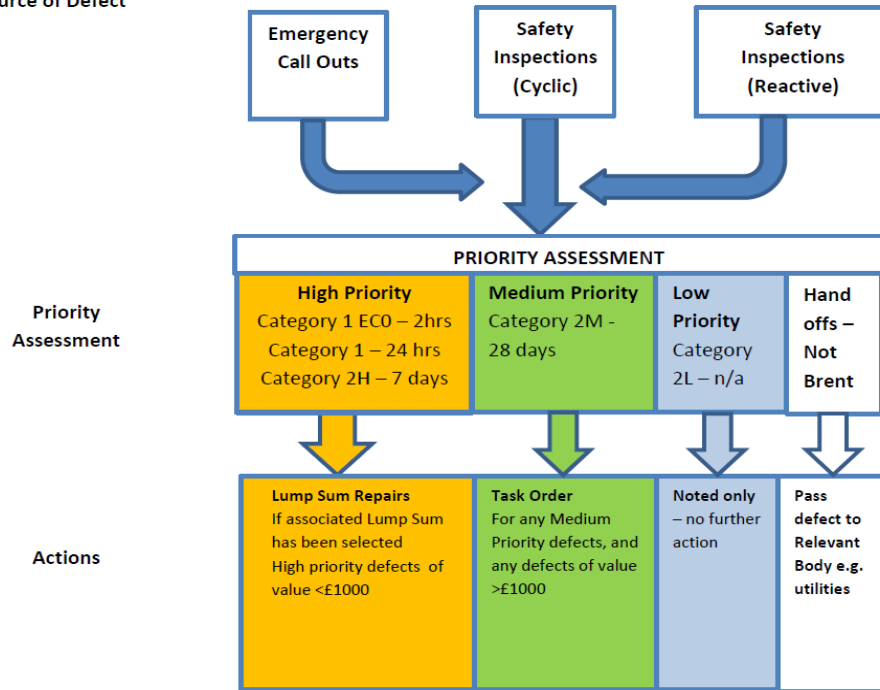
Under the London Highways Alliance Contract, the London Borough of Brent procured both cyclic and reactive safety inspection services, under a lump sum payment. Detail on how highway safety inspections are carried out can be found in Appendix 2.

A key feature of the contract is a "Find and Fix" mechanism where the contractor delivers the inspection service and rectifies defects identified as a result of the inspections, for defects that are under the value of £1,000 and are categorised as needing to be attended to within seven days or less, i.e. high priority defects:

- Road pavements
- Kerbs, footways and paved areas
- Traffic signs
- Road markings
- Road restraint systems
- Earthworks
- Street furniture

The diagram below represents how the Find and Fix process worked initially. Works are identified via one of three sources Emergency Call Outs; Cyclical Safety Inspections and Reactive Safety Inspections (e.g. from Customer Reports)

Source of Defect

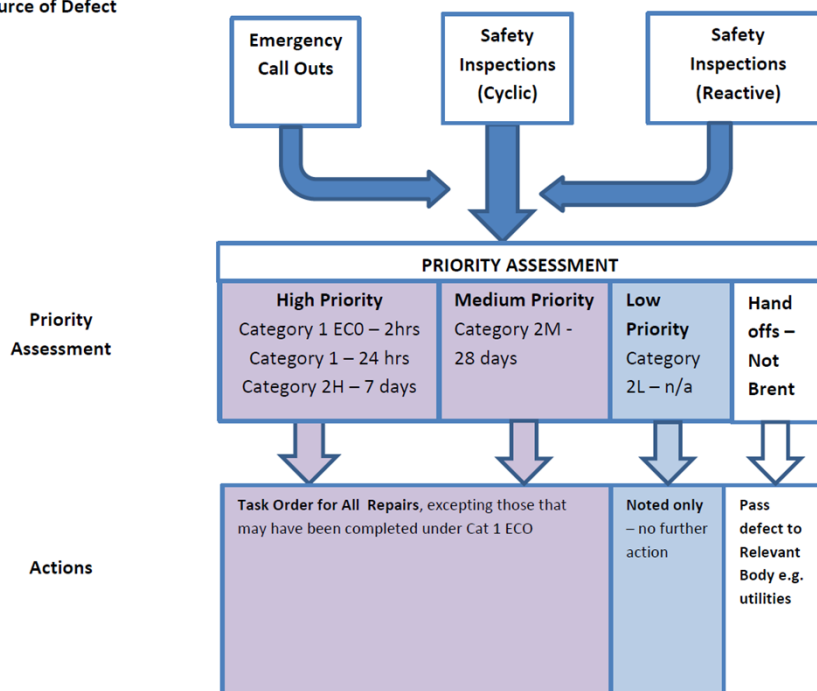


Officers regularly received comments from residents and members alike regarding the consistency and responsiveness of service when reporting defects on the public highway.

In order to overcome this, it was decided by Cabinet in July 2017 to bring the inspection regime in-house and pay for the services through the Schedule of Rates, rather than Lump Sum. This will provide officers with more control to choose where and when repairs are ordered and enables a more responsive approach to dealing with members' reports and ordering multiple repairs within a specified area. The overall budget for this work remains the same.

The revised process is below, where a task order is required for all Repairs, except those that may have been completed under Category 1 Emergency Call Out. Priority assessments will be done in-house rather than by the contractor.

Source of Defect



The average cost of a pothole under the contract is not easy to calculate as the Lump sums cover all kinds of highways defects (footway trips, broken kerbs etc) as well as potholes, and the numbers of defects rectified under the lump sums will vary from one month to the next depending on demand.

To give an idea an idea, each year the Asphalt Industry Alliance (AIA) commissions an independent survey of local authority highways departments in England and Wales. The 2018 Alarm Survey found that the average cost of filling a pothole on a reactive basis in London is £89 (in the rest of England, £74). For filling a pothole on a planned basis the figures become £56 and £49 respectively.

