

## London Borough of Enfield

### Environment and Climate Action Scrutiny Panel 9<sup>th</sup> December 2021

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#### Subject:

**Update on the Highways Capital Programme and how Effective the Programme has been.**

**Cabinet Member: Cllr Barnes**

**Executive Director: Sarah Cary**

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#### Purpose of Report

1. For discussion.

#### Relevance to the Council Plan

2. Enfield's highway (roads and pavements) network is probably the largest and most visible community asset for which Enfield is responsible. It is used daily by most people in Enfield, and keeping it in good condition is fundamental to the economic, social and environmental well-being of the community. A well-managed and maintained highway network is essential to:
  - to ensure the safety of our highway users, whether vehicular traffic or pedestrian traffic;
  - promote new growth and regeneration in the borough;
  - to maintain and improve customer satisfaction with the Council (previous Mori Polls have demonstrated that well maintained highways rank highly in what residents' feel is most important to them);
  - reduce the potential for complaints and for third party liability claims;
  - to shape the character and quality of a local area (eg by greening up areas, planting trees, incorporating sustainable drainage features etc);
  - to comply with our legal obligations as set out in the Highways Act where we have a 'duty to maintain' the highway.

#### Background

3. The borough of Enfield has one of the largest public highway networks in London comprising of the following:
  - 585km of roads;
  - Over 1,170 km of footways and cycleways;
  - Over 52km of footpaths, bridleways and byways;
  - Over 340 bridges and other structures;
  - Associated verges, shrub beds and flower beds;
  - 23,500 highway trees;
  - Highway drainage, including road gullies;
  - Over 19,400 unlit road signs and street nameplates;

- Other items of street furniture such as benches, historic features etc; and
  - 31,800 streetlights and illuminated signs maintained under a PFI contract.
- 4 Enfield's Highway Infrastructure Asset Management Plan (HIAMP) policy and strategy were approved by Cabinet in April 2015. These are high level documents which set out the Council's approach to the management of highway infrastructure assets through long term planning based on a sustained level of funding.
  - 5 A key recommendation from a previous Government review of 'potholes' is that local highway authorities should adopt the principle that 'prevention is better than cure' in determining the balance between structural, preventative and reactive maintenance activities in order to improve the resilience of the highway network and minimise the occurrence of potholes in the future. Enfield's Highway Maintenance Plan supports this approach and sets out the arrangements for maintaining carriageways and footways based on a sustainable whole life approach to design, specification and methods. It identifies the key elements of reactive maintenance (eg repairing defects), routine maintenance (eg. cyclic activities such as gully cleaning to maintain serviceability) and programmed maintenance (eg. more extensive treatments that have a greater longer term benefit to extend asset life, such as resurfacing). This approach is applicable to all asset groups in the above list and not just carriageways. A sustained level of capital investment is therefore essential to support this approach.
  - 6 The Council has been providing capital funding for highway maintenance since at least 2006/07 and has included indicative amounts for future years in its 10-year capital programme. Once the allocation is approved by full Council in February/March of each year, approval is then sought from the relevant Cabinet Member to allocate funding into work streams and for individual schemes within those programmes. The approved allocations for 2020/21 are shown in the table below, which is an extract from the Delegated Authority Report.

Item Description	Allocation (£)
Highways and Street Scene	
Carriageways- Renewal / Resurfacing Programme	2,425,000
Footways – Renewal / Resurfacing Programme	1,275,000
Highway Defect Repairs	1,967,500
Bridge Maintenance	350,000
Bridge Renewal Projects - Feasibility	150,000
Bridge Schemes	1,000,000
Watercourses	150,000
Verge and Shrub Beds	25,000
Highway Trees	300,000
Street Nameplates	20,000
Minor Highway Improvements	110,000
Playgrounds and Parks Infrastructure	200,000
<b>Total Highways and Street Scene</b>	<b>7,972,500</b>

## **Main Considerations for the Panel**

### General:

- 7 This year's capital programme for highways and street scene will enable over 10km (6 miles) of roads to be resurfaced, over 7km (4 miles) of pavements to be renewed and an additional 18,000 individual smaller defective areas on the highway network to be repaired as part of Enfield's overall highway maintenance programme. Approximately 630 new street trees will be planted, some of which will replace previously removed dead and decaying trees giving a net gain of over 350 established street trees. The funding also includes several smaller bridge maintenance schemes. Funding is also allocated to continue the programme of constructing sustainable drainage schemes, including the completion of the Albany Park river restoration project, rain gardens and wetlands. Details of the larger programmes are provided below.

