



Friday, 24 January 2020

Dear Sir/Madam

A meeting of the Environment and Climate Change Committee will be held on Monday, 3 February 2020 in the Council Chamber, Council Offices, Foster Avenue, Beeston NG9 1ABAB, commencing at 7.00 pm.

Should you require advice on declaring an interest in any item on the agenda, please contact Legal Services at your earliest convenience.

Yours faithfully

Chief Executive

To Councillors: L A Ball BEM  
R H Darby  
S Easom  
L Fletcher  
T Hallam  
R I Jackson  
P Lally

R D MacRae  
G Marshall  
P Roberts-Thomson  
H E Skinner (Chair)  
D K Watts (Vice-Chair)  
R D Willimott

## A G E N D A

1. APOLOGIES

To receive any apologies and notification of substitutes.

2. DECLARATIONS OF INTEREST

Members are requested to declare the existence and nature of any disclosable pecuniary interest and/or other interest in any item on the agenda.

3. MINUTES

(Pages 1 - 2)

To approve the minutes of the previous meeting held on 25 November 2019.

4. BUSINESS PLANS AND FINANCIAL ESTIMATES 2019/20  
- 2021/22 - ENVIRONMENT (Pages 3 - 50)  
  
To report progress against outcome targets identified in the Environment Business Plan, linked to Corporate Plan priorities and objectives, and to provide an update as to the latest key performance indicators therein.
  
5. PRIDE IN PARKS UPDATE (Pages 51 - 56)  
  
To update members on the Pride in Parks initiative.
  
6. CLEAN AND GREEN UPDATE (Pages 57 - 62)  
  
To update Members on the progress of the 'Clean and Green' initiative.
  
7. BROXTOWE PARKS STANDARD (Pages 63 - 68)  
  
To update members on the outcome of the latest consultation and site assessments relating to the Broxtowe Parks Standard.
  
8. AIR QUALITY STATUS REPORT 2019 (Pages 69 - 166)  
  
To advise Members of the latest Air Quality Status Report which was submitted to the Department of Food Environment and Rural Affairs (DEFRA), and their subsequent response.
  
9. WORK PROGRAMME (Pages 167 - 168)  
  
To consider items for inclusion in the Work Programme for future meetings.

## ENVIRONMENT AND CLIMATE CHANGE COMMITTEE

25 NOVEMBER 2019

Present: Councillor H E Skinner, Chair

Councillors: S J Carr (substitute)  
S Easom  
L Fletcher  
T Hallam  
R I Jackson  
P Lally  
R D MacRae  
J C Patrick (substitute)  
P Roberts-Thomson  
D K Watts

Apologies for absence were received from Councillors L A Ball BEM, R H Darby, G Marshall and R D Willimott.

11 DECLARATIONS OF INTEREST

There were no declarations of interest.

12 MINUTES

The minutes of the meeting held on 1 October 2019 were confirmed and signed as a correct record.

13 ALLOTMENTS IN BROXTOWE

The Council was responsible for eight allotment sites in the Attenborough, Beeston and Chilwell areas of Broxtowe. The Committee noted an update report on the sites in addition to related costs. The use of compost toilets at allotments was considered and information on the subject would be submitted to a future meeting.

14 MANAGEMENT OF WATER COURSES

The Committee noted a report on the various roles and responsibilities which related to flood risk from water pathways in Broxtowe. Members requested that the emergency flooding response contact details be updated and it was suggested that visits to the relevant areas be undertaken during Spring.

15 TREE PLANTING - FREE FRUIT TREES

The Committee noted a report which gave information on the target to plant 2,000 trees each year across the Borough. Members were informed that there was now

limited land available following the target to plant 100,000 trees. It was stated that pocket orchards could be planted on unused or suitable allotment space.

16 GARDEN WASTE SUBSCRIPTION CHARGES FOR 2020/21

Members were informed that 20,042 properties had subscribed to the 2019/20 service, as of October 2019, generating an income of £699,986. An income target of £680,000 had been set for the 2019/20 subscription period. The Council had increased the subscription fee for 2019/20 by £1 on the main subscription fee and £2 for each additional bin. The number of subscribers in 2019/20 had increased from those in 2018/19 suggesting that the service represented good value for money.

An amendment was proposed by Councillor L Fletcher and seconded by Councillor R I Jackson that the money raised by the increased subscription be ring-fenced for use on greening the fleet of vehicles.

On being put to the meeting, the proposal was defeated.

**RESOLVED that:**

1. **The price for the first bin for 2020/21 be increased to £34**
2. **The price for additional bins for 2020/21 be increased to £18.**

**RECOMMENDED that the resolution be submitted to the Finance and Resources Committee for approval.**

17 CLIMATE CHANGE AND GREEN FUTURES APPROACH

The Committee noted a report which provided information on the approach to the Green Futures and Climate Change Programme in Broxtowe. Members queried a number of areas in the report and were informed that the Council was on course to meet the targets stated and a number of factors, such as the rationalisation of assets and the benefits of environmental impact assessments in relation to procurement, would be taken into account.

18 PERFORMANCE MANAGEMENT - REVIEW OF BUSINESS PLAN PROGRESS - ENVIRONMENT

Member considered a report which noted progress against outcome targets identified in the Environment Business Plan, linked to Corporate Plan priorities and objectives and received an update as to the latest key performance indicators.

19 WORK PROGRAMME

Members agreed that information on 'Bring Days' and Free Waste Collection be added to the Work Programme.

**RESOLVED that the Work Programme, as amended, be approved.**

**Joint Report of the Chief Executive, the Deputy Chief Executive and the Strategic Director****BUSINESS PLANS AND FINANCIAL ESTIMATES 2020/21 - 2022/23**1. Purpose of report

To consider proposals for business plans; detailed revenue budget estimates for 2020/21; capital programme for 2020/21 to 2022/23; and proposed fees and charges for 2020/21 in respect of the Council's priority areas.

2. Detail

As part of the Council's performance management framework, the business and financial plans for the five corporate priority areas identified within the Corporate Plan 2020-2023 are brought together in one report so that the linkages between service priorities, spending proposals and targets are clear.

Under the Constitution, financial and business planning is reported to the Committee which has primary responsibility for oversight of the relevant corporate priority area and related services, in this case Environment.

The proposed Environment Business Plan is provided as a separate attachment to this report. The revenue and capital budget proposals for the corporate priority and relevant service areas, together with the proposed fees and charges, are provided in appendices 2a to 2c.

Following consideration by each respective Committee, a summary of the estimates, including any changes recommended, will be presented to Finance and Resources Committee on 13 February 2020 for consideration and recommendation to Full Council on 4 March 2020.

**Recommendations**

1. **The Committee is asked to RESOLVE that the Environment Business Plan be approved.**
2. **The Committee is asked to RECOMMEND that the Finance and Resources Committee recommends to Council that the following be approved:**
  - a) **The detailed revenue budget estimates for 2020/21 (base) including any revenue development submissions.**
  - b) **The capital programme for 2020/21 to 2022/23**
  - c) **The fees and charges for 2020/21.**

Background papers

Nil

## APPENDIX 1

**Introduction**

The Council's business and financial planning framework is one of identifying key service and spending pressures and prioritising resources accordingly, taking into account national and local priorities.

The targeted outcomes from these key issues and the anticipated impact on service performance are set out in business plans. These plans are combined with financial information, including proposals for reducing business costs and increasing income, to form the business plans for each priority area.

This report considers the detail in respect of the business plans covering the priority area of Environment. The financial consequences of the business plans, together with the expenditure and income from maintaining existing services, are set out in the revenue budget proposals, the capital programme and the proposed fees and charges which follow the plans.

Within the Environment Business Plan attached to this report, there are some key tasks which can be met from existing resources or which relate to policy preparation. These are not included in the key spending proposals detailed in the appendices. Any planned activities which will have a financial implication either by increasing costs or reducing income are identified, along with the financial impact in section 5 of the business plan.

There are also several key tasks where it is not appropriate to make financial provision at this stage. These include areas that are subject to external funding bids, partnership arrangements or where insufficient information exists at the present time. In addition, there are a number of capital schemes within the programme which are deemed to be 'awaiting funding' pending receipt of the necessary resources to complete them. These schemes will be brought forward for approval once a potential funding source has been identified.

All of these items will be the subject of further reports throughout 2020/21 as further information and resources become available, thus ensuring that the service and financial planning framework is a fluid process.

**Business plans**

As part of the Council's performance management framework, it is the responsibility of each relevant committee to consider business plans prior to recommendations being made to Council. The purpose of the plans is twofold. Firstly, they establish the linkage between the Council's high-level objectives and the strategies and aims of the respective services, and secondly, they outline the services' proposals for meeting those aims and objectives.

This report deals with the Environment Business Plan and associated budgets covering these priority areas. The Council's corporate objectives and aims, as included in the Corporate Plan 2020-2023, are shown at appendix 1a to provide the framework for consideration of the plans.

**Financial background**

The revenue and capital budget proposals for the corporate priority, together with proposed fees and charges, are shown in appendices 2a to 2c.

The revenue budgets show the 2019/20 revised estimate as of December 2019 and the 2020/21 base estimate for the areas encompassed by the relevant business plans. The 2020/21 base estimate figures generally reflect the same level of service as in the current year with a few exceptions.

The following are included in the 2020/21 base figures in this report:

- a) Allowance for certain inflationary pressures including the April 2020 pay award and cost of utilities. These allowances are guided by the best indications available at the time
- b) Anticipated additional income within the General Fund and the Housing Revenue Account (HRA) arising from the review of fees and charges
- c) The revenue effects of the 2020/21 capital programme including the cost of any new borrowing to support the capital programme.
- d) Any revenue developments.

A classification of revenue expenditure is included at appendix 1b for the guidance of members.

## FRAMEWORK FOR BUSINESS PLANNING

The Council's Corporate Plan 2019-2023 is subject to annual review to ensure that it continues to reflect the aims and objectives of the Council.

### Vision

The Council's Vision for Broxtowe is “**greener, safer, healthier Broxtowe, where everyone prospers**”.

### Priorities

The Council's updated priorities have been updated have been developed within the context of national, regional and countywide plans and priorities with the aim being to align these with our own aspirations wherever possible.

The Council's priorities are **Housing, Business Growth, Environment, Health and, Community Safety**.

Underpinning the above and all of the Council's work is a series of values which the Council has adopted, namely:

**G**oing the extra mile: *a strong, caring focus on the needs of communities*

**R**eady for change: *innovation and readiness for change*

**E**mployees: *valuing our employees and enabling the active involvement of everyone*

**A**lways improving: *continuous improvement and delivering value for money*

**T**ransparent: *integrity and professional competence.*

### Objectives

Each priority area is underpinned by its strategic objectives. Each strategic objective has targeted outcomes against which progress can be monitored.

The priorities and objectives for **Housing** are 'a good quality home for everyone':

- Build more houses, more quickly on under used or derelict land
- Invest to ensure our homes are safe and more energy efficient
- Prevent homelessness and help people to be financially secure and independent.

The priorities and objectives for **Business Growth** are 'New and growing businesses providing more jobs for people in Broxtowe and improved town centres':

- Complete the redevelopment of Beeston Town centre
- Undertake regeneration schemes in Eastwood, Kimberley and Stapleford
- Support skills development apprenticeships, training opportunities and wellbeing in our workforce.

The priorities and objectives for **Environment** are ‘The environment in Broxtowe will be protected and enhanced for future generations’:

- Develop plans to reduce our carbon emissions to zero and start implementing
- Invest in our parks and open spaces
- Increase recycling and composting.

The priorities and objectives for **Health** are ‘People in Broxtowe enjoy longer, active and healthy lives’:

- Promote active and healthy lifestyles in every area of Broxtowe
- Come up with plans to renew our leisure facilities in Broxtowe Borough Council
- Support people to live well with dementia and support those who are lonely or have mental health problems.

The priorities and objectives for **Community Safety** are ‘Broxtowe will be a place where people feel safe and secure in their communities’:

- Reduce anti-social behaviour in Broxtowe
- Work with partners to reduce domestic violence and support survivors
- Work with partners to reduce knife crime.

## APPENDIX 1b

<b>REVENUE BUDGET 2020/21</b>
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**CLASSIFICATION OF EXPENDITURE**

The classification of expenditure shown in the revenue estimates is based on the CIPFA Standard Accounting Classification. The following statement shows the type of expenditure charged to each heading:

EMPLOYEE EXPENSES	Salaries and Wages National Insurance Pensions
PREMISES RELATED EXPENSES	Repairs, Alterations and Maintenance of Buildings, Fixed Plant and Grounds Energy Costs Rents National Non-Domestic Rates Water Charges Fixtures and Fittings Cleaning & Domestic Supplies
TRANSPORT RELATED EXPENSES	Direct Transport Costs Recharge of Pooled Transport Costs Travelling Allowances
SUPPLIES AND SERVICES	Equipment, Furniture and Materials Clothing, Uniforms and Laundry Printing, Stationery and General Office Expenses Postages Telephones Insurances Grants and Subscriptions Miscellaneous Expenses
THIRD PARTY PAYMENTS	Other Local Authorities Private Contractors Charges from Trading Services
TRANSFER PAYMENTS	Housing and Council Tax Benefits
CENTRAL, DEPARTMENTAL AND TECHNICAL SUPPORT SERVICES	Administrative Buildings Expenses Central Departmental Support Departmental Administration
CAPITAL FINANCING COSTS	Operating Lease Charges Asset Register Charges

## APPENDIX 2a

<b>Environment and Climate Change Portfolio - Revenue Budgets</b>		
<b>Cost Centre</b>	<b>2019/20 Revised Budget (as at December 2019)</b>	<b>2020/21 Base Budget (as at December 2019)</b>
Environmental Improvements	195,055	182,710
Property Admin Services	0	2,130
Environment Services – Management	1	(7,100)
NCC Highway Maintenance	(155,000)	(9,060)
Capital Works	0	89,010
Estates	1	4,990
Vehicles Cost - Housing Repairs	0	0
Vehicles Cost - Gas Repairs	0	0
Vehicles Cost - Courier Service	(450)	0
Vehicles Cost - Car Parks	(450)	0
Vehicles Cost - Neighbourhood Wardens	(1,100)	0
Vehicles Cost - Estate Caretakers	(2,200)	0
Vehicles Cost - Mechanics Vans	0	0
Vehicles Cost - JCB	0	0
Vehicles Cost - Public Buildings	0	0
Vehicles Cost-Electric Testing	(20)	0
Refuse Collection	1,266,841	1,222,380
Recycling	114,068	126,270
Refuse Collection - Vehicles & Plant	(50)	(5,000)
Public Conveniences	116,348	113,040
Repairs & Maintenance - Kimberley	5,917	0
Grounds Maintenance - Kimberley	(54,699)	90,000
Grounds Maintenance - Kim - Vehicle Cost	0	0
Kimberley Admin Building	0	0
Stapleford - C.A.S.	(12,100)	0
Street Cleansing Vehicle Costs	0	0
Highways Sweeping	745,719	706,530
Abandoned Vehicles	806	750
Highways - Borough Services	159,856	124,300
Sign Shop	36,836	34,770
Open Space	316,010	172,160
Tree Management	205,427	316,700
Nottingham Canal	32,686	97,250
Parks & Recreation Grounds Management	97,020	112,370