Variation of the Contract

Through negotiations with the contractor to date the following variation to move away from the existing Contract setup has been agreed and is to be implemented imminently:

a) *Cyclic & Reactive Inspections*

Remove the lump sums for Cyclic and Reactive Safety Inspections. Transfer two Cyclic Safety Inspectors plus one Reactive Safety Inspector from Conway Aecom to the London Borough of Brent via a TUPE process to allow the Highway Inspections to be carried out by the London Borough of Brent moving forward.

b) *High Priority (Cat 1 & Cat 2H) Repairs*

Remove the lump sum for Cat 1 & Cat 2H repairs. Use the Contract Schedule of Rates item coverage with a percentage (amount to be negotiated) uplift for works of seven days or less to cover for the inefficiencies of this type of work.

c) *Emergency Call Outs*

A small annual fee agreed to cover a nominal contribution of the total Operational Control Room (OCR) service costs plus a Schedule of Rates item per callout (2 hours duration) to cover plant, labour and consumables. Permanent materials are covered by a works order.

d) *Cyclic Gully Cleansing*

See the section below “Cyclic and Reactive Gully Cleansing”

3.2.2 Planned Highway Maintenance

Brent normally has a base-level programme of £3.5m of planned highway maintenance, plus any in-year enhancements as and when additional funding can be identified. Brent’s £3.5m capital budget is 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
- Highways Structures (Bridges, culverts, retaining walls etc)

The detailed 2018/19 Planned Highway Maintenance Programme can be found in Appendix 3.

3.2.3 Drainage Works

After addressing performance issues experienced during the first two years of the contract, cyclical gully cleansing is now operating very effectively; on site monitoring scores now regularly achieve 100%. The cost of this service is considered competitive in the current market and it is therefore recommended to keep cyclic maintenance a lump sum item, as it is providing good value and a reliable service.

Over the recent years we have gathered data by measuring the build-up of silt levels between cleanses. This data enables us to review the current cyclic programme and target locations where the build-up of silt levels is greatest, whilst reducing cleanses at locations where silt levels remain low. The savings identified through this work have been reinvested in the repair of defects.

Because the cyclical gully cleansing is working so much better now, the number of reactive gully cleanses required has fallen by around 65% since the start of the contract.

Small drainage schemes are also delivered under the contract; things such as replacement of gully grates and gully pots; CCTV surveys of suspected pipe blockages; renewal of blocked or broken drainage pipes where necessary.

3.2.4 Scheme Implementation

The highways contract is also used to implement all kinds of public realm schemes which every year involves building dozens of schemes under various headings

- CPZs;
- road safety schemes;
- traffic calming schemes
- bus priority schemes
- bus accessibility schemes
- cycle schemes
- Whole route / corridor schemes
- town centre regeneration schemes (e.g. Kingsbury)
- works in the boroughs parks (e.g. footways)
- Domestic and Industrial Vehicle Crossings

These can be funded from various sources e.g. the Local Implementation Plan (LIP) programme, S106 funding, CIL funding, along with other borough capital and revenue funding

3.2.5 Highway Structures

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.

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 | |

The Council's £76k revenue budget is distributed across numerous structures for routine cyclic maintenance as well as the 2018/19 Principal Inspection programme.

3.3 Performance Management & Contract Auditing

There is a suite of Performance Indicators (see Appendix 4) which are monitored monthly and are tied in to the payment process so that the monthly amounts certified for payment are directly linked to performance. Auditing by Officers is carried out across all activities of the contract:

3.3.1 Reactive Maintenance

Officers audit how the defect categorisation risk assessment is being applied to ensure consistency of application and to help prioritise further the 28 day category defects, or those >£1000, so that when budgets are oversubscribed priority defects can be identified and selected for repair. Audits of highway defect categorisation lead to the issue of contractual notices, where defects have been categorised as medium priority when officers think they should have been high priority. Most "miscategorised" defects have subsequently been rectified under the lump sum. Figures are as follows

Year	Miscategorised defects	Number Rectified
2015-16	1615	1615
2016-17	1081	1081
2017-18	392	279*

**the 113 outstanding are in commercial dispute.*

Before payments are certified, officers also check that work has been completed, and completed satisfactorily via photos stored on the Symology management system. Deductions to payments are retained until the work has been completed to an acceptable standard.

Every month feedback is given to the contractor in the form of a line by line analysis of how many repairs have been "failed" under auditing, and the causes for the failures. Trends of numbers and causes can be plotted over time (see Appendix 5 for an example).

Whilst there will always be some repairs that fail prematurely, officers' experience is that there are not many, and consequently our resources (which are limited) have not been allocated to carry out audits on repairs just before their "warranty" runs out. Those that have failed prematurely have been brought to the contractor's attention for remedial work. However, as an exercise, a number of pothole repairs have been checked and the result was that all of the 42 repairs checked are still holding up after 9-11 months.

3.3.2 Planned Maintenance and Scheme Delivery

Officers visit sites on a regular basis and where possible identify any problems as the work proceeds. It is better that defects are rectified as the work progresses rather than wait to the end, causing more disruption. Problems identified may relate to incorrect or sub-standard materials provided, or bad workmanship.

3.3.3 Gully Cleansing

"Blind" audits of streets covered by the cyclical gully cleansing are carried out; in other words the contractor is not told which streets are going to be audited. Remaining silt levels in gullies are checked to ensure that they have been recently been cleaned out.

Across the contract when the performance falls short, contractual Defect Notices are issued and monies are retained until either works are completed, or remedial works are carried out, as the case may be.