### Carriageways:

- 8 Resurfacing/Renewal schemes are an essential part of highway asset management as they are based on a properly planned and programmed approach enabling the Council to prioritise funding to treat the highest priority locations first. The programme also includes 'partial' resurfacing schemes, ie using appropriate treatments at specific locations or short sections of resurfacing in order to target the worst areas of carriageway where treatment of the whole length of a longer road cannot be justified. This allows a cost-effective approach to be taken, based on sound asset management principles, whereby specific defective lengths of carriageways are targeted.
- 9 The allocation of £2.425million allows for approximately 10km of carriageways to be resurfaced. This represents only 2% of the borough's road network and, on this basis, each road on average, would only be re-surfaced every 50 years. This is less than the average for London boroughs reported in the latest London-wide roads survey as being every 36 years and much less than the frequency of resurfacing normally recognised as being required by the highway maintenance industry, i.e. roads need to be resurfaced every 20 years or so. It is therefore crucial to maximise the value of funding that is made available for road maintenance.

Appendix 1 shows the status of this year's programme.

### Footways

- 10 The allocation of £1.275m allows for approximately 7km of footways to be re-laid. This represents less than 1% of the borough's footway network and, on this basis, it would take over 100 years to relay every footway on a rolling programme. In order to maximise whole life costs, Enfield's

Highway Maintenance Plan specifies the use of asphalt rather than paving slabs for most footways apart from shopping centres etc. This form of construction is more resilient to being damaged by vehicle over-runs and leads to lower on-going maintenance costs. Unfortunately, Enfield still has a high proportion of paved footways which are broken and in a poor condition, leading to a high demand on this budget.

Appendix 2 shows the status of this year's programme.

### Bridges

- 11 The Code of Bridge Maintenance Management sets out standards for maintaining highway structures based on sound asset management principles of providing desired levels of service, e.g. safety and reliability. Officers inspect Enfield's bridges on a cyclic basis and the results are used to prioritise maintenance activities. This year, small scale maintenance works are being undertaken at 10 bridges, funded from the allocation of £350k. These were identified in the portfolio report and include activities such as repairs to concrete beams and bridge decks, repairing brick parapets and re-painting steelwork
- 12 In 2019 officers identified 29 bridges as requiring more significant works over the next few years to ensure their longevity. Initial risk-based studies have been undertaken on these structures with further, more detailed feasibility studies being undertaken to determine the most appropriate way forward. £1m was allocated in 2021/22 to start this work and two bridges, namely Melville Gardens over Pymmes Brook and Powys Lane over Pymmes Brook have been identified for more comprehensive maintenance works and complete re-waterproofing of the bridge decks during 2021/22.

### Measures taken to ensure effective delivery of the programme

- 13 Effective delivery of the overall programme depends on various issues such as:
  - Prioritisation of works – limited funding means that work must be undertaken on assets that achieve the maximum benefit. Priorities for works to all asset groups are therefore based on regular inspections and take a risk-based approach incorporating condition/deterioration and usage of the asset. Often other criteria are taken into account such as social and economic pressures and benefits.
  - Specification and designs are crucial to ensure maximum benefit from the Council's investment. Officers keep abreast of the latest industry best practices to ensure use of the most up to date techniques. Examples include recycling road materials in-situ and low temperature asphalts.
  - Sustainability issues are at the forefront of the highway maintenance industry with much thought being given to maximising the life of products, minimising raw materials and low-carbon techniques.
  - Works programmes are delivered using term contracts with experienced contractors, which are procured in accordance with the Council's Contract Procedure Rules. Term contracts are based on tendered

schedules of rates which negate the need to tender each scheme and also enable collaborative relationships to be developed allowing the contractor to contribute to developing the best solution.