Beeston Parks	383,512	199,350
Stapleford Parks	162,336	108,480
Eastwood Parks	79,078	45,300
Kimberley Depot	0	0
Kimberley Stores	0	80,290
Mechanics - Kimberley Depot	(50)	0
	<b>3,691,398</b>	<b>3,807,620</b>
<b>Environment and Climate Change Portfolio - Revenue Budgets</b>		
<b>Cost Centre</b>	<b>2019/20 Revised Budget (as at December 2019)</b>	<b>2020/21 Base Budget (as at December 2019)</b>
Employees	4,388,900	4,500,360
Premises	365,700	389,840
Transport	1,612,580	1,701,710
Supplies & Services	1,133,750	1,186,710
Transfer Payments	0	0
Third Party Payments	1,027,575	780,790
Central Support Recharges	(1,602,852)	106,980
Capital Charges	400,000	376,900
Income	(3,634,255)	(5,235,670)
Income - Benefits	0	0
	<b>3,691,398</b>	<b>3,807,620</b>

The change in the 2020/21 base budget for total net expenditure when compared with the 2019/20 revised estimate is primarily a consequence of the following items:

	<b>Change (£)</b>
<b>Environmental Improvements</b> - The 2020/21 base budget includes a reduction of £12,300 in Central Support Recharges to reflect a more streamlined approach to this process to better reflect where costs should be attributed	(12,300)
<b>Environment Services – Management</b> - The 2020/21 base budget has been reduced by £32,580 for the voluntary redundancy of the Operations Manager being considered by Personnel Committee on 27 January 2020. - The 2020/21 base budget includes a revenue development of £25,480 for a Recycling Officer post	(7,100)
<b>NCC Highway Maintenance</b> - The 2019/20 revised estimate includes just the anticipated income from NCC of £155,000. No expenditure will be charged to this heading. - The 2020/21 base budget includes provision of £50,000 for subcontractors, £78,950 for Central Support Charges and £20,000 for weed killing offset by anticipated income of £158,000 from NCC.	145,950
<b>Capital Works</b> - Costs that were previously recharged to other areas as part of Central Support Recharges will no longer be recharged from 2020/21 to reflect the approach set out above.	89,000
<b>Refuse Collection</b> - The 2020/21 base budget includes an additional £47,000 and £11,000 for garden waste and trade refuse income respectively. - The 2020/21 base budget for employees (including agency staff costs) is £78,600 higher than the 2019/20 revised estimate to reflect factors such as an anticipated 2.0% pay award from 1 April 2020 and increments. - The notional capital charges in 2020/21 are estimated to be £25,650 lower than in 2019/20. - The 2020/21 base budget includes a reduction of £46,550 in Central Support Recharges to reflect the approach set out above.	(51,600)
<b>Recycling</b> - The notional capital charges in 2020/21 are estimated to be £11,150 higher than in 2019/20.	11,150
<b>Grounds Maintenance – Kimberley</b> - The 2020/21 base budget for subcontractors has been reduced by £41,000 to reflect a transfer of budget to Tree Management - The 2019/20 revised estimate includes £30,000 budget for direct materials in respect of one-off playground and bowling green works that relate to 2019/20 only. - The 2020/21 base budget includes a reduction of £206,600 in Central Support Recharges to other areas to reflect the approach set out above.	135,600

<p>Highways Sweeping</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget for employees (including agency staff costs) is £49,250 lower than the 2019/20 revised estimate due primarily to the voluntary redundancy of the Street Cleansing Manager approved by Policy and Performance Committee on 6 February 2019.</li> </ul>	(49,250)
<p>Highways – Borough Services</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes a reduction of £37,550 in Central Support Recharges to other areas to reflect the approach set out above.</li> </ul>	(37,550)
<p>Open Space</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes a revenue development of £15,000 for wildflower sowing and meadow management.</li> <li>- The 2020/21 base budget includes a reduction of £147,100 in Central Support Recharges to other areas to reflect the approach set out above.</li> </ul>	(132,100)
<p>Tree Management</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes a revenue development of £11,500 for the planting of 2,000 new trees per year over the next four years</li> <li>- The 2020/21 base budget for subcontractors has been increased by £41,000 to reflect a transfer of budget from Grounds Maintenance – Kimberley.</li> <li>- The 2020/21 base budget includes an increase of £54,150 in Central Support Recharges from other areas to reflect the approach set out above.</li> </ul>	106,650
<p>Nottingham Canal</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes an increase of £64,550 in Central Support Recharges from other areas to reflect the approach set out above.</li> </ul>	64,550
<p>Parks and Recreation Grounds Management</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes an increase of £15,350 in Central Support Recharges from other areas to reflect the approach set out above.</li> </ul>	15,350
<p>Beeston Parks</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes a reduction of £200,250 in Central Support Recharges from other areas to reflect the approach set out above.</li> <li>- The 2019/20 revised estimate includes income of £10,000 from Western Power for the installation of a cable in Toton that relates to 2019/20 only.</li> </ul>	(190,250)
<p>Stapleford Parks</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes a reduction of £56,850 in Central Support Recharges from other areas to reflect the approach set out above.</li> </ul>	(56,850)
<p>Eastwood Parks</p> <ul style="list-style-type: none"> <li>- The 2020/21 base budget includes a reduction of £30,100 in Central Support Recharges from other areas to reflect the approach set out above.</li> </ul>	(30,100)
<p>Kimberley Stores</p>	80,300

<p>- Costs that were previously recharged to other areas as part of Central Support Recharges will no longer be recharged from 2020/21 to reflect the approach set out above</p>	
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## ENVIRONMENT AND CLIMATE CHANGE CAPITAL PROGRAMME

No.	Scheme	Start	Finish	Estimated Total Cost				Net Revenue Costs in 2020/21	Full Years Revenue Effect of (6)	Net Effect of (5)
					2020/21	2021/22	2022/23			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
				£	£	£		£	£	£
1.	Play Areas Improvements Works Capital Salaries	June 20	Mar 21	40,000 2,000 42,000	40,000 2,000 42,000	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
2.	Dovecote Lane Recreation Ground – Improvement Works Capital Salaries	June 20	Mar 21	110,000 5,500 115,500	110,000 5,500 115,500	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
3.	Swiney Way Open Space – Improvement Works Works Capital Salaries	June 20	Mar 21	40,000 2,000 42,000	40,000 2,000 42,000	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
4.	Pasture Road Recreation Ground – Improvement Works Works Capital Salaries	June 21	Mar 22	75,000 3,750 78,750	0 0 78,750	75,000 3,750 78,750	0 0 0	0 0 0	0 0 0	0 0 0
<b>Environment and Climate Carried Forward</b>				<b>278,250</b>	<b>199,500</b>	<b>78,750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

No.	Scheme	Start	Finish	Estimated Total Cost				Net Revenue Costs in 2020/21	Full Years Revenue Effect of (6)	Net Effect of (5)
					2020/21	2021/22	2022/23			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
				£	£	£	£	£	£	£
	<b>Environment and Climate Change Brought Forward</b>			<b>278,250</b>	<b>199,500</b>	<b>78,750</b>	0	0	0	0
5.	Jubilee Park (Eastwood) –Improvement Works	June 21	Mar 22	30,000	0	30,000	0	0	0	0
	Capital Salaries			1,500	0	1,500	0	0	0	0
				31,500	0	31,500	0	0	0	0
6.	Bramcote Hills Park – Improvement Works	June 22	Mar 23	150,000	0	0	150,000	0	0	0
	Capital Salaries			7,500	0	0	7,500	0	0	0
				157,500	0	0	157,500	0	0	0
7.	Spinney Open Space (Nuthall) – Improvement Works	June 22	Mar 23	25,000	0	0	25,000	0	0	0
	Capital Salaries			1,250	0	0	1,250	0	0	0
				26,250	0	0	26,250	0	0	0
8.	Banks Road Open Space (Totonl) – Improvement Works	June 22	Mar 23	40,000	0	0	40,000	0	0	0
	Capital Salaries			2,000	0	0	2,000	0	0	0
				42,000	0	0	42,000	0	0	0
	<b>Environment and Climate Change Carried Forward</b>			<b>535,500</b>	<b>199,500</b>	<b>110,250</b>	<b>225,750</b>	<b>0</b>	<b>0</b>	<b>0</b>

ENVIRONMENT AND CLIMATE CHANGE CAPITAL PROGRAMME

No.	Scheme	Start	Finish	Estimated Total Cost				Net Revenue Costs in 2020/21	Full Years Revenue Effect of (6)	Net Effect of (5)
					2020/21	2021/22	2022/23			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	<b>Environment and Climate Change Brought Forward</b>			£ <b>535,500</b>	£ <b>199,500</b>	£ <b>110,250</b>	£ <b>225,750</b>	£ <b>0</b>	£ <b>0</b>	£ <b>0</b>
9.	Replacement Vehicles & Plant	Ongoing		2,039,500	738,500	720,000	581,000	0	0	0
10.	Asset Management – Programmed Maintenance Works	Ongoing		120,000	40,000	40,000	40,000	0	0	0
	Capital Salaries			12,000	4,000	4,000	4,000	0	0	0
	<b>ACTIVELY SEEKING FUNDING</b>			132,000	44,000	44,000	44,000	0	0	0
	<b>Environment and Climate Change Total</b>			<b>2,707,000</b>	<b>982,000</b>	<b>874,250</b>	<b>850,750</b>	<b>0</b>	<b>0</b>	<b>0</b>

**ENVIRONMENT AND CLIMATE CHANGE CAPITAL PROGRAMME 2020/21**SchemeNumber

1. Play Area Improvements (£42,000)

A number of play areas, whilst not requiring a full refurbishment, do require expensive remedial works to make them fully compliant with relevant safety legislation. The Play Strategy identified that priorities may change during the period of the strategy due to issues such as increased usage of sites, vandalism and equipment failure. This budget recognises these changes and will allow the site specific issues identified to be addressed without undertaking a full refurbishment of the particular site
2. Dovecote Lane Recreation Ground – Improvement Works (£115,500)

This budget would provide for two modern climbing units as well as allowing for outdated equipment to be replaced. New rubber surfacing would also be installed. It is anticipated that £50,000 will be contributed towards the cost of the scheme from FCC Communities Foundation (formerly known as WREN) subject to a successful bid for funding.
3. Swiney Way Open Space – Improvement Works (£42,000)

This budget will provide for a new toddler climbing unit and additional young children’s equipment as well as a full rubber surface for this area to support a safe environment for users of the facility.
9. Replacement Vehicles and Plant (£738,500)

This budget provides for the replacement of various vehicles and items of plant in accordance with the Council’s replacement programme.
10. Asset Management – Programmed Maintenance (£44,000)

This budget will enable some progress on the planned maintenance programme of the Council’s public building stock to continue to reduce the maintenance backlog identified by building condition surveys in accordance with the Asset Management Plan and the changing requirements of service provision.

## APPENDIX 2c

**ENVIRONMENT – REVIEW OF FEES, CHARGES AND ALLOWANCES**

All fees and charges are quoted exclusive of VAT, which will be added where applicable.

**1. Refuse Charges**Trade refuse charges for facilities

The collection charges show a 5% increase which is in line with previous years.

The increase of 3.5% in disposal charges reflect the likely change in landfill tax from £91.35 to £94.55 per tonne from 1 April 2020 and an increase in Nottinghamshire County Council's costs. The disposal element may need to be adjusted when the County Council notify this Council of actual disposal costs.

Current charges 2019/20

	<b><u>Bag</u></b>	<b><u>140L bin</u></b>	<b><u>240L bin</u></b>	<b><u>660L bin</u></b>	<b><u>820L bin</u></b>	<b><u>1100L bin</u></b>
		<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>
	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>
Broxtowe BC Collection/Admin	1.29	2.58	4.00	7.70	8.68	10.64
Notts. CC Disposal Charge	1.57	3.11	4.86	13.28	16.25	22.02
<b><u>TOTAL</u></b>	<b>2.86</b>	<b>5.69</b>	<b>8.86</b>	<b>20.98</b>	<b>24.93</b>	<b>32.66</b>

Proposed charges 2020/21

	<b><u>Bag</u></b>	<b><u>140L bin</u></b>	<b><u>240L bin</u></b>	<b><u>660L bin</u></b>	<b><u>820L bin</u></b>	<b><u>1100L bin</u></b>
		<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>	<b><u>(wheeled)</u></b>
	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>	<b><u>£</u></b>
Broxtowe BC Collection/Admin	1.35	2.71	4.20	8.09	9.11	11.17
Notts. CC Disposal Charge	1.62	3.22	5.03	13.74	16.82	22.79
<b><u>TOTAL</u></b>	<b>2.97</b>	<b>5.93</b>	<b>9.23</b>	<b>21.83</b>	<b>25.93</b>	<b>33.96</b>

	<u>Current Charge</u> <u>2019/20 (£)</u>	<u>Proposed</u> <u>Charge 2020/21</u> <u>(£)</u>
<b><u>Replacement/Additional Wheeled Bins</u></b> (Replacement when not through fair wear and tear, cost includes for delivery and future maintenance)		
240 litre wheeled bin	30.00	30.00
140 litre wheeled bin	26.00	26.00
<b><u>Special Collections</u></b>		
First item	20.00	20.00
Each additional item	7.00	7.00
Collection of a shed	100.00	100.00
<b><u>Collection of Garden Waste</u></b>		
Standard Annual Charge	33.00	34.00
Additional Bins	16.00	18.00
<b><u>Sponsorship of dog and litter bins</u></b>		
Per bin	25.00	25.00
A discount rate of ten for the price of nine is available		

The total estimated additional income on garden waste in 2020/21 is £27,000.

## 2. Parks and Recreation Grounds

### Charges for Facilities

	Present Charge 2019/20		Proposed Charge 2020/21	
	Senior £	Concession £	Senior £	Concession £
1.				
<b>Football</b>				
Senior Pitch	58.00	N/A	60.00	N/A
Junior 11-a-side pitch	N/A	35.00	N/A	36.00
9v9 football pitch	N/A	32.00	N/A	33.00
7v7 football pitch	N/A	30.00	N/A	31.00
5v5 if using changing facilities	N/A	25.00	N/A	25.50
Pit lane	N/A	25.00	N/A	25.50
2.				
<b>Cricket</b>				
Square inc. use of pavilion with showers	65.00	39.00	68.00	41.00
Service charge for facilities where Clubs are involved in management/maintenance				
• Bramcote Cricket Club (Club maintain square & pavilion)	40.00	N/A	42.50	N/A
• Manor Farm & Hetley Pearson Recreation Grounds (Clubs maintain squares)	42.50	N/A	45.00	N/A
• Eastwood Cricket Club (Club maintain pavilion)	45.00	N/A	47.50	N/A
Hall Park (use of pavilion) per fixture	N/A	N/A	N/A	N/A
Kwik Cricket	N/A	24.50	N/A	26.00

3.

**Bowls**

	Present Charge 2019/20		Proposed Charge 2020/21	
	Senior £	Concession £	Senior £	Concession £
Use of rink per hour per person.	4.30	2.60	4.40	2.70
Juniors (under 17) playing with a registered club member.	No charge			
Season tickets. 50% reduction on bowls season ticket price after 1 August. (Use of rinks by season ticket holders restricted to 2 hours at any one time if others are waiting to play).	68.00	41.00	68.00	41.00
Competitions (singles, pairs, triples and fours)				
- Season ticket holders	No charge			
- Visitors/non season ticket holders per person, per match	4.30	2.60	4.40	2.70
Match bookings – per rink per match.	9.75	N/A	10.25	N/A
New players playing with a registered club Member. First 5 hourly sessions free of charge.	N/A	2.60	Nil	Nil

4.