Performance Data (PIs) submitted by the contractor are also subject to scrutiny by officers for accuracy, and the figures are analysed and where possible agreed. Where agreement is not possible, Brent figures are also reported upwards to give a balanced view of performance. The salient results are the following

PPI SPI	PI No.	PI Title	Contract Target for "Green" Performance 17/18 *	Annual Average 15/16	Annual Average 16/17	Annual Average 17/18
PPI	1	Percentage of Cat 1 defects repaired on time	>=98%	92.2% (Red)	93.0% (Red)	94.0% (Red)
SPI	2	Percentage of Cat 2 defects repaired on time	>=98%	36.5% (Red)	67.0% (Red)	68.0% (Red)
SPI	3	Percentage of safety inspections completed on time	=100%	99.7% (Green)	100% (Green)	100% (Green)
PPI	5	Percentage of ECOs attended and appropriate action taken on time.	>=99%	97.1% (Amber)	99.0% (Green)	96.0% (Amber)
PPI	8	Delivery of Cyclic Activities to programme	>=93%	96.4% (Amber)	92.0% (Red)	99.0% (Green)

**Please note that under the continuous improvement aspect of the contract, PI targets are raised every year of the contract. 2017/18 thresholds are given for reference.*

Whereas the performance on scheduled safety inspections, delivery of cyclical activities (i.e. gully cleansing) and attendance on Emergency Call outs is good, completion of repairs on defects is slow.

3.4 Corporate Audits of the Management of the Contract

The internal management of the contract has been audited twice during the life of the contract. In both cases the audit assurance opinion was at the "substantial" level (Green). The audit work was carried out by Internal Audit which indicated that there was a basically sound system of internal control.

3.5 Asset Management

The planned highways maintenance programme is 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, delivers better value for money through adoption of a sensible and forward thinking maintenance plan. Practical measures we take to target scarce funding, so that we are choosing the right treatment at the right time, are delivered in the following programmes:

3.5.1 Preventative maintenance (*thin resurfacing*)

This 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.

3.5.2 Major resurfacing

This is required when deterioration has progressed further and so more extensive (and more expensive) repairs are necessary

3.5.3 Injection Patching

A successful pilot programme of injection patch repairs was carried out in autumn 2017. 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. In 2018/19 we are expanding our injection patching programme, and the results to date are given in Appendix 6. Pothole repairs done to 20th July are 1710 in total, at a rate of an average of 68 a day.

3.5.4 Crossover conversion programme

At some point in the past, the practice in Brent was that vehicle crossings were built with the pavement slabs carried on over the vehicle crossing. We find that slabs are damaged on a regular basis which is hazardous for pedestrians and is a drain on revenue maintenance budgets. We now systematically replace slabs across vehicle crossings with more durable concrete blocks, reducing the amount of cracked and broken slabs requiring repair.

3.5.5 Asphalt Pavements

Slabbed pavements are vulnerable to damage. In 2016 the policy decision was taken by Cabinet to change the default pavement material to asphalt. This helps make pavements more resilient and durable, and fit for purpose for the demands of today. Asphalt is more flexible than slabs and is less likely to crack and create trip hazards in the long term. It will also make our limited resources stretch further, meaning more pavements can be repaired each year, making the borough a safer, more accessible place to live.

3.5.6 Verge Protection

As part of the Improvements to the public realm programme, locations damaged by overrunning vehicles are identified and localised measures are installed to protect grass verges and pavements. Rather than install forests of bollards, which are themselves vulnerable to damage and can be a drain on resources to repair, double height kerbs are the preferred solution to reduce visual clutter avoid causing obstacles for grass cutting.

4.0 Financial Implications

- 4.1 A budget provision of £3.5m has been included within the current capital programme for Highways Main Programme works. 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
2018/19 Sub Total Brent Capital		3500
2018/19 TfL Funding for Principal Roads**		0
TOTAL 2018/19 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 The Head of Highways and Infrastructure proposes to implement the programme within available resources. Technical staff time (fees) will be charged to the capital schemes within the Highways main programme allocations. There should be no additional cost to the Council in implementing these schemes.
- 4.5 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.
- 4.6 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

- 4.7 The value of the London Highways Alliance Contract (LoHAC) is approx. £8m per annum. This represents the total value of all works delivered through this contract by Conway Aecom.

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 Equality Implications

- 6.1 The proposals in this report have been subject to screening and there are considered to be no diversity implications that require full assessment. The proposed variation of contract does not have different outcomes for people in terms of race, gender, age, sexuality or belief.
- 6.2 The priority given to defects is dependent on a probability and risk score to ensure defects with greatest risk to safety will be prioritise for repair.

7.0 Consultation with Ward Members and Stakeholders

- 7.1 The members of the Resources and Public Realm Scrutiny Committee have been consulted about the contents of this report.

Report sign off:

Amar Dave

Strategic Director of Regeneration & Environment

Appendix 1: Revised Selection of Services under the Contract

	Services	Cyclic Activity	Reactive Activity		Scheme Activity
		Lump Sum	Lump Sum	Task Order	Task Order
1*	Safety Inspections	No	No	n/a	n/a
3	Inspection of Highway Structures	n/a	n/a	Yes	Yes
4	Site Investigations and Surveys	n/a	No	Yes	Yes
5	Design Services	n/a	n/a	n/a	Yes
6*	Road Pavements (including minor repairs and resurfacing)	n/a	No	Yes	Yes
7*	Kerbs, Footways and Paved Areas	n/a	No	Yes	Yes
8*	Traffic Signs	No	No	Yes	Yes
9*	Road Markings	No	No	Yes	Yes
11	Fencing	n/a	No	Yes	Yes
12*	Road Restraint Systems (including pedestrian guard railing)	No	No	Yes	Yes
13	Drainage (excluding gully cleansing)	No	No	Yes	Yes
14*	Earthworks	n/a	No	Yes	Yes
15	Horticulture, Arboriculture, Landscaping and Ecology	No	No	No	Yes
17 *	Street Cleaning (including gully cleansing; excluding sweeping and litter picking)	Yes	No	Yes	n/a
18	Bridges and other Structures	No	No	Yes	Yes
20*	Street Furniture (excluding signs, lighting columns and pedestrian guard railing)	n/a	No	Yes	Yes
21	Winter Service	n/a	No	Yes	n/a
22*	Emergency Call-Out Service ⁽⁴⁾	n/a	Yes	Yes	n/a
23	Civil Engineering Support Works for Traffic Signals and Control Equipment	n/a	No	No	Yes
24	3rd Party Damage	n/a	No	n/a	n/a
25	Updating <i>Employer's</i> Asset Management System	Yes	n/a	n/a	n/a