- All works on the highway are co-ordinated with the Council's Streetworks Team in order to plan works to minimise disruption to road users and members of the public as far as practicable. The borough's highway maintenance activities need to be balanced alongside those of utility companies, which create a huge pressure on the availability of the highway network and often means that works need to be re-programmed around each other.

#### Measures to assess the effectiveness of the programme

14 The following considerations may provide an indication on the level of effectiveness of the Council's capital programme for highway maintenance, however many of these are subjective rather than scientific.

- The level of customer satisfaction and/or complaints about the borough's highway network provides an indication of whether the Council's investment in highway maintenance is effective. The Council does receive reports of potholes and paving trips via the Council's web-based report-it function. These are inspected by officers and, where they exceed the Council's intervention levels, repairs are undertaken. The current highway maintenance term contractor is performing well, and we receive few complaints that repairs are not undertaken once reported. Where officers receive complaints about roads and pavements being in poor condition, these are inspected and works prioritised for potential inclusion in future years' programmes. Unfortunately, the level of capital funding does not meet the level of demand to deal with all requests.
- Condition surveys are often used to establish the condition of individual roads and pavements, and of the overall network as a whole. These are expensive to perform and are dependent of the level of confidence in the 'accuracy' and 'repeatability' of surveyors' assessments to provide any meaningful trend analysis. The last detailed condition survey of the whole of Enfield's road network was undertaken by an accredited consultant in 2015. This has not been repeated due to the high cost, however, Enfield has been pioneering a new video survey technique with a specialist consultant using Artificial Intelligence (AI) to allocate a condition score to each length of road. This is still fairly early in its development but other authorities, including TfL, are also starting to use the technique. This allows video footage to be captured using the Council's fleet such as refuse vehicles and will provide a much lower cost option for gathering condition information that can be used to compare the condition from one year to the next. In addition, the Council's team of Highway Officers undertake regular safety inspections at pre-determined intervals, which are used to identify and instruct the repair of safety defects.
- Planned maintenance programmes, such as resurfacing roads and renewing pavements provide better value for money than repairing individual potholes or paving trips. At the start of the previous term contract, approximately 8 years ago, officers were instructing between

2,000 and 2,500 safety defect repairs per month. Nowadays, officers instruct up to 1,500 defect repairs per month using the same intervention criteria. This suggests that Enfield's roads and pavements are in a better condition than they were 8 years ago.

- Enfield's highway maintenance team works closely with the Council's insurance team to deal with third party claims arising from accidents and injuries on roads and pavements. The insurance team has previously advised that Enfield receives relative few claims relating to potholes or paving trips. Most claims arise from tree roots spreading across pavements which often presents a difficult management issue to achieve an appropriate balance of maintaining pavements and preserving trees.

In summary, the effectiveness of the Council's highway maintenance programme relies on a sustained and appropriate level of capital funding so that long-term asset management techniques can be properly planned rather than short-term reactive repairs. Appropriate highway asset management techniques must be used to ensure value for money and to maximise customer satisfaction.

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## **Appendices**

**Appendix 1 – 2021/22 Carriageway  
Carriageways Programme 2021/22**

**Summary to 22/11/21**

**Main Resurfacing Schemes completed – 23 of 26**

**Total Area – 60,641sq.m \***

**Total Length – 8.19km \*\***

**Reserve Schemes Complete – 3 of 5**

**Total Area – 4550sq.m**

**Total Length – 0.61km**

**Partial Resurfacing Schemes completed – 18 of 26**

**Total Area – 18,266sq.m**

**Total Length – 2.47km**

**Overall Area Completed – 83,457sq.m**

**Overall Length Completed - 11.28km**

*(\*Areas taken from original drawings actual areas may differ slightly)*

*(\*\* Length = Area / Average Road width (7.4m))*

**Table 1: Proposed Schemes**

Road Name	Extent (Whole road unless otherwise stated)	Area (m2)	Ward	Progress
Churchbury Road EN1		1475	Town	Completed 30/07/21