**Tennis**

	Present Charge 2019/20		Proposed Charge 2020/21	
	Senior £	Concession £	Senior £	Concession £
Grass court per person – per hour	3.80	2.30	3.80	2.30
Hard court per person – per hour *	2.00	1.20	2.00	1.20
Season ticket – Hard court only	38.00	23.00	38.00	23.00
(Use of courts by season ticket holders restricted to 2 hours at any one time if others are waiting to play).				
Club use – charge per court per hour				
Block booking fee summer period (or part of)	42.00	N/A	44.00	N/A
Block booking fee winter period (or part of)				
With attendant	77.00	N/A	80.00	N/A
Without attendant	39.00	N/A	41.00	N/A
Occasional use – per hour	7.50	N/A	8.00	N/A
Coaching – charge per person per hour	3.75	2.25	4.00	2.40
Matches – 3 Courts	56.00	34.00	58.00	35.00

**\* Tennis is free at King Georges Park, Inham Nook Recreation Ground and Manor Farm Recreation Ground.**

Concessionary rate is set at 60% for state pensionable age, under 18's and disabled in line with concessionary leisure card.

	Present Charge 2019/20		Proposed Charge 2020/21	
	Senior £	Concession £	Senior £	Concession £
<b>5. Hire of Pavilion</b>				
Charge per hour per site, sites with summer attendant (May – Sept)	14.50	N/A	15.50	N/A
Charge per hour other sites (All year round)	23.00	N/A	24.50	N/A
Official keyholders all year round per hour	12.00	N/A	12.50	N/A
Concession per hour (Play Groups/Charities)	6.25	N/A	6.50	N/A
<b>6. <u>Hire of Parks/Recreation Grounds for Events</u></b>				
Fun fairs - up to 4 days	1250.00	N/A	1300.00	N/A
- each additional day	360.00	N/A	380.00	N/A
Cyclocross/orienteering/cross country	145.00	87.00	150.00	90.00
Events with mixed age categories will be charged at senior rate. There will be no charge for charity events/training events or events with less than 25 participants.				
Events with no entry charge for participants will be charged at the concessionary rate.				
Fun days/galas (non charity)	145.00	N/A	150.00	N/A
Major events charge per day minimum charge, actual rate by negotiation plus additional labour and admin. costs	440.00	N/A	460.00	N/A
<b>7. <u>Fitness Training Organisations Using Parks</u></b>				
Rate per session				
Large/Medium organisation using one or more sites	8.50	N/A	9.00	N/A
Small organisation using one site only	£5.20	N/A	£5.70	N/A

## ENVIRONMENT BUSINESS PLAN 2020–2023

This Business Plan details the projects and activity undertaken in support of the Broxtowe Borough Council Corporate Plan priority of **ENVIRONMENT**.

The Corporate Plan prioritises local community needs and resources are directed towards the things they think are most important. These needs are aligned with other local, regional and national plans to ensure the ambitions set out in our Corporate Plan are realistic and achievable.

The Business Plan covers a three-year period but will be revised and updated annually. Detailed monitoring of progress against key tasks and outcome measures is undertaken quarterly by the Environment and Climate Change Committee. The Policy and Performance Committee also receives a high level report of progress against Corporate Plan priorities on a quarterly basis.

**The Council's Vision for Broxtowe is 'a greener, safer, healthier Broxtowe where everyone prospers'.**

**The Council's Values are:**

- **Going the extra mile: a strong, caring focus on the needs of communities**
- **Ready for change: innovation and readiness for change**
- **Employees: valuing our employees and enabling the active involvement of everyone**
- **Always improving: continuous improvement and delivering value for money**
- **Transparent: integrity and professional competence**

**The Council's Priorities and Objectives for ENVIRONMENT are 'The environment in Broxtowe will be protected and enhanced for future generations':**

- **Develop plans to reduce our carbon emissions to zero and start implementing**
- **Invest in our parks and open spaces**
- **Increase recycling and composting**

## 1. PUBLISHED STRATEGY AND POLICY DOCUMENTS SUPPORTING THE DELIVERY OF PRIORITIES AND OBJECTIVES

Strategy/Policy Document	Purpose of Document	Renewal Date	Responsible Officer/Contact
Corporate Plan	The Council's overarching plan for its priorities, targets and objectives. The plan sets out priorities to achieve the vision for 'A greener, safer, healthier Broxtowe where everyone prospers' with focus on the priorities of Housing, Business Growth, Community Safety, Health and Environment.	April 2024	Chief Executive
Business Strategy	Deigned to ensure that the Council is: <ul style="list-style-type: none"> <li>• Lean and fit in its assets, systems and processes</li> <li>• Customer focused in all its activities</li> <li>• Commercially minded and financially viable</li> <li>• Making best use of technology.</li> </ul>	Updated annually	Deputy Chief Executive
Medium Term Financial Strategy	The Council's key financial planning document. In detailing the financial implications of the Corporate Plan, the MTFS provides a reference point for corporate decision-making and helps to ensure that the Council can optimise the balance between its financial resources and the delivery of its priorities. The MTFS informs the annual budget-setting process, ensuring that each year's budget is considered within the context of the Council's ongoing sustainability over the entirety of the planning period.	Updated annually	Deputy Chief Executive Head of Finance Services
Commercial Strategy	Promote and support a change in organisational culture towards a more business-like approach to the delivery of services. Overall, commercialism will enable departments to adopt a business-like approach with the focus firmly on delivering the best services possible for residents and businesses within the Borough whilst at the same time maximising income generation.	April 2020	Deputy Chief Executive Commercial Manager

<b>Strategy/Policy Document</b>	<b>Purpose of Document</b>	<b>Renewal Date</b>	<b>Responsible Officer/Contact</b>
Capital Strategy	An overarching summary document which encompasses all capital and treasury activity including the capital programme, financing planning, accounting policies and asset management.	Updated annually	Deputy Chief Executive Head of Finance Services
Street Cleansing Service Standard	Provides local standards and targets for delivery of the service delivered in part through the Clean and Green initiative	Ongoing	Operations Manager
Green Infrastructure Strategy	Safeguards and enhances the core environmental Green Infrastructure networks within Broxtowe. It encompasses the Blue Infrastructure and Meadow Planting /Wildlife Corridor strands in the Green Futures programme	2030	Business and Projects Manager
Management Policy for Trees in Council Ownership	Sets out the guidelines for managing trees to assist and influence arboriculture decisions in relation to pruning and removal of trees	Ongoing	Grounds Maintenance and Arboricultural Manager
Local Nature Reserves Site Management Plans	Strategic documents setting out the maintenance regimes and actions through the life of the plans	Various - Rolling five or 10 year plans	Conservation and Green Spaces Development Manger
Broxtowe Parks Standard	Agreed standard for Management and Maintenance of Parks and large Open Spaces in the Borough	Ongoing	Business and Projects Manager
Playing Pitch Strategy 2016-2028	To identify priorities to enhance existing or provide new playing pitches and associated facilities	2028	Business and Projects Manager / Head of Neighbourhoods and Prosperity
Play Strategy 2017-2025	Shaping the future of children and young people's play throughout Broxtowe delivered through the Pride in Parks programme	2025	Business and Projects Manager

<b>Strategy/Policy Document</b>	<b>Purpose of Document</b>	<b>Renewal Date</b>	<b>Responsible Officer/Contact</b>
Recycling Service Standards	Provides standards and targets for the delivery of the service	Ongoing	Environment and Business Development Manager
Trade Waste Service Standards	Provides standards and targets for the delivery of the service	Ongoing	Environment and Business Development Manager
Domestic Waste Service Standards	Provides standards and targets for the delivery of the service	Ongoing	Operations Manager
Broxtowe Revised Waste Strategy (Now also linked to the Recycling Strand within the Climate Change and Green Futures programme)	Provides a revised strategic framework for the management of municipal waste for the period from 2016-2020.	2020	Environment and Business Development Manager
Bramcote Hills Park/ Colliers Wood Green Flag Management Plans	Establishes aims, objectives and targets to manage the sites to Green Flag standard.	Review plans annually and in detail every 5 years	Business and Projects Manager
Tree Planting	Key strand in Green Futures Programme creating a strategic approach to tree planting with annual target for new trees	2023	Business and Projects Manager
Our Waste, Our Resource: A Strategy for England	Provides a strategic guidance for the management of waste within England	Ongoing	Environment and Business Development Manager
Single Use Plastic Action Plan	To identify measures to reduce the Council's use of 'single use plastic'.	Ongoing	Environment and Business Development Manager

## 2. SERVICE LEVEL OBJECTIVES LINKED TO CORPORATE OBJECTIVES

**Develop plans to reduce our carbon emissions to zero and start implementing them (En1)**

Service Areas covered by this Plan	Service Objectives
<b>Environmental Services</b>	
Street Cleansing	<p>Provide effective cleansing services which maintain public land in accordance with national standards and contribute to a safe and healthy community.</p> <p>Promote a cleaner borough.</p> <p>Implement actions from Clean and Green Initiative and the Climate Change and Green Futures programme.</p>
Waste	<p>Promote responsible waste management. This includes education, awareness raising and enforcement through various activities and methods.</p> <p>Implement actions from Clean and Green Initiative.</p> <p>Implement actions within the Recycling Strand of the Climate Change and Green Futures programme. Actions such as remodelling of the recycling rounds in order to increase efficiency and reduce mileage.</p>
Transport / Fuel	<p>Implement actions from Clean and Green Initiative and the Climate Change and Green Futures programme.</p>
Improving biodiversity	<p>Promote good biodiversity practice and implement actions from Clean and Green Initiative and the Climate Change and Green Futures programme.</p>
Tree Planting	<p>Implement actions from Tree planting strand in Green Futures Programme</p>
Blue / Green Infrastructure	<p>Implement actions from Blue Infrastructure and Meadow planting/ Wildlife corridors strands in Green Futures programme</p>
Improve air quality	

## Invest in our parks and open spaces (En2)

Service Areas covered by this Plan	Service Objectives.
<b>Parks and Green Spaces</b>	
Public Green Spaces	<p>Manage, maintain and develop public green spaces (parks, open spaces, play areas and street scene areas).            Undertake the planting and maintenance of trees and landscaped areas on the Council's green spaces.            Implement actions from the Green Futures programme and Pride in Parks Initiative.</p>
Local Nature Reserves, Woodlands	<p>Manage, maintain and develop local nature reserves and woodlands to ensure that they enhance the environment and contribute towards a safe and healthy community.</p> <p>To ensure that the selection of tree species in the borough is diverse and predominantly native. A range of non-natives will be included to ensure sustainability. This will mitigate the risks that a monoculture of trees can create with pest and diseases.</p> <p>Further develop a proactive approach to partnership working.</p>

## Increase recycling and composting (En3)

Service Areas covered by this Plan	Service Objectives
<b>Recycling and composting</b>	
Waste Management	<p>Provide an effective collection service for domestic, garden and trade waste.</p> <p>Maintain and increase the opportunities for residents to recycle their waste.</p> <p>Promote recycling and sustainability by educating the community on the benefits of recycling and waste minimisation and encourage a reduction of contamination.</p> <p>Engage through the Nottinghamshire Joint Waste Management Committee for the purpose of developing and implementing sustainable waste management policies, practices and development of shared services.</p> <p>Implement actions from Clean and Green Initiative and the Climate Change and Green Futures programme.</p>
Estates, Energy and Sustainability	<p>Reduce levels of energy use in the Council's buildings and social housing properties through raising awareness and installing energy efficient measures reducing CO<sub>2</sub> levels in Broxtowe.</p>
Reducing single use plastic	<p>Review the use of single use plastic within the Council and implement actions to reduce the use of single use products.</p> <p>Educate residents and promote the wider issue of reducing the use of single use plastics</p> <p>Work with procurement section to ensure that sustainable procurement is at the heart of the tendering process.</p>

### 3. MEASURES OF PERFORMANCE AND SERVICE DATA

#### Context – Baseline Service Data

Pentana Code	Service Data Description	Actual 2016/17	Actual 2017/18	Actual 2018/19	Comments including benchmarking data
WMData_01	Enquiries for bulky collections	1,703	1,694	1,260	The number of enquiries has reduced slightly from the previous year.
WMData_02	Enquiries for general refuse enquiries	16,929	20,920	16,251	Following the transition to the new rounds the number of enquiries has fallen below the levels previously experienced outlining the refuse service is running efficiently and effectively
WMData_03b	Garden waste subscriptions	18,716	19,211	19,664	Customer base is increasing year on year.
WMData_06 NEW	Number of trade customers	782	803	809	The trade waste service has continued to grow year on year despite the commercial waste sector being a highly competitive market. This demonstrates the Council provides a service which is deemed value for money
SSData_02	Abandoned vehicles removed and destroyed	40	28	22	The number of vehicles being removed has reduced despite the number of reports of vehicles increasing year on year
SSData_03	Litter/dog bins	1,168	1,210	1,223	Includes provision of 14 recycling bins
SSData_04	Clean and Green events undertaken	-	-	7	The Clean and Green Initiative was approved by Committee in September 2018. Following its approval over 300 residents, children or interested individuals took part in 7 community events in 2018/19

<b>Pentana Code</b>	<b>Service Data Description</b>	<b>Actual 2016/17</b>	<b>Actual 2017/18</b>	<b>Actual 2018/19</b>	<b>Comments including benchmarking data</b>
PSData_01	Play areas refurbished	1	2	7	Broadgate Park, Leyton Crescent Recreation Ground, Redbridge Drive Open Space, Mansfield Road Recreation Ground, Shilo Recreation Ground. Brinsley Recreation Ground, Basil Russell Playing Field
PSData_02	New site specific management plans produced	2	1	2	In 2018/19 Sandy Lane and Alexandrina Plantation Open Spaces produced
PSData_05	Total area of parks and open spaces (hectares)	236	236	236	There was no increase in the area of parks and open spaces in 2018/19 from land acquired from housing developers
PSData_06	Children's play areas	34	34	34	Programme has been to improve exiting provision
PSData_07	Local Nature Reserves	15	15	15	Total area of land managed as Local Nature Reserves exceeds the national target of 1 hectare per 1000 population set by Natural England
EMData_02	Total business mileage (vehicles)	198,886	167,871	173,386	Data excludes Liberty Leisure Ltd employees. Increase of 3% from 2017/18.
EMData_03a	Total litres of fuel used fleet (mileage)	337,380 litres	298,352 litres	301,221 litres	Fuel usage decreased by 12% from 2016/17 to 2017/18 with the reduced vehicle fleet and revised refuse rounds contributing towards this
EMData_08	Proportion of Households Fuel Poor in the Borough of Broxtowe	11.9% (2014/15)	11.8% (2015/16)	8.6% (2016/17)	Figures collected nationally by DECC, sub regional fuel poverty (Low Income High Cost definition), figures two years behind. Source – Dept. Business, Energy & Industrial StrategySub-regional fuel poverty data, 2017

Pentana Code	Service Data Description	Actual 2016/17	Actual 2017/18	Actual 2018/19	Comments including benchmarking data
SSData_01	Reduce the number of fly tipping incidents	399	344	359	There was a small increase in 2018/19 from the previous year. The number of fly tipping incidents reported so far in 2019/20 suggests there will be a reduction compared to the previous year.

## Critical Success Indicators (CSI)

Priority leaders should work corporately to **define the outcome objective** for each priority area and **identify an outcome indicator or indicators** which will be **Critical Success Indicators**. There will be a maximum of two CSI for each corporate priority.