*items varied by the provisions of the Deed of Variation

Appendix 2 – Highways Safety Inspections

Highway safety inspections can either be Scheduled Safety Inspections (all roads are inspected at a set frequency throughout the year) or Reactive Safety Inspections (i.e. in response to a report of a defect by a member of the public, a Member, or a member of staff).

It is a two stage process. Firstly the defect is compared to the Council's intervention levels to see whether it's severe enough to consider for repair; secondly a risk assessment is carried out to decide on a response time for a repair

1. What Constitutes a Repair

When carrying out a safety inspection, the following shall be classified as defects:

Carriageway

- A pothole 20mm or deeper over 100sqcm or more within 1.5m of the kerb or within a formally marked cycle lane
- A pothole 30mm or deeper over 100sqcm or more elsewhere
- Spalling of concrete 20mm or deeper over 400sqcm or more
- Crowning of 40mm or more over a 3m length
- A depression of 40mm or more within a 1m length or 25mm or more within a 300mm length
- Rutting of 40mm or more
- A gap or crack 20mm or wider, 40mm or deeper and 500mm or longer
- An oil or diesel spill over 1sqm
- Missing or defective anti-skid surfacing over 1sqm
- Standing water 10mm or deeper over 500mm in width adjacent to the kerb or 20mm or deeper over 1sqm or more elsewhere
- Debris, building materials, abandoned vehicles or other obstruction likely to create a hazard
- Inadequate signing or guarding of works

Pedestrian Crossing

- A trip of 20mm or more

Footway/Shared Path/Cycle Track

- A trip of 20mm or more
- A pothole 20mm or deeper over 100sqcm or more
- A rocking slab or block with 20mm or more movement
- A gap or crack 20mm or wider, 20mm or deeper and 200mm or longer
- Standing water 10mm or deeper over 1sqm or more
- Cellar or other access doors or vents likely to create a hazard
- Damaged, misaligned or defective street furniture likely to create a hazard
- Height clearance less than 2.5m to cycle path or cycle track below signs or overhanging trees or vegetation
- Height clearance less than 2.1m to footway below signs or overhanging trees or vegetation
- A tree base 20mm or more below footway level
- A damaged or defective tree grid likely to create a hazard
- Advertising, scaffolding, hoarding, building materials, vegetation or other obstruction likely to create a hazard
- Inadequate signing or guarding of works

Kerbing

- A unit dislodged by 50mm or more horizontally
- A unit sunk by 20mm or more compared to an adjacent unit
- A unit rocking with 20mm or more of movement
- A missing unit

Ironwork

- A broken or cracked cover likely to create a hazard
- A worn or polished cover likely to create a hazard
- A missing cover
- A rocking cover or frame likely to cause a hazard or noise nuisance
- Ironwork sunk or projecting by 20mm or more
- Fluid discharging and likely to create a health or safety hazard
- A missing gully grate
- A blocked gully likely to create a hazard
- A broken or cracked gully grate likely to create a hazard

Grass verge

- Rutting of 75mm or more
- Inadequate signing or guarding of works

Road Markings

- 30% or more missing, faded or worn over a 1m length

Traffic Signals, Lighting, Signs, Bollards, 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
- Exposed wiring
- An open or missing door protecting electrical apparatus
- A traffic signal lamp failure

Fencing, Safety Fencing and Barriers

- A damaged, misaligned or defective item likely to create a hazard
- A missing item likely to create a hazard

Trees and Vegetation

- Obstructing visibility of signs or sight lines
- Obstructing passage in use of the highway
- Dead, diseased or infected trees or branches

Highway Structures

- A damaged, misaligned, loose or defective item likely to create a hazard (eg expansion joint)
- Severe cracking or spalling of concrete
- Missing items or any evidence of tampering with security features
- Inadequate signing or guarding of works

Culverts

- An accumulation of rubbish, debris or any other material at the mouth of the culvert likely to create a flooding hazard

Pedestrian Subways

- Lighting damaged or not functioning
- Wall tiles missing or damaged
- A trip of 20mm or more
- A pothole 20mm or deeper over 100sqcm or more

- Damaged stair treads
- A gap or crack in the floor 20mm or wider, 20mm or deeper and 200mm or longer
- Standing water 10mm or deeper over 1sqm or more
- A handrail loose or missing.

In addition to the above, the inspector shall record anything else which is deemed to be creating, or is likely to create, a hazard to users of the Affected Property. The inspector shall also identify and record any requirement for reactive works associated with, for example, graffiti, animal carcasses, fly tipping or street lights burning during the day.

During safety inspections, all observed defects that create a risk to users shall be recorded and the level of response determined on the basis of risk assessment. The degree of deficiency in highway elements will be crucial in determining the nature and speed of response. The inspector shall make an on-site judgement taking into account the particular circumstances. For example, the degree of risk from a pothole depends upon not merely its depth but also its surface area and location in the carriageway or footway.