<b>Lowden Road N9</b>		<b>1916</b>	<b>Lower Edmonton</b>	<b>Completed 20/07/21</b>
<b>Queen Annes Gardens EN1</b>		<b>2097</b>	<b>Bush Hill Park</b>	<b>Completed 29/06/21</b>
<b>Windsor Road N13</b>		<b>1924</b>	<b>Palmers Green</b>	<b>Completed 09/07/21</b>
<b>Oaktree Avenue N13</b>		<b>1280</b>	<b>Palmers Green</b>	<b>Programmed 28/02/22</b>
<b>Berkshire Gardens N13</b>		<b>4057</b>	<b>Bowes</b>	<b>Completed 11/08/21</b>
<b>Kelvin Avenue N13</b>		<b>1902</b>	<b>Bowes</b>	<b>Completed 06/08/21</b>
<b>Bycullah Road EN2</b>	<b>The Ridgeway to Chase Green Ave</b>	<b>3500</b>	<b>Highlands</b>	<b>Completed 16/06/21</b>
<b>River Way N13</b>	<b>Hazelwood Lane to Lodge Drive</b>	<b>1530</b>	<b>Palmers Green</b>	<b>Completed 07/10/21</b>
<b>The Grove N13</b>	<b>Hazelwood Lane to Lodge Drive</b>	<b>1230</b>	<b>Palmers Green</b>	<b>Completed 06/10/21</b>
<b>The Rise N13</b>		<b>1000</b>	<b>Palmers Green</b>	<b>Programmed 02/03/21</b>
<b>Palmers Road N11</b>	<b>Bowes Road to Springfield Road</b>	<b>1500</b>	<b>Southgate Green</b>	<b>Completed 03/08/21</b>
<b>Willow Road EN1</b>	<b>Carterhatch Lane to Tenniswood Rd</b>	<b>3800</b>	<b>Town</b>	<b>Completed 28/07/21</b>
<b>Ivy Road N14</b>		<b>2100</b>	<b>Southgate</b>	<b>Completed 07/07/21</b>
<b>* Meridian Way N9</b>	<b>Phase 1 - Morson Rd (Sth) to Lee Valley Athletics Centre</b>	<b>6450</b>	<b>Jubilee</b>	<b>Completed 09/09/21</b>
<b>* Meridian Way N9</b>	<b>Phase 2 – Lee Valley Athletics Centre South</b>	<b>2000</b>	<b>Jubilee</b>	<b>Programmed 10/03/22</b>
<b>Southbury Road EN1</b>	<b>Crown Road to Swansea Road</b>	<b>2800</b>	<b>Southbury</b>	<b>Completed 14/09/21</b>
<b>Trinity Avenue EN1</b>	<b>A10 to Ladbroke Road</b>	<b>2650</b>	<b>Bush Hill Park</b>	<b>Completed 24/06/21</b>



Bramley Road N14	Reservoir Road to Cat Hill roundabout	5600	Cockfosters	Completed 10/09/21
Southbury Road EN1	A10 to Baird Road	2700	Southbury	Completed 23/07/21
Bullsmoor Lane EN1	A10 to Lackmore Road	2550	Enfield Lock	Completed 16/09/21
Stagg Hill EN4	Waggon Road to Plumridge Farm Entrance	2850	Cockfosters	Completed 01/04/21
Parkgate Crescent En4	No.3 – No.63	3460	Cockfosters	Completed 10/06/21
Moffat Road N11		1150	Bowes	Completed 04/08/21
Devonshire Road N13	Aldermans Hill-No.3, 13-25, 41-65 & 93-Green Lanes	1800	Palmers Green	Completed 16/08/21
Pennington Drive N21	Tresilian Avenue to Champneys Court	1600	Southgate	Completed 05/07/21
<ul style="list-style-type: none"> <li>* Works at Meridian Way originally funded by Borough Capital. Subsequent funding awarded by TfI for this work has allowed additional schemes to be completed off of this years reserve list</li> </ul>				
<b>Partial Resurfacing</b>				
Whitewebbs Lane Patching		800	Chase	Completed 04/06/21
Stagg Hill	Patch adjacent to Gas compound	480	Cockfosters	Completed 09/06/21
Edington Road		232	Enfield Highway	Completed 16/06/21
Borden Avenue	Village Rd to Sittingbourne Ave	1080	Grange	Completed 17/06/21
Meadway	No.45 to No.51	500	Southgate	Completed 18/06/21
Beaconsfield Road	Ordnance Rd to Rotherfield Rd	1270	Enfield Lock	Completed 21/06/21
Medcalf Road	No. 68 to dead end	570	Enfield Lock	Completed 22/06/21