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
<b>Critical Success Indicators (CSI)</b>								
Cleanliness of the streets and open spaces within the Borough (levels of litter)	NI195a	96%	95%	95%	97%	97%	97%	Environment and Business Development Manager Target to maintain the level of cleanliness within the Borough
Reduce the number of fly tipping incidents	SSData_01	399	344	359	414	270	243	Environment and Business Development Manager Current projection for 2019/20 is around 300 incidents. Targets for 2020/21 onwards based on an annual 10% reduction from a baseline figure of 300
Parks achieving Broxtowe Parks Standard %	PSData_09	96%	94%	92%	94%	97%	100%	Business and Projects Manager Sample sites assessed on an annual basis

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
Energy Consumption across all operational sites – Total kWh gas and electric ('000)	CPLocal_03	6,340 (Revised from 8,902)	6,581	X	8,280	8,114		Head of Property Services
Household waste recycled and composted	NI192	41.04%	38.82%	38.48%	41%	40%	+ 1% per annum	Environment and Business Development Manager  Current projection for 2019/20 based on midyear data is a recycling rate of 38.8%. With the implementation of additional recycling employees whose role is to promote and educate residents on recycling, together with reducing contamination, it is expected that an increase in the recycling rate will be achieved. This is reflected in the target for 2020/21 onwards.

## Performance Indicators

Priority leaders should identify two sets of performance indicators namely **Key Performance Indicators (KPI)** for reporting to GMT and Members and **Management Performance Indicators (MPI)** for use in business planning and performance monitoring at a service level.

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
<b>Key Performance Indicators (KPI)</b>								
Green Flags/Community Green Flags	PSLocal_02	5	5	5	5	5	5	Business and Projects Manager Target is to maintain the number of Green Flags. Sites independently assessed on an annual basis
Garden Waste Subscriptions	WMData_03b	18,716	19,211	19,664	19,200	20,042	20,042	Environment and Business Development Manager The customer base for 2019/20 is currently 20,042. Customer base is expected to remain relatively stable year on year which is reflected in the targets from 2020/21 onwards
Income generated by garden waste subscriptions	WMData_03c	£582k	£623k	£661K	£645k	£727K	£727k	Based on price increases in 2019/20 and maintained customer base

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
Income generated through Trade Waste	WMData_06a	£517k	£550k	£580K	£597K	£608K	£632K	Environment and Business Development Manager  Budget for 2020/21 onwards is based on an increase in the overall charges of 4% and maintaining customer base.
External income generated through Environmental Services	WMData_08	£150k	£172k	£202K	£198K	£190K	£190K	Environment and Business Development Manager  It is anticipated that the income for 2019/20 will around £8K lower than the target level. The reduction is due to the reduced demand for services by external parties. Figures have been revised to include the income from the Nottinghamshire County Council highway grass cutting contract. The targets from 2020/21 onward are based on maintaining the current income level and the assumption that the highway grass cutting contract will continue.

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
Levels of detritus on the public highway	NI195b	96%	95%	96%	96%	96%	96%	Environment and Business Development Manager Figures show a total of 96% of streets met the acceptable level of standard.
Savings through reuse of bins	WMData_10	£4k	£10k	£12K	£12K	£4500	£4500	Environment and Business Development Manager Fewer bins which are suitable for reuse have been collected. It is anticipated that the savings for 2019/20 will be in the region of £4.5K targets for 2020/21 onwards are based on maintaining this level of reuse.
Tonnes of household waste recycled	BV82a(ii)	8,993	8,312	8,018	8,700	7,776	7,776	Environment and Business Development Manager It is predicted that in 2019/20 around 7,776 tonnes of recyclables will be collected. The reduction in tonnages being collected can be attributed to many factors including lighter products and also improved purchased habits. The target from 2020/21 onwards is based on maintaining the current levels.

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
Tonnes of household waste composted	BV82b(ii)	7,904	6,782	7,461	7000	8000	8000	Environment and Business Development Manager. It is predicted that in 2019/20 around 8000 tonnes will be collected. The tonnage collected through this service is dependent upon weather conditions. The targets from 2020/21 are therefore based on maintaining the current levels.
Household waste collected per head (kg)	BV84a	366.62	344.98	356.92	386.00	373.38	365.91	Environment and Business Development Manager Estimates suggest the 2019/20 total will be 381kg. This would be below the target level of 386kg. Targets from 2020/21 represent a desire to continue to reduce by 2% each year
Residual Waste per household (kg)	NI191	486.62	476.81	493.25	512.00	482.09	467.62	Environment and Business Development Manager Estimates suggest the total for 2019/20 will be 497kg. The target will be achieved. Targets from 2020/21 represent a desire to continue to reduce by 3% each year

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
Number of Clean and Green events undertaken	SSData_04	-	-	7	20	20	20	The community events under the Clean and Green initiative have proven to be very popular with individual, schools, workplaces all getting involved in making the area where they live or work a better place.
Number of Trees Planted		862	628	1,618	2,000	2,500	3,000	Business and Projects Manger. Increasing target in line with Tree Planting Strand in Green Futures programme
<b>Management Performance Indicators (MPI)</b>								
Average play value score	PSLocal_01	28.75	29.85	31.38	32.00	32.50	33.00	Business and Projects Manager This is a measure of the different elements that make up a play area using a national scoring system. With the Pride in Parks Initiative the figure has increased

Indicator Description	Pentana Code	Achieved			Target			Indicator Owner and Comments (incl. benchmarking)
		2016/17	2017/18	2018/19	2019/20	2020/21	Future Years	
No. of Nature Reserves	PSData_07	15	15	15	15	15	15	Business and Projects Manager No growth in numbers of reserves is projected in the short term. Management plans for existing sites are in the process of being updated and consolidated
Number of new Green Spaces created		-	-	-	1	1	1	The target is to create 1 new publically accessible green space each year

#### 4. KEY TASKS AND PRIORITIES FOR IMPROVEMENT 2020/21 – 2022/23 INCLUDING COMMERCIAL ACTIVITIES

Priority leaders are asked to consider potential **commercial activities** in their priority areas when setting the key tasks and priorities for the next three years. In doing so priority leaders should consider:

- In which service areas could new commercial activities be undertaken?
- How much additional income could be generated from the new commercial activities?
- Would additional resources (employees, equipment, systems etc.) be needed to undertake the new commercial activities? If yes, outline these with estimates of costs.
- How will these new commercial activities link into the Council's Medium Term Financial Strategy, Capital Programme, Business Strategy and Commercial Strategy?
- Will the new commercial activities affect existing Revenue and Capital budgets? If yes, then remember to include the net income or costs to Section 5 'Link Key Tasks and Priorities for Improvement to the Financial Budgets'.
- Please identify new '**commercial activities**' in the comments column.

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Pentana Code	Description	Targeted Outcome	Partnership/ Procurement Arrangement	Officers Responsible/ Target Date	Budget Implications/ Efficiencies/Other comments
ENV 1620_03	Implement the actions identified within the Waste Strategy and additional actions connected to the Recycling Strand within the Climate Change and Green Futures programme.	Increase in the Council's recycling rate and improved awareness of how to reduce waste	Working with other districts, Nottinghamshire County Council and external partners M.E.L Research WRAP	Environment and Business Development Manager March 2020	Limited capital and revenue money available to implement new recycling schemes Potential financial implications for use of external bodies
ENV 1620_04	Franchises and licensing within Parks and Open Spaces	Increased number of franchises and licensed facilities	Working with local suppliers and companies	Conservation and Green Spaces Manager March 2021	Through licensing of sales of refreshments and sponsorship of floral displays

<b>Pentana Code</b>	<b>Description</b>	<b>Targeted Outcome</b>	<b>Partnership/ Procurement Arrangement</b>	<b>Officers Responsible/ Target Date</b>	<b>Budget Implications/ Efficiencies/Other comments</b>
ENV 1518_04	Implement Key Actions in Green Infrastructure Strategy	Develop, improve and promote Green and Blue infrastructure in the Borough incorporating strategic actions in Green futures programme	PCV/Notts Wildlife Trust/Friends Groups	Business and Projects Manager March 2022	Utilise capital and Section 106 funding together with bids for external funding
ENV1720_01	Apply a strategic approach to tree management and planting.	Work with partners, land owners and other agencies to plant 2,000 trees per year. Work with volunteers as part of the Clean and Green initiative to achieve this outcome	PCV/Notts Wildlife Trust/ /Clean and Green Projects/ Friends Groups	Business and Projects Manager December 2023	£11,500 bid submitted as a revenue development as part of the Tree Planting strand in the Green Futures programme
GREEN 0912_14	Further develop sites with Local Nature Reserve status	Maintain existing 121 hectares of land identified as Local Nature Reserves and investigate possible additional sites as opportunities arise with new housing development and the acquisition of additional open space	PCV/Notts Wildlife Trust	Conservation and Green Spaces Manager March 2022	Management plans to be updated so the existing sites are properly maintained rather than increase the number of sites. New sites may have a potential revenue implication
ENV1821_03	Improve Play areas and Parks and Open Spaces	Play areas identified as Medium Priority sites (Years 2020-2023) in the Play Strategy 2017-2025 improved. Healthy Society , DDA Compliant	Parish/Town Councils, Local Sports Clubs, Community groups, Schools, Friends Groups	Business and Projects Manager March 2023	Continue to undertake Pride in Parks initiative utilising capital allocation in 2020/21

<b>Pentana Code</b>	<b>Description</b>	<b>Targeted Outcome</b>	<b>Partnership/ Procurement Arrangement</b>	<b>Officers Responsible/ Target Date</b>	<b>Budget Implications/ Efficiencies/Other comments</b>
ENV1922_01	Implementation of the Clean and Green Initiative	Implement a range of initiatives aimed at making Broxtowe a Cleaner and Greener place for residents and visitors to the Borough.	Other Council Departments/ Friends Groups/ Members	Environment and Business Development Manager Corporate Communication Manager March 2021	Funding implications for this initiative have been included in the budgetary process
ENV2023_01 NEW	Wildflower sowing and meadow management	New wildflower areas created and grass managed as wildflower meadows	Friends Groups/ Notts Wildlife Trust/PCV	Business and Projects Manager March 2023	£15,000 bid submitted as a revenue development as part of the Meadow Planting/Wildflower corridors strand in the Green Futures Programme
NEW	Introduction of new staff within the recycling section with the aim of educating our residents on recycling, reducing contamination and increasing the Council recycling rate.	Increase in the Council's recycling rate and improved awareness of how to reduce waste	Working with other District Councils, Nottinghamshire County Council and external partners	Environment and Business Development Manager March 2023	Revenue implications relating to salaries and funds for undertaking promotional work

<b>Pentana Code</b>	<b>Description</b>	<b>Targeted Outcome</b>	<b>Partnership/ Procurement Arrangement</b>	<b>Officers Responsible/ Target Date</b>	<b>Budget Implications/ Efficiencies/Other comments</b>
NEW	Identify areas of new Green Space for public use	Increase the total area of publically accessible green space in Broxtowe	Working with housing developers, local land owners and community groups	Business and Projects Manager March 2023	Revenue implication of maintaining new open space. Potential 106 funding from housing developers. Volunteer time to maintain areas.
COMS 1821_14	Produce DEFRA Annual Air Quality Status report	Develop a new Air Quality Strategy and Action Plan.	Notts Authorities, internal stakeholders and transport providers.	Chief Environmental Health Officer June 2020	Contained within capital and revenue budgets..
	Investigate reduction in water use / grey water harvesting	Develop recommendations for reviewing water use in Council owned properties.	All relevant internal stakeholders	Head of Property Services	To be determined.
NEW	Implement actions deriving from the Governments 'Our Waste, Our Resource: A Strategy for England'	Increase in the Council's recycling rate and increased awareness of climate change and waste and recycling issues.	Working with other District Councils, Nottinghamshire County Council and external partners	Environment and Business Development Manager March 2020	Limited capital and revenue money available to implement new recycling schemes.

## 5. LINK KEY TASKS AND PRIORITIES FOR IMPROVEMENT TO THE FINANCIAL BUDGETS

Priority leaders should ensure that key tasks and priorities (including commercial activities) that have a financial implication are included in the analysis below.

Revenue and Capital Budget Implications/Efficiencies Generated	Pentana Action Code	2020/21 Budget £	2021/22 Budget £	2022/23 Budget £
<b>Budget Implications</b>				
Salaries for one recycling employee	NEW	25,659	25,659	25,659
Funds for undertaking promotional work	NEW	15,000	15,000	15,000
Tree Planting	NEW	11,500	11,500	11,500
Meadow Planting	NEW	15,000	15,000	15,000
<b>Efficiencies Generated</b>				
	0	0	0	
<b>New business/increased income</b>				
Increase in garden waste income (against £700k income 2019/20)	WMData_03c	27,000	30,000	33,000
Increase in Trade Waste income (Income for 2019/20 will be below target on £597K with the prediction being to achieve £585K. Figures for 2021/22 onwards are based on 4% growth each year from this based figure.	WMData_06a	11,000	24,000	25,000
<b>Net Change in Revenue Budgets</b>		<b>(0)</b>	<b>(0)</b>	<b>(0)</b>

## 6. SUMMARY OF KEY RISKS

Priority leaders are to identify three strategic risks for the Business area and to determine whether these have been/or should be considered on the Council's Strategic Risk Register.

Key Strategic Risk	Is this already covered by an existing Strategic Risk?	What action can be taken/is required to mitigate/minimise the risk or threat
Lack of skills and or capacity to meet increasing initiatives and expectations	Yes	Assess priorities, develop workforce planning and multi skilling, and manage expectations. A programme of due diligence training is live and being monitor through the assurance model
Failure to achieve recycling targets in a cost effective manner	Yes	Review ongoing initiatives, Monitor garden waste scheme, explore partnership opportunities

Also, the top five risks (strategic or operational) arising from the key tasks and priorities for improvement should be identified. Whilst, it will be expected that detailed risks will be considered as part of the project planning process for each key task, it is anticipated that there will be 'common themes' identified which should enable the key risks to be limited to the top five. An earlier example has been included for reference.

Code	Key Task	Risk or Threat to Key Task	Covered by an existing Strategic Risk?	Action taken/required to mitigate/minimise the risk or threat
ENV 1518_04	Implement Key Actions in Green Infrastructure Strategy	Insufficient Officer time – lack of resources	2 - Failure to obtain adequate resources to achieve service objectives	Programmed monitoring/planning
ENV1620_03	Implement the actions identified within the Waste Strategy	Lack of funding and resources	2 - Failure to obtain adequate resources to achieve service objectives	Promote recycling services, monitor costs and investigate different recycling initiatives, partnership working and funding.

<b>Code</b>	<b>Key Task</b>	<b>Risk or Threat to Key Task</b>	<b>Covered by an existing Strategic Risk?</b>	<b>Action taken/required to mitigate/minimise the risk or threat</b>
ENV1922_01	Implementation and continuation of the Clean and Green Initiative	Insufficient Officer time, lack of resources, lack of funding	2 - Failure to obtain adequate resources to achieve service objectives	Programmed monitoring/planning
ENV1821_03	Improve Play areas and Parks and Open Spaces	Insufficient Officer time, lack of resources	2 - Failure to obtain adequate resources to achieve service objectives	Source external partnership funding
NEW	Implement actions deriving from the Governments 'Our Waste, Our Resource: A Strategy for England'	Insufficient Officer time, lack of resources, lack of funding	2 - Failure to obtain adequate resources to achieve service objectives	Partnership working and funding. Keeping up to date with the outcome of the consultations and Government guidance

## List of Strategic Risks

- Risk 1 - Failure to maintain effective corporate performance management
- Risk 2 - Failure to obtain adequate resources to achieve service objectives
- Risk 3 - Failure to deliver the HRA Business Plan
- Risk 4 - Failure of strategic leisure initiatives
- Risk 5 - Failure of the Liberty Leisure Limited trading company
- Risk 6 - Failure to complete the re-development of Beeston town centre
- Risk 7 - Not complying with domestic or European legislation
- Risk 8 - Failure of Financial Management and/or budgetary control
- Risk 9 - Failure to maximise collection of income due to the Council
- Risk 10 - Failure of key ICT systems
- Risk 11 - Failure to implement private sector element of Housing Strategy in accordance with Government and Council expectations
- Risk 12 - Failure to engage with partners/community to implement the Broxtowe Borough Partnership Statement of Common Purpose
- Risk 13 - Failure to contribute effectively to dealing with crime and disorder
- Risk 14 - Failure to provide housing in accordance with the Local Development Framework
- Risk 15 - Natural disaster or deliberate act, which affects major part of the Authority
- Risk 16 - Failure to mitigate the impact of the Government's welfare reform agenda
- Risk 17 - Failure to maximise opportunities and recognise the risks in shared services arrangements
- Risk 18 - Corporate and/or political leadership adversely impacting upon service delivery
- Risk 19 - High levels of sickness
- Risk 20 - Lack of skills and/or capacity to meet increasing initiatives and expectations
- Risk 21 - Inability to attract or retain key individuals or groups of staff
- Risk 22 - Failure to comply with duty as a service provider and employer to groups such as children, the elderly, vulnerable adults etc.
- Risk 23 - Unauthorised access of data
- Risk 24 - High volumes of employee or client fraud

## Report of the Strategic Director

**PRIDE IN PARKS – PLAY AREA AND PARKS/OPEN SPACE IMPROVEMENTS**1. Purpose of report

To update members on the Pride in Parks initiative.