2. Risk Assessment

All defects identified from the list above shall be assessed for likely risk. All risks identified through this process shall be evaluated in terms of their significance, which means assessing the likely impact should the risk occur, and the probability of it actually happening.

The impact of a risk occurring shall be quantified on a scale of 1 to 4, assessed as follows:

- 1 little or negligible impact;
- 2 minor or low impact;
- 3 moderate impact;
- 4 major, high or serious impact.

The impact shall be quantified by assessing the extent of damage or injury likely to be caused should the risk become an incident. As the impact is likely to increase with increasing speed, the amount of traffic and type of road are clearly important considerations in the assessment, as is the vulnerability of the road user, e.g. cyclists.

The probability of a risk occurring shall be quantified on a scale of 1 to 5, assessed as follows:

- 1 very low probability;
- 2 low probability;
- 3 medium probability;
- 4 high probability;
- 5 very high probability.

The probability shall be quantified by assessing the likelihood of users, passing by or over the defect, encountering the risk. As the probability is likely to increase with increasing vehicular, cyclist or pedestrian flow, the network hierarchy and defect location are, consequently, important considerations in the assessment.

The risk factor for a particular risk is the product of the risk impact and the risk probability and is therefore in the range of 1 to 20. It is this factor which shall identify the overall seriousness of the risk and consequently the speed of response to remedy the defect. Accordingly, the category of the defect and the response time for dealing with it shall be determined by correlation with the risk factor, as follows:

Risk factor / Category of defect Response

16 or 20 Cat 1(ECO*) Attend and take appropriate action within 1 hour (for defects affecting the Strategic Route Network) or within 2 hours (for all other parts of the Affected Property)

8 to 15 Cat 1 Make safe or complete temporary or permanent repair within 24 hours

6 Cat 2H Complete permanent repair within 7 calendar days

3 to 5 Cat 2M Complete permanent repair within 28 calendar days

1 or 2 Cat 2L No response required

* Emergency Call Out

As part of the Cat 1(ECO) or Cat 1 response, where a permanent repair is not carried out initially, a permanent repair shall be carried out within 28 calendar days, unless agreed otherwise and the Contractor shall put in place a special inspection regime to ensure that temporary repairs or measures taken to make the defect safe remain effective until a permanent repair is made. The cost of temporary repair, making safe and the associated special inspection regime shall be deemed to be covered in the reactive works lump sum for the affected asset, or the item rates for permanent repair if permanent repair is instructed by a Task. If the Employer does not instruct permanent repair of the asset, or the defect relates to a 3rd party asset where the 3rd party undertakes the permanent repair, the Employer will reimburse the Contractor for carrying out a temporary repair, making safe and associated special inspections, in accordance with the contract.

Category 2 defects are those which, following an on-site risk assessment, are deemed not to represent an immediate or imminent hazard or risk of short term structural deterioration. The Cat 2H response requires the defect to be permanently repaired within 7 calendar days, and the Cat 2M response requires the defect to be permanently repaired within 28 calendar days. In neither case will a temporary repair be permitted.

In practice, all defects are inspected for inspection and will be categorised subject to the defect meeting intervention levels. Defects will be categorised as high, medium or low priority, with high priority defects repaired within seven days of the inspection. Medium priority defects will be subjected to a further officer assessment to confirm if immediate repair is required as this enables us to prioritise locations to ensure the maximum benefit will be achieved from the funding available for this work. Medium priority defects selected for repair will be completed within 28 days of the order being placed with the contractor. We will continue to monitor medium priority defects not selected for repair and review the position should they deteriorate further. Low priority defects are recorded but no further action is taken. The paint around defects usually indicates that the defect has already been inspected – it is not necessarily a sign that we are planning to carry out works.

Examples of Defect Classification

Defect Classification depends not only on the defect severity (depth of pothole, height of trip) but also on the location of the defect. So, a trip which only just reaches the 20mm investigation level and is out of the way (e.g. on a back street, right at the back of the pavement where no-one is likely to trip over it) is likely to be a low priority defect. The same trip located towards the middle of the pavement on a school route could be a medium priority defect, or a high priority defect if it was right outside a busy tube station or shopping centre.

The photos below are therefore given as guidance only

Pavement Trip - Priority

Low



Medium



High



Road Pothole - Priority

Low



Medium



High



Appendix 3 – Planned Highways Maintenance Programme 2018/19

Non-Principal B&C, Unclassified Borough Roads - Major and Preventative Maintenance Programmes 2018-19

Resurfacing Programme	Length (m)	Estimated Cost (£k)	Treatment	Ward
Ellesmere Road (Cullingworth Road to Park Avenue North)	353	71	Preventative	DNL
Cumberland Avenue	525	152	Major	STN
Torbay Road	312	52	Preventative	KIL
Clifford Gardens	427	81	Major	QPK
Cornwall Gardens	100	18	Major	WLG
Kendal Road	621	123	Preventative	DNL
Robson Avenue	351	81	Major	WLG
Claremont Road (Kilburn Lane to number 19)	110	26	Major	QPK
Pasture Close	143	21	Major	NPK
Wembley High Road (Ecclestone Place to Park Lane)	370	215	Major	WEM
The Mall		80	Joint Repairs	KEN/BAR
Total km	3.31	920		
Miles	2.07			
Total Area m2	28,776			
Reserve Schemes	Length (m)	Estimated Cost (£k)	Treatment	Ward
Rucklidge Avenue	449	88	Preventative	KGN
Fairfields Crescent	263	37	Preventative	FRY
Uxendon Crescent	288	46	Major	BAR
Lindsey Drive (Chapman Crescent to Roundabout Included)	279	47	Major	KEN
Uphill Drive	268	37	Major	FRY
Yewfield Road	239	42	Major	DNL
Total km	1.79	297		
Miles	1.12			
Total Area m2	12,860			