Church Street EN2	Chase Side to Gentlemans Row	980	Town	Completed 09/07/21
Newsholme Drive	No. 15 to Highlands Ave	1330	Southgate	Completed 01/07/21
Laburnum Avenue	Hawthorne Wy to Northern Ave	810	Edmonton Green	Completed 19/07/21
Downes Court	Hoppers Rd to Woodland Way	350	Winchmore Hill	Completed 21/07/21
Carterhatch Lane	David Lloyds to Donkey La	1274	Southbury	Completed 09/09/21
Town Road	4No. Patches	1550	Lower Edmonton	Completed 27/08/21
Hoppers Road	Bourne Hill to College Road	2140	Winchmore Hill	Completed 27/10/21
Chalkwell Park Avenue	Patching	530	Grange	Completed 29/10/21
Church Hill	Wades Hill to Denleigh Gardens	1350	Winchmore Hill	Completed 02/11/21
Bridport Road	55 Gloucester Rd to 59/75 Bridport Rd	700	Upper Edmonton	Completed 03/11/21
Brownlow Road	Goring Rd to No. 123	2320	Bowes	Completed 05/11/21
Church St N9	Bury St West to Rowantree Rd	3500	Bush Hill Park	Programmed 28/02/22
Green Street	No.100-No.106 & junction of Westmoor Road.	450	Enfield Highway	Programmed 06/12/21
Inverforth Road	Station Road to No.1	210	Southgate Green	Programmed 07/12/21
Alma Road	Avondale Crescent to No. 417	220	Ponders End	Programmed 08/12/21
Clive Road	Southbury Road to Clive Way	600	Southbury	Programmed 04/03/22
Haselbury Road	Church Street to Northern Ave	2930	Haselbury	Programmed 08/03/22

<b>Windmill Hill</b>	<b>Railway Bridge to No.63</b>	<b>1520</b>	<b>Highlands</b>	<b>Programmed 18/03/22</b>
<b>Crown Road</b>	<b>Road Slab Reconstruction</b>	<b>180</b>	<b>Southbury</b>	<b>Programmed 07/03/22</b>
<b>TOTAL</b>				

**Table 2: Reserve Schemes 2021/22**

<b>Road Name</b>	<b>Extent (Whole road unless otherwise stated)</b>	<b>Area (m2)</b>	<b>Ward</b>	<b>Progress</b>
<b>Cannon Hill N14</b>		<b>5000</b>	<b>Southgate Green</b>	<b>Programmed 14/03/22</b>
<b>Hoppers Road N21</b>	<b>Fernleigh Rd – Compton Rd</b>	<b>3400</b>	<b>Winchmore Hill</b>	
<b>Hoppers Road N21</b>	<b>Stonnard to Fernleigh</b>	<b>4300</b>	<b>Winchmore Hill</b>	
<b>Buckingham Close EN1</b>		<b>910</b>	<b>Town</b>	
<b>Sandringham Close EN1</b>		<b>1050</b>	<b>Town</b>	
<b>York Road N21</b>		<b>1100</b>	<b>Bush Hill Park</b>	<b>Completed 30/06/21</b>
<b>Ashley Road EN3</b>		<b>230</b>	<b>Enfield Highway</b>	
<b>Bouvier Road</b>		<b>2000</b>	<b>Turkey Street</b>	
<b>Cockfosters Road</b>	<b>Cat Hill to Chalk Lane</b>	<b>7100</b>	<b>Cockfosters</b>	