2. Background

A report to the Environment and Climate Change Committee on 1 October 2019 updated members on the Pride in Parks initiative. Funding has been allocated to undertake improvements to the Borough owned play areas that have been identified as high priority sites in the Play Strategy and to the Town and Parish Councils that maintain their own parks and outdoor recreational facilities to enable improvement and renovation works to be undertaken at these sites.

This report details the progress made over the autumn/winter period.

3. Financial implications

The £250,000 initially included in the 2019/20 capital programme has been split with £125,000 allocated to the Borough Council and £125,000 allocated to the Town and Parish Councils. The £125,000 allocated to the Borough Council has where possible been supplemented by funding from other sources in order to produce enhanced schemes as shown in the appendix.

**Recommendation**

**The Committee is asked to NOTE the progress on the schemes in the 2019/20 capital programme as part of the Pride in Parks initiative.**

Background papers

Nil

## APPENDIX

**1. Broxtowe Borough Council Sites**

There are 4 Borough Council sites identified as high priority in the Borough's Play Strategy for which there is budget provision for schemes in the 2019/20 capital programme. The details are as follows:

**(i) King George's Park, Bramcote**

Following on site consultation, a successful bid to FCC Environment (formerly WREN) for £50,000 has allowed a much more expansive scheme to be developed than had been originally envisaged. The 2019/20 capital programme includes a scheme to the value of £123,850 with funding of £50,000 from FCC, £24,850 from an insurance settlement and £49,000 from the Council's own capital resources.

Despite very difficult weather conditions the work at this site is now almost complete. The scheme has proved to be extremely popular with equipment for a mixed range of ages and a fitness station. Reinstatement works to the grass areas will be undertaken in the spring when improved ground conditions allow.

**(ii) Sherman Drive Open Space, Chilwell**

The 2019/20 capital programme includes £30,000 from the Council's capital resources towards replacement equipment and surfacing.

All works have been completed and the site is open.

**(iii) Hall om Wong Open Space, Kimberley**

The 2019/20 capital programme includes £20,000 from the Council's capital resources for work at this site. A bid has been submitted to FCC Environment for £54,000 using this funding together with a further allocation of £11,000 in the 2019/20 capital programme for access improvements at this site as the Council's contribution. This will facilitate an enhanced scheme at the site including a wider range of equipment for younger children and the creation of a large area of rubber safety surfacing together with path and access improvements. The outcome of this bid is expected in spring 2020 and will be reported to the Committee in due course.

**(iv) Hickings Lane Recreation Ground, Stapleford**

The 2019/20 capital programme included £165,500 for a scheme to fully refurbish the play area and install a new multi use games area at the site. The cost of the scheme was met from contributions of £93,500 from WREN, £18,500 from Section 106 receipts, £2,500 from United Living, £1,000 from Stapleford Town Football Club and £50,000 from the Council's own capital resources. The work at this site is now complete with a fully refurbished multi use games area and a state of the art play area. All new facilities have been very well received.

## **2. Town/Parish Council Sites**

There are six Town/Parish Councils that manage their own Parks/Recreation Grounds as follows:

### Awsorth Parish Council

- The Lane Recreation Ground
- Shilo Recreation Ground

### Brinsley Parish Council

- Brinsley Recreation Ground

### Greasley Parish Council

- Beauvale Park
- Greenhills Road Recreation Ground

### Kimberley Town Council

- Knowle Park
- The Stag Recreation Ground

### Nuthall Parish Council

- Basil Russell Playing Fields
- Temple Centre Recreation Ground

### Trowell Parish Council

- Trowell Parish Hall

As part of the Pride in Parks project all 6 Town/Parish Councils were asked to consider their priorities for work over financial years 2018/19 and 2019/20.

The Town/Parish Councils were advised on the sort of schemes that the council would consider as favourable. These included:

- Play Area /Skate Park Improvements
- Improvements to outdoor sports /exercise facilities
- Footpath creation/surfacing
- Improvements to sports pavilions (but not Parish Halls)
- Habitat improvements
- Improvement for disabled access parking (but not full car park surfacing schemes)

The Town/Parish Council's also had the option to combine the Year 1 (2018/19) and Year 2 (2019/20) funding as appropriate. Where relevant this is referenced below.

Project Update

## (i) Awwsworth

The balance of the Year 1 funding was used as part of a jointly funded project with the English Cricket Board to improve the cricket pavilion at The Lane Recreation Ground. This project is now complete and there was an opening event on Sunday 8 September. There will also be a small scheme to undertake pond improvements at The Lane Recreation Ground in early 2020 utilising the balance of the funding.

## (ii) Brinsley

The scheme for the second year of funding is for replacement outdoor gym equipment and an extension to the fenced play area with a wheelchair accessible swing. Work is currently in progress.

## (iii) Greasley

The year 2 scheme has seen a second phase of play area improvement works at Beauvale Park.

## (iv) Kimberley

The scheme for the second year funding was one to improve the play facilities at Knowle Park with a designated fenced area with rubber surfacing for younger children. This work has been completed and the area is now fully open.

## (v) Nuthall

A new outdoor fitness area at Basil Russell was officially opened on Sunday 2 June. Orders have been placed for additional works in the sports pavilion. The Parish Council is looking at options including a basketball court or upgrading the skate park and propose to use the remaining finance towards a potential funding bid. This will require the balance of funding to be carried forward into the 20/21 financial year.

## (vi) Trowell

The Parish Council chose to combine the year 1 and year 2 allocations with a scheme to provide new young children's play equipment, outdoor table tennis and a boules court at Trowell Parish Hall. This work has been completed and there was an official opening on Saturday 17 August 2019.

Summary

<b>Parish/Town Council</b>	<b>2019/20 Allocation</b>	<b>Funding Committed</b>	<b>Funding Spent</b>
Awsorth	£16,452.46	£16,452.46	£13,592.96
Brinsley	£17,983.77	£17,983.77	Nil
Greasley	£28,546.58	£28,546.58	£28,546.58
Kimberley	£25,397.59	£25,397.59	£25,397.59
Nuthall	£29,733.34	£29,733.34	£26,060.07
Trowell	£6,886.26	£6,886.26	£6,886.26
<b>Total</b>	<b>£125,000</b>	<b>£125,000</b>	<b>£100,483.46</b>

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## Report of the Strategic Director

**CLEAN AND GREEN**1. Purpose of report

To update Members on the progress of the 'Clean and Green' initiative.

2. Background

On the 19 November 2018 members approved the implementation of the Clean and Green initiative. The initiative identified a number of on-going activities which support the Council's key Priority to ensure that the environment in Broxtowe is protected and enhanced for future generations.

Information in the appendices provides an update with regards to the activities undertaken as part of the 'Clean and Green' initiative since the last Committee in October 2019.

3. Financial implications

Any financial implications of the Clean and Green initiative have been approved and are contained within budgets.

**Recommendation**

**The Committee is asked to NOTE the Clean & Green activities which have taken place.**

Background papers

Nil

## APPENDIX 1

**1. Waste Days/Free Kerbside Collection**

Linked to the corporate Priority of reducing littering and fly tipping, increasing recycling and reducing residual waste.

Following Committees approval in September 2019 the first free bulky collection week took place during week commencing 16 December 2019. The scheme was extremely popular with the week being fully booked within three days of the phone lines opening.

The second free collection week took place during the week commencing 27 January 2020 with the third week taking place during week commencing 3 February 2020.

Tables 1 to 4 below show the analysis from the results of the first week's collection (16 December 2019):

**Table 1: Monday to Thursday residual waste collected**

Date	Waste Type	Number of households receiving a collection	Amount collected
Monday	Residual	35	1.94 tonnes
Tuesday	Residual	26	1.24 tonnes
Wednesday	Residual	32	2.78 tonnes
Thursday	Residual	34	2.70 tonnes
Total	Electrical	60	See table 2

**Table 2: Friday electrical items collected**

Item	Number of items
Fridge/Freezer	32
Cooker (Electrical)	2
Tumble Dryer	2
Washing Machine	2
Microwave	1
Fire (Electrical)	1
TV	9
Other (insert)	4
<b>Total</b>	<b>53</b>

**Table 3: Properties serviced by area throughout the week**

Area	Number of households serviced
Attenborough	1
Awsworth	3
Beeston	39
Bramcote	11

Area	Number of households serviced
Brinsley	2
Chilwell	33
Cossall	3
Eastwood	8
Greasley	1
Kimberley	9
Newthorpe	4
Nuthall	5
Stapleford	61
Toton	9
Trowell	1
<b>Total</b>	<b>190</b>

**Table 4: Number of items booked in by resident**

Number of Items booked in by resident	Number of residents
1	94
2	38
3	58

The free weeks were promoted through social media, the website and the local press. Local Members also promoted the scheme. As is shown in Table 3 the majority of residents booking a collection were from the South of the Borough.

A number of residents, mainly from the North of the Borough, did report only seeing the promotion in the local press after the week had been fully booked. To address this, the press release for the January and February collections was sent to the local press earlier to allow for publication in time for when the phone lines opened. At the time of writing this report the effect of the early distribution on the bookings is not known.

It was apparent on collection day that some residents had chosen to dispose of their items in an alternative way. Taking this learning into account the capacity and number of items scheduled on the daily work plan was increased for the second and third free weeks.

Comparison of the statistics from all the Bulky Waste Day events and the free week are shown in the Table 5 below:

**Table 5: Comparison of waste day and free bulky collection weeks**

Event	Average number of visits/properties serviced per day	Average amount of residual waste collected per day	Average amount electrical/metal items collected per event
Waste Day	60 visits per day	2.8 tonnes	22
Free kerbside collection	41 properties per day	2.16 tonnes	53

Analysis of the figures in Table 5 suggests that more residents were serviced on bulky waste day events than the free week. However, it should be noted that on the waste day events it was evident that residents visited multiple times throughout the day. It is therefore likely that the total number of individual properties serviced throughout the day is comparable.

It is also apparent that whilst the tonnage of residual waste collected is comparable there is a significant difference in the number of electrical/metal items collected between the two different collection methods. The majority of electrical items collected on the free week were fridges/freezers, 32 in number. The average number of fridges/freezers collected per waste day event was 5. With such items being difficult to transport the free week appeared to be particularly good for residents disposing of larger items which would otherwise be difficult to take to a waste day event.

The budget allocation for 2019/20 for Waste Days/Free Bulky Waste collections is £15,500. The expenditure incurred on the provision of these services throughout the year will be met within the existing budget.

Following the completion of the three free bulky waste weeks a comprehensive review of the waste days and free weeks will be undertaken. A report will then be prepared for Members to review and provide direction on what free bulky waste system they wish to be implemented in the longer term.

**2. Community Clean Teams Initiative** Linked to the corporate Priority of making reducing litter, reducing fly tipping, increasing recycling and composting and reducing residual waste

From April 2019 there have been twenty two Clean and Green events involving over one thousand individuals. This demonstrates the commitment and enthusiasm there is for learning about the environment and taking pride in the local area.

Since the last Committee a number of Community Clean Team events have taken place.

On 14 November 2019 twenty children from Lawrence View School, Eastwood, took part in a litter pick on Coronation Park and on 23 November 2019 members of Greening Beeston litter picked around Weirfields Recreation Grounds.

On 27 November 2019 members of the Recycling and Horticultural Team met children from Foxwood School, Bramcote, at Bramcote Hills Park. At this Clean and Green event children litter picked the local area, planted daffodils, snowdrops and crocus bulbs as well as learnt about recycling.

On 4 December the Mayor presented a local resident with a certificate, litter picker and other equipment to celebrate their efforts towards the clean and

green agenda. The resident takes it upon themselves to litter pick around Barncroft, Chilwell, embracing the concept of taking pride in the local area.

On 5 December 2019 the Recycling and Horticultural Team met children from Beeston Ryland Junior School, Beeston, at Leyton Crescent Recreation Ground. At this Clean and Green event children litter picked the local area and planted two lime trees as well as daffodil and bluebell bulbs.

In January 2020 an assembly recycling presentation took place to the full school at Horsendale School, Nuthall. The children were educated on the need to recycle and how they can make a difference at both a local and global scale by making environmentally friendly choices in their everyday lives.

The 2019/20 budget allocation of £4000 for Community Clean Teams has been spent. Provision is in place to support any events undertaken before the end of the financial year.

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## Report of the Strategic Director

**BROXTOWE PARKS STANDARD**1. Purpose of report

To update members on the outcome of the latest consultation and site assessments relating to the Broxtowe Parks Standard.

2. Background and Detail

The Corporate Plan 2016-2020 has, as one of its priorities, to protect and enhance the environment for future generations. One of the targets associated with this priority is that 100% of parks and open spaces achieve the Broxtowe Parks Standard. This standard was agreed by Cabinet in 2014. Having a uniform standard across all the sites is seen as a fair and positive way of improving the quality and visitor experience of the parks and open spaces. Appendix 1 details the questions asked as part of this standard.

Since the standard was approved the sites have been assessed on a number of occasions and a report to the Leisure and Environment Committee in January 2019 identified 4 sites not achieving the standard. Appendix 2 details these sites together with the outcome of the consultation reassessments in summer 2019. In addition the appendix lists the outcomes of consultation and site assessments of a further 20% of sites that previously met the standard to make sure they were still achieving the quality targets. Consultation took place during late summer/early autumn 2019 using an online questionnaire and 236 responses were received. Notices were placed on all the sites being assessed asking for responses. The questionnaire was also promoted on the Council's website and through social media.

3. Financial implications

No costings have been included in this report but it is proposed to use some of the issues identified to prioritise funding proposals for future capital programmes for improvements to play areas and parks/open spaces.

**Recommendation**

**The Committee is asked to NOTE the report and the proposal to increase the visits by the Neighbourhood Wardens and the Cleansing teams at Archers Field Recreation Ground, Stapleford.**

Background papers

Nil

APPENDIX 1

Site Assessment

1. How welcoming is the park?
2. How effective is signage?
3. Standard of cleanliness
4. How clean is the site in terms of dog fouling?
5. Accessibility
6. Standard of grass cutting
7. Standard of shrub beds/flower beds maintenance
8. Standard of the tree maintenance
9. Play facilities provided
10. Sports facilities provided
11. How are the issues with violence and anti-social behaviour dealt with?
12. Nature and wildlife management
13. Overall impression of the park/open space

Options

Very good/very well  
Good/Well  
Fair  
Poor/not very well  
Very poor/not at all  
Don't know/not applicable

APPENDIX 2

Sites failing to achieve the Broxtowe Parks Standard in 2018

To achieve the Broxtowe Parks Standard sites must score at least 85% of marks in the fair and above category and at least 45% of marks in the good and above category. Detailed below are the 4 sites not achieving the standard in 2018.