Major resurfacing of short sections 2018/19

Short Sections of Carriageway Resurfacing	Length (m)	Estimated Cost (£k)	Treatment	Ward
Engineers Way	85	78	Rhino Imprint	TOK
Further sites to be prioritised in-year	TBD	150		-

Renewal of Road Markings 2018-19

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

Major Footway Reconstruction 2018/19

Major Footway Reconstruction	Length (m)	Estimated Cost (£k)	Treatment	Ward
High Road Willesden (Strode Road to Colin Road)	954	331	Paving	WGN
Harvist Road (Kingswood Avenue to Peploe Road)	912	317	Paving	QPK
Pasture Close	296	62	Asphalt	NPK
Evelyn Avenue	740	161	Asphalt	QBY
Ashcombe Park	480	112	Asphalt/Brick	DNL
Grendon Gardens	740	207	Paving	BAR
Brookfield Crescent	382	72	Asphalt	KEN
Cairnfield Avenue (Neasden Lane to Ashcombe Park)	396	109	Asphalt/Brick	DNL
Valley Drive (Fryent Way to Waltham Avenue)	830	210	Asphalt/Brick	FRY
High Street Harlesden (Jubilee clock to Tavistock Road)	155	174	Rhino Imprint	HAR
Maintenance to Vehicle Crossings		50		
Total km	5.89	1805		
Miles	3.68			
Total Area m2	16,590			
Reserve Schemes	Length (m)	Estimated Cost (£k)	Treatment	Ward
Beverley Drive (Queensbury Station Parade to Wimborne Drive)	416	176	Asphalt/Brick	QBY
Burnside Crescent	480	71	Asphalt/Brick	ALP
District Road (Allendale Road to Maybank Open Space)	740	187	Asphalt/Brick	SUD
Campden Crescent	460	92	Asphalt	NPK
Sonia Gardens	440	65	Asphalt/Brick	DNL
Elthorne Way	178	30	Asphalt/Brick	FRY
Maybank Avenue (Greenbank Avenue to Rosemead Avenue)	720	175	Asphalt/Brick	SUD
Total km	3.02	620		
Miles	1.89			
Total Area m2	6,108			

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

Other footway improvements 2018/19

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

Public Realm improvements 2018/19

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

Appendix 4 - Performance Indicators

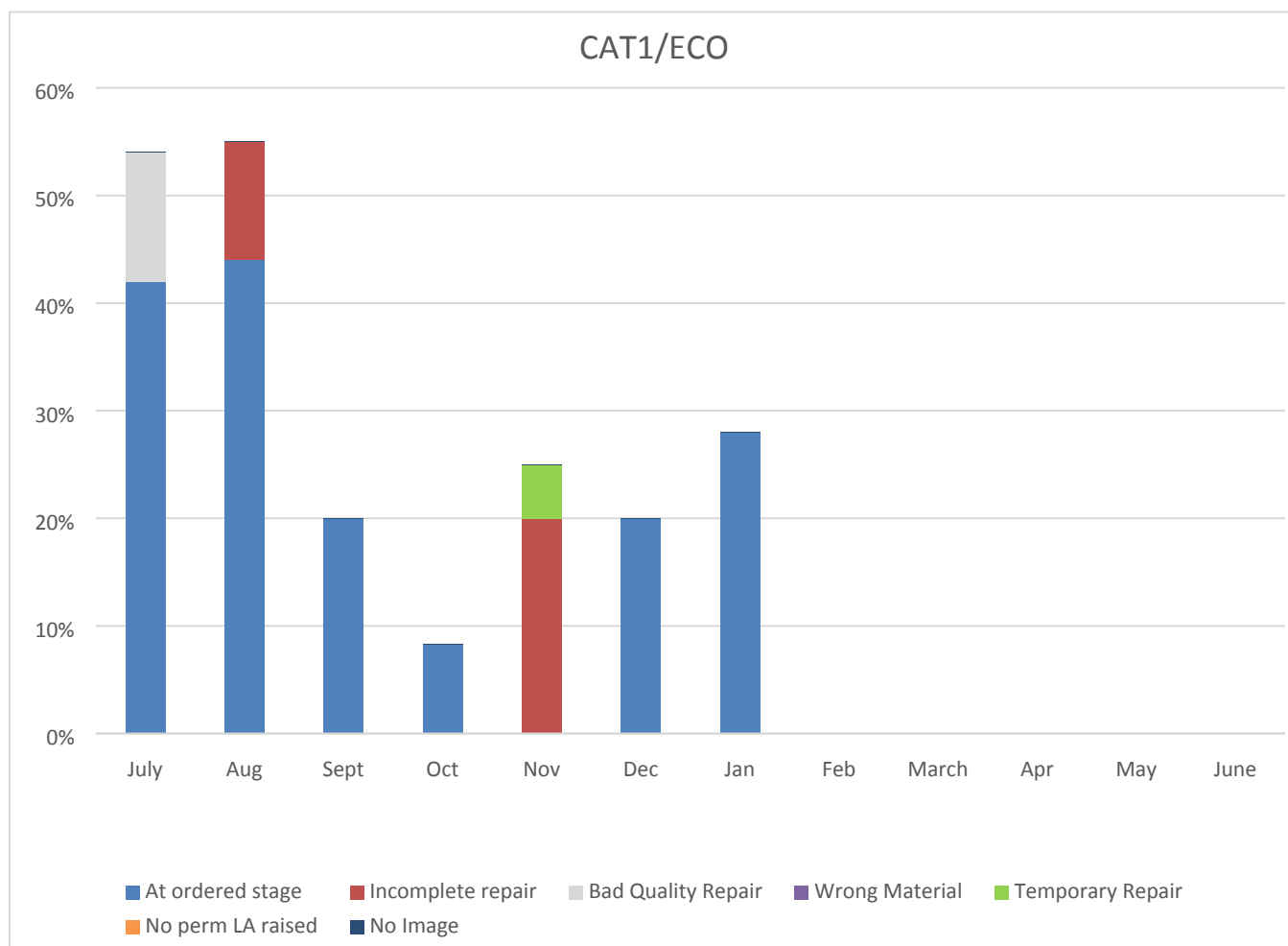
Indicator Number	Performance Theme (Outcome)	PI Title	Indicator Outcome
1	Public and Workforce kept Safe	Percentage of Cat 1 defects repaired on time	Ensure the network is safe for all forms of traffic.
5	Reduced Disruption on the Network	Percentage of ECO's attended and appropriate action taken on time	Reduce Disruption through appropriate choice of action in response to Cat 1 (ECO) defects.
8	Preventative Maintenance is effective	Delivery of Cyclic Activities to programme	Increased availability of the network through preventative maintenance.
16	Scheme Delivery is Effective	Percentage Schemes completed on time	Ensure that the programme is delivered swiftly and efficiently.
20	Contract Requirements fulfilled	Percentage Schemes/ Works where final application payment was submitted on time	Timely and efficient processing of financial payments on completion of all works.