Cat Hill roundabout		1600	Cockfosters	Completed 25/08/21
Montagu Road	Conduit Lane to Swathling Close	1850	Edmonton Green	Completed 11/06/21
Worlds End Lane	Tresilian Ave to Lonsdale Dri	2750	Highlands	Programmed 17/02/22
Minchenden Crescent	Chandos Ave to Arnos Grove	3370	Southgate Green	
Adlington Close		1430	Upper Edmonton	
Broadway Mews		670	Winchmore Hill	
Clifton Gardens		1800	Highlands	
Chiltern Dene		950	Highlands	
St Paul's Rise		1700	Bowes	
Walsingham Road		2620	Grange	
Picketts Lock Lane	No.26a to Eastern end	4000	Jubilee	
Doveridge Gardens		1150	Palmers Green	
The Chine	Southern Extents (The Grangeway to Old Park Ridings)	2040	Grange	
Westbury Road		1325	Bowes	
Illingworth Way		725	Bush Hill Park	
Derwent road		4170	Winchmore Hill	
Aldbury Mews		1000	Bush Hill Park	
Rosemary Avenue N9		1430	Lower Edmonton	

<b>Exeter Road N9</b>	<b>Monmouth Rd – Bounces Rd</b>	<b>1860</b>	<b>Lower Edmonton</b>	
<b>Waterfall Close</b>		<b>400</b>	<b>Southgate Green</b>	
<b>Wilbury way</b>	<b>Pentyre Avenue to Bull Lane</b>	<b>5910</b>	<b>Upper Edmonton</b>	
<b>Gordon Hill</b>		<b>4025</b>	<b>Town</b>	
<b>Myddleton Avenue</b>		<b>3600</b>	<b>Town</b>	
<b>TOTAL</b>				

## Appendix 2 – Progress to date on 2021/22 Footway Programme

Road Name	Extent	Area (m2)	Status	% Complete		No. of Dropped Kerb Applications
A1010 Hertford Rd EN3	Wickham Close to No.2 Tyberry Rd – West Side	115	Programmed			0
A1010 High St Hertford Rd EN3	No.394 High St to No.30 Hertford Rd – West Side	525	Programmed			0
Addison Road EN3	The Sunny Rd to Nursery Close – North Side	740	Complete	100.00%	740	16
	The Sunny Rd to Nursery Gardens – South Side					
Baker Street EN1	No.103a to 119 – East Side	300	Programmed			0
Borden Avenue EN1	Faversham Av to Sittingbourne Ave – Both Sides	590	Complete	100.00%	590	6
Bounces Road N9	Exeter Rd to Cornwallis Rd – South Side	800	Complete	100.00%	800	0
Carterhatch Lane EN1	Myddelton Ave to Russell Rd – Both Sides	830	Complete	100.00%	830	17
Cowper Gardens N14	The Fairway to No.47 – Both Sides	355	Complete	100.00%	355	0
Ecclesbourne Gardens N13	Oakthorpe Rd to No.68 & 71 – Both Sides	360	Programmed			4
Edington Road EN3	Entire Road	225	Complete	100.00%	225	3
Elmscott Gardens N21	Entire Road	525	On Site	95.00%	498.75	3
Enfield Road - EN2	Service Road - No.16 to No.80 – South Side	230	Programmed			0
Fox Lane - N14	Old Park Rd to Grovelands Rd – Both Sides	580	Programmed			0
Galliard Rd N9	No.10 to No.36 – East Side	300	Complete	100.00%	300	3
Holly Hill N21	Entire Road	995	On Site	5.00%	49.75	14
Leighton Road EN1	Main Avenue to No.91 – Both Sides	1230	Complete	100.00%	1230	8
Nelson Road EN3	No.15 to Falcon Road – West Side	210	Complete	100.00%	210	0
Queen Elizabeth Drive N14	No.80 to No.106 – Both Sides	885	On Site	90.00%	796.5	6
Riley Road EN3	Entire Road	710	Programmed			0
Rosemary Avenue EN2	Entire Road	1055	Complete	100.00%	1055	0
Station Road N21	Radcliffe Road to Ringwood Way – North Side	400	Complete	100.00%	400	1
Tottenham Road N13	No.198 to No.234 – South Side	640	Complete	100.00%	640	3
Bush Hill N21	Opp. No.5 to Opp. No.23	380	Programmed			0
Greenmoor Link	Entire Road	285	Programmed			0
Glenloch Rd	No.69 to Cedar Ave- Both sides	365	Programmed			0
		Sqm	13630		8720	84
		km	7.57		4.84	
	Total savings made by residents, having a dropped kerb constructed during renewal works, to date this year is:					£15,754.20
	Have completed 12 out of 25 schemes with a further 3 currently on site.					