Less than 85% Fair and Above

Chetwynd Road Recreation Ground, Chilwell	76%
Knowle Park, Kimberley	83%
Pasture Road Recreation Ground, Stapleford	79%

Less than 45% Good and Above

Chetwynd Road Recreation Ground, Chilwell	41%
Knowle Park, Kimberley	38%
Millfield Road Open Space, Kimberley	33%

Analysis of the 2018 Survey Work

In summer 2019 the four sites failing to achieve the Broxtowe Parks Standard were reassessed together with 11 other sites previously assessed as achieving the standard. These additional 11 sites were selected at random across the borough from the sites that had not been assessed in the last 3 years. These scores together with the previous assessments in 2018 are shown below.

Area	Name of site	Fair & Above 2018	Good & Above 2018	Fair & Above 2019	Good & Above 2019
Awsorth	The Lane Recreation Ground	Not assessed	Not assessed	88% P	74% P
Beeston	Broadgate Park	Not assessed	Not assessed	90% P	62% P
Beeston	Leyton Crescent Recreation Ground	Not assessed	Not assessed	90% P	77% P
Brinsley	Brinsley Recreation Ground	Not assessed	Not assessed	93% P	76% P
Chilwell	Chetwynd Road Recreation Ground	76% F	41% F	85% P	45% P
Eastwood	Greenhills Road Recreation Ground	Not assessed	Not assessed	86% P	45% P
Eastwood	Hall Park	Not assessed	Not assessed	88% P	50% P
Greasley	Colliers Wood	Not assessed	Not assessed	86% P	72% P
Greasley	Smithurst Road Open Space	Not assessed	Not assessed	87% P	62% P
Kimberley	Knowle Park	83% F	38% F	83% F	50% P
Kimberley	Flixton Road Open Space	Not assessed	Not assessed	92% P	50% P
Kimberley	Millfield Road	83% F	33% F	87% P	59% P

Area	Name of site	Fair & Above 2018	Good & Above 2018	Fair & Above 2019	Good & Above 2019
	Open Space				
Stapleford	Archers Field Recreation Ground	Not assessed	Not assessed	75% F	30% F
Stapleford	Judson Avenue Open Space	Not assessed	Not assessed	90% P	69% P
Stapleford	Pasture Road Recreation Ground	79% F	47% P	91% P	56% P

F = Fail

P = Pass

Based on this round of assessments there are 2 sites failing to achieve the Broxtowe Parks Standard.

Less than 85% Fair and Above

Knowle Park, Kimberley 83%  
 Archers Fields Recreation Ground, Stapleford 75%

Less than 45% Good and Above

Archers Fields Recreation Ground, Stapleford 30%

Site Specific Comments on the 15 Sites Assessed

Awsworth – The Lane Recreation Ground. Mainly positive comments. Improvements to the bowling green and cricket facilities well received. Better signage was suggested on a number of occasions.

Beeston – Broadgate Park. New play area attracted many positive comments. Good scores for cleanliness but concern that sometimes at the weekend due to the popularity of the park there are accumulations of litter.

Beeston - Leyton Crescent Recreation Ground. New play area attracted many favourable responses. Suggestions for additional footpaths. Positive comments on cleanliness and grass cutting.

Brinsley – Brinsley Recreation Ground. The Pride in Parks improvement works undertaken in 2018 have influenced the high scores for this site as have the paths around the site which provide good access.

Chilwell – Chetwynd Road Recreation Ground. An area failing to achieve the standard last year but has seen improved scores for both Fair and Above and Good and Above categories. Positive feedback on improvements relating to lack of dog fouling and good comments on trees. The new junior football goals erected have also improved the site’s facilities.

Eastwood – Greenhills Road Recreation Ground. Good scores in terms of cleanliness, absence of dog fouling and grass cutting has helped this site achieve the standard.

Eastwood – Hall Park. Generally positive scores throughout. Some concern about anti-social behaviour and work needed to improve the footpaths which has now been addressed.

Greasley – Colliers Wood. This Green Flag site scores very well in the Good and Above category and is much appraised by both local residents and visitors to the area. Concerns about frequent washout on the stone footpaths.

Greasley – Smithurst Road Open Space. A popular site offering a wide range of facilities. The refurbished play area was popular. Concern about washout on some of the paths which needs addressing. Cleanliness of the area and absence of dog fouling helped the site achieve the standard.

Kimberley – Knowle Park. An area failing to achieve the standard in 2018 and again last year. Whilst there have been positive improvements in the Good and Above category the site still just falls short in the Fair and Above category. The consultation was however undertaken prior to the new young children's play area being installed as part of the Pride in Parks programme. This should help to improve future scores. The absence of a path around the site also influenced the lower score.

Kimberley – Flixton Road Open Space. The play area scored very well as did the general maintenance of the overall site. Some concerns about vandalism.

Kimberley – Millfield Road Open Space. A big improvement on last year's score with the improvement works to the play area having a strong influence. The site's accessibility, cleanliness and standards of grass cutting helped the site once again achieve the standard.

Stapleford – Archers Field Recreation Ground. This site scored the lowest scores in both the Fair and Above and the Good and Above categories, failing to achieve the standard in both areas. A list of the negative reports concerning anti-social behaviour with related issues such as litter and dog fouling influencing the low scores. The nature conservation and tree areas did score well but there is a clear requirement to work with the Neighbourhood Wardens to help address these issues. Additional litter picks will be undertaken by the Cleansing teams and there will be regular use of social media to highlight the problems and to encourage positive and responsible use of this green space.

Stapleford – Judson Avenue Open Space. Strong scores all round for this small local open space. The improvements to the play area and wildlife areas have been well received.

Stapleford – Pasture Road Recreation Ground. Another site showing big improvement on 2018. High scores for improved signage, grass cutting and cleanliness helped this site achieve the standard again. The path around the site scored very well as did the maintenance of the trees. The play area was identified for improvements and this has been recognised in the play strategy.



## Report of the Chief Executive

**AIR QUALITY STATUS REPORT 2019**1. Purpose of report

To advise Members of the latest Air Quality Status Report which was submitted to the Department of Food Environment and Rural Affairs (DEFRA), and their subsequent response.

2. Detail

Each year, DEFRA requires all local authorities in England to produce an Annual Status Report (ASR) in respect of air quality. The production of an ASR is intended to aid local transparency, increase accessibility of air quality to the wider public audience and encourage buy-in to delivering air quality improvement measures by those best placed to assist (e.g. directors of public health, transport managers etc).

The latest Annual Status Report submitted by Broxtowe Borough Council in June 2019 is attached (appendix 1), along with the response received from DEFRA (appendix 2). This states that "The report is very well written, detailed, and provides the information specified in the Guidance". Various recommendations are made which will be incorporated into the 2020 Air Quality Status Report.

**Recommendation**

**The Committee is asked to NOTE the 2019 Air Quality Status Report and the response from DEFRA.**

Background papers

Nil

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Broxtowe  
Borough  
COUNCIL

# **2019 Air Quality Annual Status Report (ASR) for Broxtowe Borough Council**

In fulfilment of Part IV of the  
Environment Act 1995  
Local Air Quality Management

June 2019

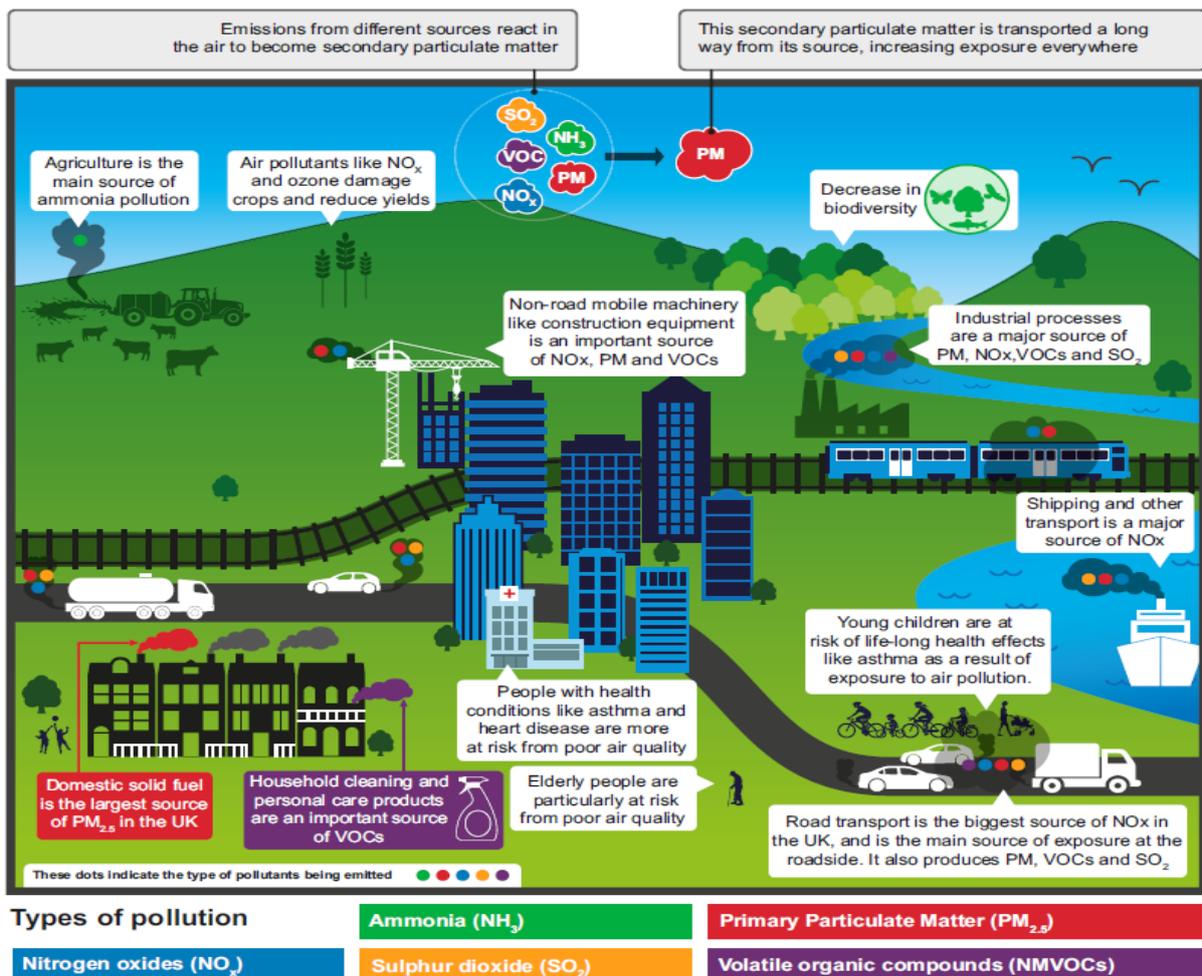
Local Authority Officer	Kate Ratcliffe
Department	Environmental Health
Address	Council Offices Foster Avenue Beeston Nottingham NG9 1AB
Telephone	0115 9177777
E-mail	health@broxtowe.gov.uk
Report Reference number	BBC/AQ/ASR/2019
Date	June 2019

# Executive Summary: Air Quality in Our Area

## What is Air Pollution and where does it come from?

Air pollution is generally defined as any type of particulate (dust) or gaseous substance (e.g. Oxides of Nitrogen) that is emitted into the atmosphere due to the combustion of fuels such as coal, oil, gas, petrol, diesel and the burning of wood or natural gas from domestic central heating boilers or power stations. When these fuels are combusted, they are emitted into the atmosphere and they affect the air quality within the United Kingdom (UK).

### The sources of air pollutants and their effects.



Source – Clean Air Strategy 2019, DEFRA

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/770715/clean-air-strategy-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770715/clean-air-strategy-2019.pdf)

Poor air quality can affect people's health on a daily basis and can result in premature death. Therefore, it is imperative that poor air quality is recognised as a public health issue and that continual measures are taken to improve the air quality even if the air quality objectives in the UK are being met.

The two main types of air pollution within the United Kingdom are Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>), therefore this report will explain the effects of these pollutants on health, the concentration levels within the Borough of Broxtowe and measures that have been, are being and will be taken to improve the air quality within the Borough.

## **What is Nitrogen Dioxide?**

Nitrogen Dioxide is a reddish brown gas with the chemical formula NO<sub>2</sub>. Nitrogen Monoxide is a colourless gas with the chemical formula NO. Collectively NO<sub>2</sub> and NO are known as Oxides of Nitrogen and the chemical formula is NO<sub>x</sub>.

As mentioned previously NO<sub>x</sub> is emitted into the atmosphere due to the combustion of fuels such as coal, oil, gas, petrol, diesel and the burning of wood or as natural gas from domestic central heating boilers or power stations.

Some sources of NO<sub>x</sub> release NO<sub>x</sub> in the form of NO<sub>2</sub> into the atmosphere, these are known as primary sources of NO<sub>2</sub>, which are mainly emitted from vehicle exhausts. It was previously believed that it was petrol vehicles that were the main source of NO<sub>2</sub> however the use of diesel particulate filters within the exhaust systems of diesel vehicles have resulted in high concentrations of NO<sub>2</sub> being emitted into the atmosphere.

Another source of NO<sub>2</sub> in the atmosphere is due to a chemical reaction in the atmosphere between NO and Ozone (O<sub>3</sub>). This is classed as a secondary source of NO<sub>2</sub>. However, if concentrations of O<sub>3</sub> are low near to the source of NO then NO<sub>2</sub> will not be formed.

## What is Particulate Matter?

Particulate matter is the term used for a mixture of solid particles and/or liquid droplets within the air. Particulate matter varies in size with some particles being easily visible to humans e.g. dust, soot, smoke and vapour from domestic boiler flues. However, some particles are so small that they cannot be seen with the naked eye and it is these particles that are easily absorbed deep into the lungs and cannot be expelled when they are breathed in.

### Size of Particulate Matter



Source: USEPA - <https://www3.epa.gov/pm/basic.html>

Research has shown that there is significant harm to health at concentrations of Particulate Matter well below the current EU and UK limit values. (See Appendix K for the Air Quality Objectives for the UK).

There are many sources of particulate matter in the United Kingdom, examples of these are:

- Vehicle exhausts
- The wearing of brake pads, tyres and asphalt
- Rust from vehicles
- Poor fuel combustion
- Dust from demolition and building sites
- Bonfires and inefficient burning of solid fuel e.g. wood.

Within the United Kingdom the main particulate matter that causes concern is particulates that are classed as ‘fine particles’ (PM<sub>2.5</sub>) or ‘inhalable coarse particles’ (PM<sub>10</sub>). The particles are measured in size and referred to as microns (µm). PM<sub>10</sub> are particles that are 10 microns to 2.5 microns in size, and PM<sub>2.5</sub> are particles that are 2.5 microns or less.

## What are the Health Effects of Poor Air Quality?

Air pollution is associated with a number of adverse health impacts both short term and long term. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas<sup>1,2</sup>.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion<sup>3</sup>.

To be able to understand the full effects of poor air quality on humans an understanding of how the pollutants enter the body, where they go once they are within the body and the effects that they have are shown in the diagram below.

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<sup>1</sup> Environmental equity, air quality, socioeconomic status and respiratory health, 2010

<sup>2</sup> Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

<sup>3</sup> Defra. Abatement cost guidance for valuing changes in air quality, May 2013

## Where air pollutants go in our bodies and what they do

A few hours of PM<sub>2.5</sub> over 35 µg/m<sup>3</sup> or NO<sub>2</sub> over 200 µg/m<sup>3</sup> irritates the eyes, nose and throat.