Indicator Number	Performance Theme (Outcome)	PI Title	Indicator Outcome
2	Public and Workforce kept Safe	Percentage of Cat 2 defects repaired on time	Ensure the network is safe for all forms of traffic.
3	Public and Workforce kept Safe	Percentage of Safety Inspections completed on time	Ensure Safety defects are identified and appropriately categorised.
4	Public and Workforce kept Safe	Reduction in Injuries	To demonstrate the effectiveness of the Contractor's safety culture and processes by monitoring the AFR, AIR and other Safety related metrics.
6	Reduced Disruption on the Network	Percentage of precautionary salt treatments completed within required time	Safe carriageways, footways and cycleways free of winter weather related hazards.
7	Reduced Disruption on the Network	Percentage of works complying with the TMA requirements	Ensure the Employer meets their Network Management Duty.
9	Preventative Maintenance is effective	Completion of Ordered Works to timescale	To demonstrate effective planning and programming of works.
10	Preventative Maintenance is effective	Average number of days to repair Lighting Defects	Well maintained Lighting.
11	Preventative Maintenance is effective	Availability of Employer defined Tunnel Assets	Well maintained Tunnels.

Indicator Number	Performance Theme (Outcome)	PI Title	Indicator Outcome
12	Preventative Maintenance is effective	Percentage of Principal and General Inspection reports delivered and accepted on time for Bridges and Other Structures	Ensure timely and accurate reporting of Inspection Information.
13	Responsible attitude to Procurement Strategy	Percentage Construction and Demolition waste reused or recycled	Successful management of construction and demolition waste in order to reduce the use of raw materials, encourage recycling and reuse and minimise the waste taken to landfill sites to offer both environmental and economic benefits.
14	Responsible attitude to Procurement Strategy	Percentage Recycled and/or green products procured	Reduce consumption of new resources by procuring recycled and green construction materials and following the principles of sustainable procurement.
15	Responsible attitude to Procurement Strategy	Percentage of Contractor vehicles which meet the required Euro Standards	Reducing the environmental impact of the vehicle fleet.
17	Scheme Delivery is Effective	Percentage of Schemes where defects were rectified within required time	Minimum impact on the Customer after Scheme completion.
18	Scheme Delivery is Effective	Percentage of acceptable Health and Safety file information received within four weeks of scheme completion	Enable the Employer to fulfil its legislative requirement under CDM Regulations 2007.
19	Scheme Delivery is Effective	Average absolute variance between the Contractor's estimate and the Employer's instructed value for scheme works	Accurate forecasting of financial information.
21	Contract Requirements fulfilled	Percentage compliance to updating Employer asset inventory systems within Employer timescales	Employers Asset Management System is updated promptly and accurately.
22	Contract Requirements fulfilled	Percentage compliance to updating Employer asset inventory systems accurately	Update the inventory within the Employer's Asset Management System accurately after maintenance activity or scheme works.
23	Contract Requirements fulfilled	Percentage of estimates for Employer instructed works received within required timescales	Ensure timely and efficient processing of instructed works.
24	Contract Requirements fulfilled	Early Warning/Compensation Events Register	Timely response to Early Warning Notices and Compensation Events.

Indicator Number	Performance Theme (Outcome)	PI Title	Indicator Outcome
25	Improved Customer Satisfaction	Response to Complaints and Requests requiring Contractor action within contractual timescales	Improved public perception of the services provided.
26	Improved Customer Satisfaction	Third Party Claims against Contractor	Effective assistance in defence of third party claims

Appendix 5 – Example of plotting audit trends over time



The vertical axis shows the failure rate. Most of the failures are due to the work not being done i.e. still “at ordered stage”. In this example the other reasons are “Incomplete Repair” (e.g. road marking not reinstated) (Aug and Nov); “Bad Quality Repair” (July) “Temporary repair” (Nov) (defect closed as having a permanent repair done but only a temporary repair has been done). Over this period there were no fails due to “Wrong Material” “No Permanent LA Code Raised” (defect made safe but no order raised to follow up with permanent repair), “and “No image” (we require all photos of all complete repairs to be submitted before we will pay)

Appendix 6 – Results of injection Patching Programme

The programme started on 18th June and results are given to 20th July 2018. At time of writing the programme is still ongoing, due to complete on 10th August