PM can cause strokes. Ultrafine PM has been found in samples of brain and central nervous system tissue.

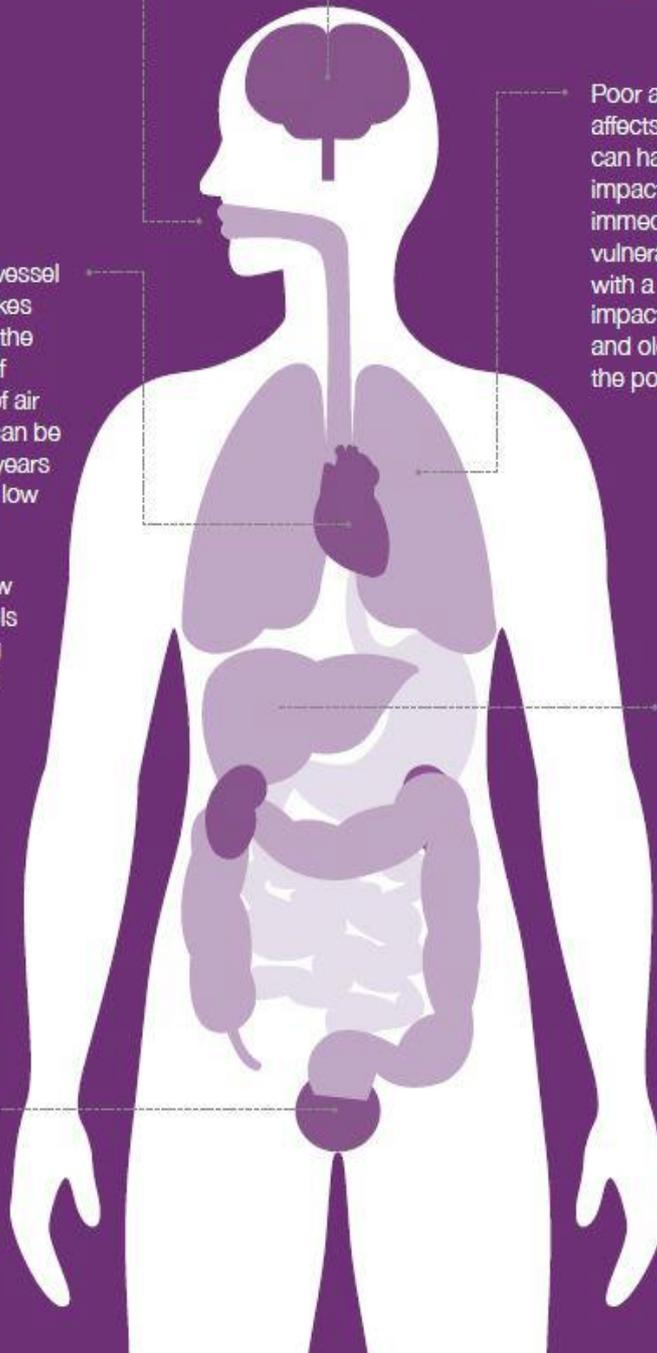
Heart and blood vessel diseases like strokes and hardening of the arteries are one of the main effects of air pollution. These can be caused by a few years exposure to even low levels of PM<sub>2.5</sub>.

Poor air quality affects everyone. It can have long term impacts on all and immediate effects on vulnerable people, with a disproportionate impact on the young and old, the sick and the poor.

Exposure for a few hours to high levels of PM<sub>2.5</sub> can bring on existing illness or strokes and heart attacks in ill people.

Ultrafine PM can get into the blood then throughout the body. Ultrafine particles have been found in body organs.

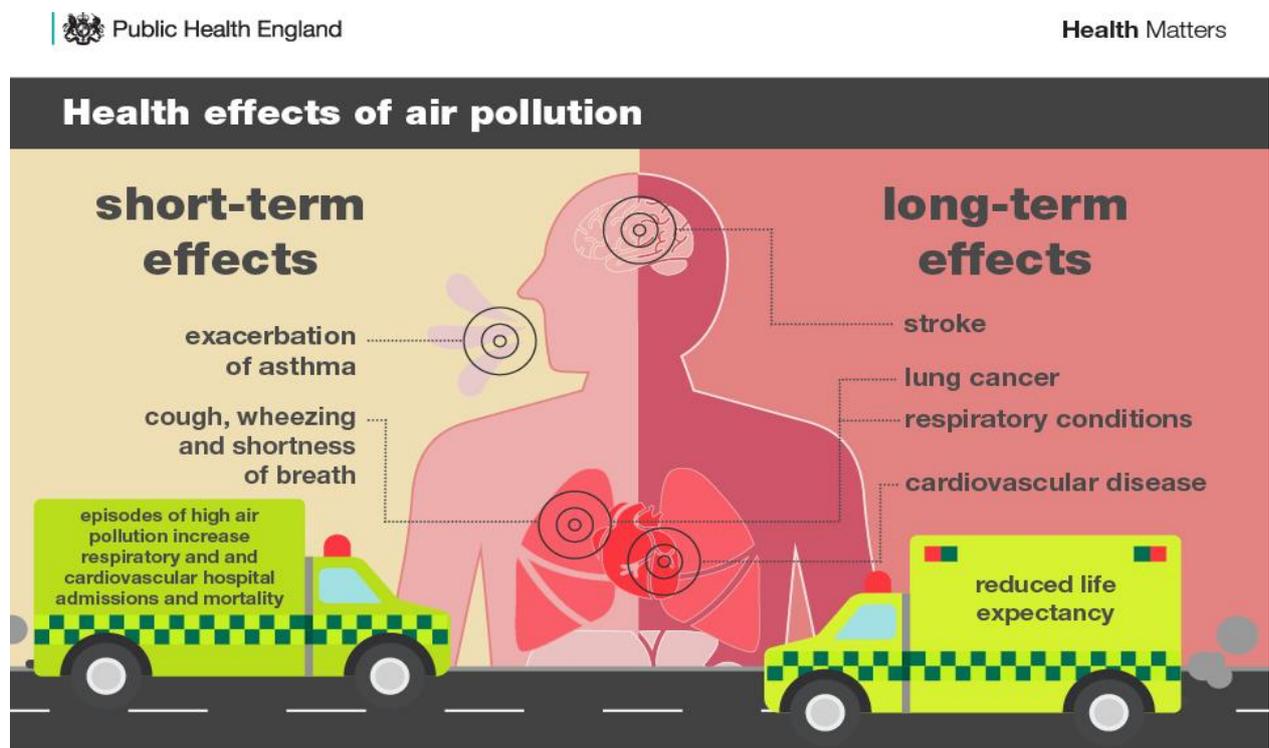
PM has been found in the reproductive organs and in unborn children.



Source - Air Quality: A Briefing for Directors of Public Health, March 2017  
<https://laqm.defra.gov.uk/assets/63091defraairqualityguide9web.pdf>

When people are within an area of poor air quality the length of time they are there is called the 'exposure' time'. There are two types of exposure, short-term and long term. Short-term is when the person is subjected to poor air quality for a short time e.g. a couple of hours and the effects are called 'Short-term effects'. Long term exposure is when people are consistently living or working with in an area where there is poor air quality. The short- term and long-term effects on the body are shown in the diagram below.

### The short and long-term effects of air pollution



Source – Health Matters 2018, Public Health England

### Health Effects of Nitrogen Dioxide

The main health effect of breathing in raised levels of Nitrogen Dioxide is the increased likelihood of respiratory problems, as Nitrogen Dioxide inflames the lining of the lungs, and it can reduce immunity to lung infections. This can cause problems such as wheezing, coughing, colds, flu and bronchitis and can exasperate pre-existing conditions like asthma and Chronic Obstructive Pulmonary Disease.

The Committee on the Medical Effects of Air Pollution (COMEAP) has produced estimates of the attributable deaths of people aged 25+ due to NO<sub>2</sub> and Particulate Matter based on 36,000 for all local authorities in the United Kingdom. The estimates are based on the researched evidence of mortality risk combined with modelled levels of background air pollution to which populations are exposed to at each local authority. Table i provides the results for the East Midlands, Nottinghamshire County Council, Nottingham City and all the District and Borough Councils within Nottinghamshire.

**Table i – Estimated Attributable Deaths in 2018 due to NO<sub>2</sub> and Particulate Matter based on 36,000.**

<b>Area</b>	<b>Attributable deaths Age 25+ due to NO<sub>2</sub> and PM based on 36,000</b>	<b>Associated Life-years Lost based on 36,000</b>
East Midlands	3,115	29,813
Nottinghamshire County Council	567	5,430
Nottingham City	181	1,734
Ashfield	94	913
Gedling	87	866
Newark and Sherwood	87	863
Bassetlaw	84	855
<b>Broxtowe Borough Council</b>	<b>86</b>	<b>844</b>
Mansfield	79	819
Rushcliffe	77	728

**Source:** COMEAP, Associations of long-term average concentrations of Nitrogen Dioxide with mortality, 2018.

Table i shows that in the Borough of Broxtowe out of 844 life years lost, 86 of these are attributable to NO<sub>2</sub> and Particulate Matter. However, the data also identifies that Broxtowe does not have the highest number of deaths that are attributable to air quality in comparison to other District and Borough authorities in Nottinghamshire

## **Health Effects of Particulate Matter**

The health effects associated with short term and long-term exposure to particulate matter are; exacerbation of asthma, effects on lung function, increases in hospital admissions for respiratory and cardiovascular conditions, and also increases in mortality<sup>4</sup>. Public Health England (PHE) has produced estimates of the risk of mortality from particulates for all local authorities in the United Kingdom. The estimates are based on the researched evidence of mortality risk combined with modelled levels of background air pollution to which populations are exposed to at each local authority. Table ii provides the results for Nottingham City and Broxtowe Borough Council.

**Table ii – Estimated Effects of Annual Mortality in 2017 of human-made PM<sub>2.5</sub> Air Pollution.**

<b>Area</b>	<b>Attributable fraction</b>	<b>Attributable * Deaths aged 30 and over</b>	<b>Associated life-years lost</b>
Nottingham City	5.6	130	1,397
Broxtowe Borough Council	5.5	62	612

**Source:** Estimating Local Mortality Burdens associated with particulate air pollution, PHE, 2017.

\*Air pollution is likely to contribute a small amount to the deaths of a larger number of exposed individuals rather than being solely responsible for the number of deaths equivalent to the calculated figure of attributable deaths.

Although the figures in Table i show that in Broxtowe Borough Council there are believed to be 62 deaths attributable to human-made air pollution, this figure needs to be put into context as deaths that are attributable to smoking and alcohol

<sup>4</sup>Gowers, A.M. et al Estimating Local Mortality burdens associated with Particulate Air Pollution, Public Health England, 2017.

consumption are far higher. For example Nottingham City had 183 deaths attributable to human-made air pollution, but there are 1408 deaths attributable to smoking<sup>5</sup> and 153 deaths related to alcohol consumption<sup>6</sup>.

However, as previously mentioned in this report it must be noted that research has shown that there is significant harm to health at concentrations of Particulate Matter well below the current EU and UK limit values.

## **Air Quality in the Borough of Broxtowe**

The main air quality issue within the Borough is due to the M1 and the A52, which is the main road that connects Nottingham to Derby and is used heavily by commuters. Residential properties are situated alongside the M1 and the A52.

The main pollutant of concern within the Borough is Nitrogen Dioxide, which is emitted from vehicle exhausts and is prevalent in areas where there are congested roads. However, it must also be noted that ambient background levels are affected by emissions from domestic heating e.g. Oxides of nitrogen from boilers and particulate matter from solid fuel burners.

Broxtowe Borough Council participates in the United Kingdom Nitrogen Dioxide diffusion tube network and has 43 diffusion tubes sites throughout the Borough. The sites are primarily monitoring the M1 corridor and the A52. Some of the diffusion tubes are sited within and near to the existing Air Quality Management Area (AQMA), which is situated in Trowell. Monitoring is still being undertaken in the three revoked AQMAs to ensure that the concentrations remain below the air quality objective. Further information on the AQMA is discussed in Chapter 2.1 of this report.

The 2018 nitrogen dioxide results show that the air quality levels are below the objective of 40µg/m<sup>3</sup> for all of the monitoring locations throughout the Borough. The results are discussed in greater detail in Chapter 3.2.1 of this report.

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<sup>5</sup> Tobacco Control Profiles 2015-2017, Public Health England. <http://fingertipsreports.phe.org.uk/health-profiles/2017/e06000018.pdf>

<sup>6</sup> Local Alcohol Profiles for England, 2017. <https://fingertips.phe.org.uk/profile/local-alcohol-profiles/data#page/4/gid/1938132832/pat/6/par/E12000004/ati/102/are/E06000018/iid/91382/age/1/sex/4>

Since January 2013, there are only thirteen NO<sub>2</sub> monitoring sites that have continued to be used for the past six years. Therefore, it is important to identify any trends in these sites. Out of the thirteen sites, ten of the sites are showing a downward trend since 2013, the three remaining sites are showing an overall downward trend since 2013 but have increased in 2018 by 1µg/m<sup>3</sup>. The trends are discussed in greater detail in Chapter 3.2.1 of this report and Appendix C contains the trend graphs for the thirteen sites.

In respect of particulates, the modelled background level provided by Defra for the Borough of Broxtowe is predicted to be between 8µg/m<sup>3</sup> and 11µg/m<sup>3</sup> for 2018, with the annual mean for 2018 being 10µg/m<sup>3</sup>. The World Health Organisation (WHO) guideline level for PM<sub>2.5</sub> is 10µg/m<sup>3</sup>.

Broxtowe Borough Council has a close working relationship with Highways England and Nottinghamshire County Council Highways Department. Highways England manages the M1 Motorway and the A52, which run through the Borough. Nottinghamshire County Council Highways Department manage the remaining roads that run through the Borough; this includes the A610/B600 Nuthall Roundabout.

The Council works with Highways England and Nottinghamshire County Council by continuing to monitor air quality levels throughout the Borough, to inform them of any changes to the air quality levels, to provide maps of the air quality management areas and to provide yearly air quality reports. By working together actions are implemented where possible to ease congestion by maintaining a steady flow of traffic throughout the Borough and to also promote sustainable travel.

The Environmental Health team at Broxtowe Borough Council also works closely with the Environment Agency who attends the Nottinghamshire Environmental Protection Working Group meetings and colleagues in the Planning department at the Council. This ensures that air quality issues are raised and considered throughout the planning process.

## Actions to improve Air Quality

Below is a brief summary of the core actions to target sources of pollution in the Borough of Broxtowe over the past year.

- Changes in Taxi Licensing Conditions at Broxtowe Borough Council - From the 13th June 2018, all petrol vehicles are required to meet Euro 5 standards, all new diesel vehicles are required to meet Euro 6 emissions. Hybrid and Electric Vehicles will be licensed as “Taxi’s” by quoting minimum 70kW and reducing boot space requirement to allow for battery storage.
- Low Emission Fleet Vehicles – Broxtowe Borough Council have purchased three new Euro 6 vehicles to replace three older more polluting vehicles.
- Marketing and promotion of sustainable transport alternatives – both the County Council and Broxtowe Borough Council continue to develop and deliver programmes to encourage more sustainable travel. These include infrastructure improvements such as the County Council’s integrated transport programme delivering improvements for pedestrians, cyclists and bus users; as well as marketing materials and campaigns developed in partnership with stakeholders such as passenger transport operators
- Go-Ultra Low programme – the County Council, in partnership with Nottingham and Derby City Councils, successfully secured £6.1m of funding to deliver the Go-Ultra Low programme between 2016 and 2021. The programme includes the development and delivery of an area-wide electric vehicle charging infrastructure network; and during 2017, the partnership procured a preferred delivery partner of the charging infrastructure. Work is now underway to identify a feasible network across the Derbyshire/Nottinghamshire area. To date 38 publicly available charge points have been installed across the Borough, 28 of these are in Broxtowe Borough Councils owned car parks in Beeston, Eastwood, Kimberley and Stapleford.
- Retrofitting of buses – In February 2018 it was announced that the County Council (and Nottingham City Council) had successfully secured funding from the Green Technology Fund to retrofit some of the most polluting buses in the County – including a number of buses that travel in the Borough. Work is now underway to retrofit the identified vehicles and will continue in to 2019/20.