Street	Date	Total Number of Potholes Repaired
CAMBRIDGE GARDENS	18/06/2018	24
CAMBRIDGE ROAD	18/06/2018	2
MONKS PARK	19/06/2018	27
MONKS PARK GARDENS	19/06/2018	25
BACON LANE	20/06/2018	3
MULGRAVE ROAD	20/06/2018	3
PRINCES AVENUE	20/06/2018	2
Chapman Crescent	21/06/2018	7
Hargood Close	21/06/2018	2
IMPERIAL WAY	21/06/2018	3
LINDSAY DRIVE	21/06/2018	30
CRAWFORD AVENUE	22/06/2018	24
ELMS LANE	22/06/2018	15
WYLD WAY	22/06/2018	8
BERKHAMSTED AVENUE	25/06/2018	1
DEREK AVENUE	25/06/2018	2
SYLVIA GARDENS	25/06/2018	11
WAVERLEY AVENUE	25/06/2018	2
DOYLE GARDENS	26/06/2018	24
UFFINGTON ROAD	26/06/2018	3
DICEY AVENUE	27/06/2018	1
KENWYN DRIVE	27/06/2018	17
OMAN AVENUE	27/06/2018	15
PURVES ROAD	27/06/2018	7
ST MARGARETS ROAD	27/06/2018	2
TRACEY AVENUE	27/06/2018	5
CULLINGWORTH ROAD	28/06/2018	21
KENDAL ROAD	28/06/2018	50
Park Side	28/06/2018	1
CAMPDEN CRESCENT	29/06/2018	15
Sutherland Court	29/06/2018	1
ABBOTTS DRIVE	02/07/2018	3
BRAEMAR AVENUE	02/07/2018	6
OAKINGTON AVENUE	02/07/2018	37
SPENCER ROAD	02/07/2018	1
DERWENT GARDENS	03/07/2018	2
HARROWDENE ROAD	03/07/2018	31
SOVEREIGN GROVE	03/07/2018	6
TREVELYAN CRESCENT	03/07/2018	8
WINDERMERE AVENUE	03/07/2018	11
PARK VIEW	04/07/2018	3
SLOUGH LANE	04/07/2018	16

SPENCER ROAD (2)	04/07/2018	11
VICTORIA AVENUE	04/07/2018	2
VIVIAN AVENUE	04/07/2018	15
WEMBLEY PARK DRIVE	04/07/2018	2
ELMSTEAD AVENUE	05/07/2018	74
HIGHFIELD AVENUE	05/07/2018	1
OXENPARK AVENUE	05/07/2018	1
RAVENSCROFT AVENUE	05/07/2018	10
ST ANDREWS AVENUE	05/07/2018	2
ABBEY AVENUE	06/07/2018	30
ABBEYDALE ROAD	06/07/2018	42
CHARTERHOUSE AVENUE	09/07/2018	1
JESMOND AVENUE	09/07/2018	8
SUDBURY COURT ROAD	09/07/2018	40
WOODSTOCK ROAD	09/07/2018	8
ASH GROVE	10/07/2018	5
CONWAY GARDENS	10/07/2018	7
GRASMERE AVENUE	10/07/2018	103
LULWORTH AVENUE	10/07/2018	5
MEDWAY GARDENS	10/07/2018	10
PRESTON ROAD	10/07/2018	14
ABBOTTS DRIVE (2)	11/07/2018	1
BLOCKLEY ROAD	11/07/2018	4
CAMPDEN CRESCENT (2)	11/07/2018	7
CHIPPENHAM AVENUE	11/07/2018	1
Greenford Road	11/07/2018	2
PAXFORD ROAD	11/07/2018	6
ST MICHAELS AVENUE	11/07/2018	1
THE FAIRWAY	11/07/2018	12
TUDOR COURT SOUTH	11/07/2018	30
VICTORIA COURT	11/07/2018	8
BRENT WAY	12/07/2018	5
CHALFONT AVENUE	12/07/2018	5
Greenford Road(2)	12/07/2018	7
MONK'S PARK	12/07/2018	30
PARK VIEW (2)	12/07/2018	2
BASSINGHAM ROAD	13/07/2018	40
COLYTON CLOSE	13/07/2018	10
EAGLE ROAD	13/07/2018	31
FARM AVENUE	13/07/2018	14
NEWLANDS CLOSE	13/07/2018	4
ALDBURY AVENUE	14/07/2018	15
BOVINGDON AVENUE	14/07/2018	17
ELMSIDE ROAD	14/07/2018	4
FIRST AVENUE	14/07/2018	8
FLAMSTED AVENUE	14/07/2018	8
NETTLEDEN AVENUE	14/07/2018	12
THIRD AVENUE	14/07/2018	2
TRING AVENUE	14/07/2018	4

DARTMOUTH ROAD	16/07/2018	76
LYDFORD ROAD	16/07/2018	1
TEIGNMOUTH ROAD	16/07/2018	19
WALM LANE	16/07/2018	1
ANSON ROAD	17/07/2018	36
Blandford Court	17/07/2018	2
BRONDESBURY PARK	17/07/2018	15
CHATSWORTH ROAD	17/07/2018	105
CHRISTCHURCH AVENUE	17/07/2018	19
CRICKLEWOOD BROADWAY	17/07/2018	1
DEERHURST ROAD	17/07/2018	4
ST GABRIELS ROAD	17/07/2018	29
BASING HILL	18/07/2018	31
CHRISTCHURCH AVENUE (2)	18/07/2018	20
Fernwood Avenue	18/07/2018	5
HARROW ROAD	18/07/2018	42
HILLVIEW AVENUE	18/07/2018	3
MOWBRAY ROAD	18/07/2018	3
NEWLANDS CLOSE	18/07/2018	1
AYLESBURY STREET	19/07/2018	31
CASTLETON AVENUE	19/07/2018	74
ELM WAY	19/07/2018	24
Rosslyn Cres	19/07/2018	6
VICARAGE WAY	19/07/2018	4

Total 1710
Average 14.8695652