- Electric Buses - Introduction of two electric buses (and their associated infrastructure) on route 510, serving communities in Beeston and Stapleford.
- Traffic signal improvements – All traffic signalling equipment at A610 Nuthall Island was replaced during 2017/18; with the installation of additional traffic monitoring cameras and advanced remote control systems to enable reactive and pro-active interventions to improve traffic flows. A review of the signal timings and linking at the signal junction was also undertaken.
- Personal travel planning with Beeston residents- which resulted in a 5% reduction of journeys to work by car amongst participants
- Effective Network Management – the County Council continues to work with stakeholders to effectively manage its highway network. Along with the co-ordination of works, contingency planning, and effective event and incident planning , the County Council has purchased an additional camera enforcement car to effectively enforce parking violations.
- Workplace Travel Plans – Broxtowe Borough Council and Nottinghamshire County Council have completed a council travel plan to determine which modes of transport are suitable. Travel Plans are also developed with businesses through the development control process.
- Joint Strategic Needs Assessment - Air Quality is now a chapter in the Joint Strategic Needs Assessment and it is part of the Health and Wellbeing Board Considerations.

Further information on these core actions and progress on grant funded projects are discussed in greater detail in Table 2.2 of this document.

## **Conclusions and Priorities**

The 2018 nitrogen dioxide results show that the air quality levels are below the objective of  $40\mu\text{g}/\text{m}^3$  for all of the monitoring locations throughout the Borough including the AQMA. Although the objectives are being met it is very important to continue to improve air quality within the UK as poor air quality is a public health concern.

Therefore, to continue to improve the air quality in the Borough the priorities for Broxtowe Borough Council in addressing air quality for the coming year are to:

- Review the NO<sub>2</sub> diffusion tubes network annually, discontinue sites where the annual air quality levels are comfortably below the objective, and relocate them to new sites within the Borough. Extensive monitoring will allow Broxtowe Borough Council to identify and focus on ‘problem’ areas.
- Continue to reduce the levels of NO<sub>2</sub> in the Borough by working with Highways England and Nottinghamshire County Council.
- Continue to be a member of the East Midlands Air Quality Network (EMAQN), to liaise with colleagues in Public Health and other local authorities.
- Continue to promote the final version of the “EMAQN Air Quality and Emissions Mitigation: guidance for developers” document.
- Continue to be a member of the Nottinghamshire Environmental Protection Working Group, and to liaise with colleagues in Public Health and the Health and Wellbeing Boards (Nottingham City and Nottinghamshire County) to ensure that Air Quality continues to be included in the Joint Strategic Needs Assessment for the County and any future work that involves air quality issues.
- Engage with the public about air quality and raise awareness of the health effects of air quality.
- Continue to provide the public, companies and businesses within the Borough with methods that they can use to improve air quality for themselves and also the health of their employees.
- Continue to provide information on green travel e.g. walking, cycling by providing leaflets.
- Continue to support bus companies and taxis that operate within the Borough to reduce emissions.
- Continue to review suitable research methods for reducing air quality levels for both NO<sub>2</sub> and particulate matter.
- Broxtowe Borough Council is an active member in the Air Quality Strategy Task Group.
- Ensure that the new Nottinghamshire Air Quality Strategy when completed is promoted and used once more as a valuable working document.

- Review Broxtowe Borough Councils Air Quality Action Plan and update the document to ensure that it is still relevant and that the measures are suitable to reduce air quality within the Borough.
- Pending a Planning Policy Review in 2019, Environmental Health is continuing to liaise with the Planning Department at Broxtowe Borough Council about the installation of Electric Vehicle Charging Points on future large commercial or large housing developments within the Borough. This is to promote sustainable travel.
- Continue to attend regional HS2 meetings to ensure that suitable mitigation measures are made during the construction phase and when HS2 is operational.

One of the challenges associated with addressing the air quality in the Borough is that the main source of the air quality problem is the M1 Motorway, which is managed by Highways England and is not under the control of Broxtowe Borough Council. Although Broxtowe Borough Council have a close working relationship with Highways England it is unable to impose or make any changes to the M1 to improve the air quality within the neighbouring residential areas. However, Highways England has undertaken projects at great expense in the past to improve the air quality within the Borough e.g. widening scheme and Smart Motorway scheme.

Apart from the M1 and the A52 all of the roads within the Borough are managed by Nottinghamshire County Council who manages the traffic flows, repairs, diversions etc. There are several challenges associated with this. The first challenge is that Broxtowe Borough Council is unable to impose or make any changes to the structure or flow of the roads. The second challenge is that the allocated County Council integrated transport funding has been reduced by approximately £3.5m from 2015/16 onwards. This significantly reduces the funding available for transport improvements that will deliver air quality improvements.

A lack of funding and resources is also a challenge that Broxtowe Borough Council face in trying to address the air quality in the Borough. The lack of resources/funding

does not allow the monitoring of PM<sub>10</sub> and PM<sub>2.5</sub> within the Borough as the equipment is expensive to buy and also maintain. However although monitoring is not carried out, there are measures that are enforced in the Borough which would reduce airborne particulates, see Chapter 2.3 in this report for further information.

## **Local Engagement**

Since the 2018 Annual Status Report (ASR) Broxtowe Borough Council (BBC) has continued to be in the East Midlands Air Quality Network (EMAQN), who review current air quality issues for the area. EMAQN is run by Public Health England. EMAQN has collectively produced a report to assist local authorities and developers when determining whether an air quality assessment is needed during the planning application process. The aim of EMAQN is to engage decision makers from different disciplines to assist in reducing AQ levels as a whole in the East Midlands. This also enables neighbouring counties to communicate more openly, which is vital for BBC due to it being next to Derbyshire because the A52 is a major source of air pollution, which runs through Derbyshire and Nottinghamshire.

Defra have identified Derby and Nottingham as exceeding the air quality objective therefore, they are mandated to implement a Clean Air Zone (CAZ). However, Nottingham City Council subsequently undertook air quality modelling of several potential CAZ options (charging and non-charging) alongside planned actions (e.g. measures to provide and promote sustainable transport infrastructure) to determine if they would deliver the required air quality objectives. This modelling has identified that air quality objectives are anticipated to be met without the introduction of a charging CAZ.

Broxtowe Borough Council was selected in 2018 to be in the Air Quality Task and Finish Group, which has been set up to update the Nottinghamshire Air Quality Strategy (NAQS). The aim is to get the NAQS endorsed by the County Health and Well-Being Board to ensure that delivery of the NAQS is aligned with the delivery of the Nottinghamshire Health and Wellbeing Strategy. An update on the progress of this group and the NAQS will be in the Annual Status Report in 2020.

## How to Get Involved

Residents and Businesses living or working in Nottinghamshire can improve the air quality in the area by taking simple measures. One of the main changes that can be made is to use sustainable travel more and reduce dependency on the car when possible. Below are some of the actions that people can take, and particularly for short journeys.

- Public transport – To use all means of public transport whenever possible e.g. trams, buses and trains. In addition to printed materials, an integrated public transport planning tool detailing local bus, rail and tram networks, as well as for trips further afield can be found at <https://www.nottinghamshire.gov.uk/travelchoice/journey-planner> and <http://www.traveline.info/>. Details on travelling on school buses to Nottinghamshire schools and assistance available to do so, can be found at <http://www.nottinghamshire.gov.uk/education/travel-to-schools>. The tram timetable is available at <http://www.thetram.net/>. The Big Wheel promotes sustainable travel within the Nottingham urban area (including parts of Broxtowe); it assists people and businesses with journey planning and advice. Further information can be found at <http://www.thebigwheel.org.uk/>.
- Car sharing schemes - Nottinghamshire have a car share scheme which is available to anyone at <https://liftshare.com/uk/community/nottinghamshire> but all businesses can produce their own.
- Park and Ride – There are a variety of Park and Ride sites within Nottinghamshire, which serve the Nottingham Tram and buses. Information for these Park and Ride sites which includes maps of their locations are found at <http://www.nottinghamshire.gov.uk/transport/public-transport/park-and-ride>
- Walking and Cycling – The health benefits of physical activity e.g. walking or cycling outweigh the risks from air pollution. You can easily avoid the worst pollution by travelling along quieter streets. Even walking on the side of the pavement furthest from the road can help.

Walking -

- Walk short distances rather than drive; this also has the benefit of improving your health as well.

- Information on walking networks in Nottinghamshire can be found at <http://www.nottinghamshire.gov.uk/planning-and-environment/walking-cycling-and-rights-of-way/walking> and <http://www.nottinghamcity.gov.uk/transport-parking-and-streets/rights-of-way-walking-and-cycling/walking-in-nottingham/> and a planning tool for deciding your route when walking can be found at <http://walkit.com/>.
- Walking and cycling to school – School travel plans promote group cycling and walking for pupils to safely get to school. Information on the travel to school options can be found at <http://www.nottinghamshire.gov.uk/education/travel-to-schools>.

#### Cycling –

- Use the extensive cycle routes that are available throughout Nottinghamshire. Maps and cycling journey planners that cover all of Nottinghamshire, including the city and further afield are available at <http://www.nottinghamshire.gov.uk/planning-and-environment/walking-cycling-and-rights-of-way/cycling>. Maps of just the city cycle routes for Nottingham are available at <http://www.nottinghamcity.gov.uk/cycling>. There are also cycle centres within Nottinghamshire that are run by RideWise who are a Nottingham based charity. RideWise provide weekly advice, training, bike rides, free bike loans and information about routes and journey planning. Further information about RideWise can be found at <http://www.ridewise.org.uk/ride/index.php> Sustrans is also a charity that promotes sustainable travel and further information can be found at <http://www.sustrans.org.uk/>
- Driving- When you have to drive you can still help to improve air quality by;
  - Make sure that your car is at its most efficient and think about how you drive, this will also save you money. Tips on how to save money on fuel and reduce your emissions are available at <http://www.energysavingtrust.org.uk/travel/driving-advice>.
  - If you are thinking about changing your car consider buying a low-emission vehicle, you can get more information on these vehicles and the support available at <http://goultralownottingham.org.uk/>

- Smoke Control Area – Large parts of Nottinghamshire is a smoke control area, therefore you cannot emit smoke from a chimney unless you are burning an authorised fuel or using an exempt appliance e.g. some burners or stoves. Further information on suitable fuels and exempt appliances can be found at <https://smokecontrol.defra.gov.uk/index.php>. All appliances must be kept in good working order to ensure that they are working efficiently and it is advised that you contact your Local Council to determine whether you are in a smoke control area or not.
- Bonfires – To not have bonfires at all and to compost all garden waste and recycle rubbish rather than burn it.
- House Boilers – Ensure that boilers are serviced regularly and kept in good working order. If a boiler needs replacing then purchase one that has a low NOx emission rating.

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# 1 Local Air Quality Management

This report provides an overview of air quality in Broxtowe Borough Council during 2018. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Broxtowe Borough Council to improve air quality and any progress that has been made.

The Statutory Air Quality Objectives applicable to LAQM in England can be found in Table K.1 in Appendix K.

## 2 Actions to Improve Air Quality

### 2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of the objectives.

Further information about the remaining AQMA declared by Broxtowe Borough Council can be found in Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at <https://www.broxtowe.gov.uk/for-you/environmental-health-noise-and-pollution/air-quality/> Alternatively, see Appendix E: Maps of Monitoring Locations and Appendix F: Map of AQMA in Trowell, which provides a map of all the monitoring locations throughout the Borough and also a map of the AQMA in Trowell.

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	City / Town	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance (maximum monitored concentration at a location of relevant exposure)		Action Plan (inc date of publication)
						At Declaration $\mu\text{g}/\text{m}^3$	Now $\mu\text{g}/\text{m}^3$	
AQMA 1 Trowell	1 <sup>st</sup> February 2006	NO <sub>2</sub> annual mean	Trowell, Nottingham	AQMA 1 encompasses twenty properties on parts of Iona Drive and Tiree Close next to the M1 motorway in Trowell	Yes	45	32	<a href="#">Action Plan 2008.</a>

## 2.2 Progress and Impact of Measures to address Air Quality in Broxtowe Borough

Defra's appraisal of last year's ASR concluded that;

- ❖ *The Nuthall AQMA has officially been revoked in 2017, and there is now one remaining AQMA in Trowell.*
- ❖ *There have been no exceedances of national air quality objectives in 2017, but site 19 in the Trowell AQMA still demonstrates concentrations within 20% of the annual mean objective concentration for NO<sub>2</sub>. - **BBC will continue to monitor at this location.***
- ❖ *The borough has stated that they will continue to monitor and keep the AQMA under review whilst the effects of the SMART motorway scheme are being determined, and until a significant decreasing trend can be demonstrated. This is supported, and it is suggested that the AQMA could be considered for revocation after demonstrating compliant NO<sub>2</sub> concentrations below 36 µg/m<sup>3</sup> for three consecutive years. – **BBC will continue monitoring at this site and will consider revocation of the AQMA if it is consistently below the annual mean for five or more consecutive years. See Chapter 3.2.1 of this report for the results.***
- ❖ *There is an additional measured concentration within 20% of the annual mean objective concentration for NO<sub>2</sub> at site 48, which was newly introduced in 2018. The borough proposes to keep this under review in future years, which again, is supported - **BBC will continue to monitor and report at this location.***
- ❖ *The Borough has made some good progress towards developing their AQAP and implementing AQAP measures in the last year, which is commended.*
- ❖ *The Borough may wish to consider developing some AQAP measures, which specifically target air quality improvements in the remaining AQMA. It would also be useful if the Borough could develop pollution reduction targets for their AQAP measures, and present these in a separate column from the KPIs, following the latest reporting template. – **BBC will endeavour to do this.***

Broxtowe Borough Council (BBC) and Nottinghamshire County Council (NCC) have taken forward a number of measures during the current reporting year of 2018/2019 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2 More detail on these measures can be found in BBC Action Plan, the Nottinghamshire Local Transport Plan 2011-2026 (and its implementation plans) and Highways England Reports (Post opening project evaluation reports for the M1 Junction 25 to 28 widening and the A52 West of Nottingham Corridor Improvements).

Key completed measures are:

- A second camera enforcement vehicle was purchased by Nottinghamshire County Council - to enforce parking obstructions outside schools and in bus lanes. The purchase of a third vehicle was approved in April 2019.
- Changes in Taxi Licensing Conditions at Broxtowe Borough Council - From 13th June 2018, all petrol vehicles are required to meet Euro 5 standards, all new diesel vehicles are required to meet Euro 6 emissions. Hybrid and Electric Vehicles are to be licensed as "Taxi's" by quoting minimum 70kW and reducing boot space requirement to allow for battery storage.
- Low Emission Fleet Vehicles – Broxtowe Borough Council have purchased three new Euro 6 vehicles to replace three older more polluting vehicles.
- Marketing and promotion of sustainable transport alternatives – both the County Council and Broxtowe Borough Council continue to develop and deliver programmes to encourage more sustainable travel. These include infrastructure improvements such as the County Council's integrated transport programme delivering improvements for pedestrians, cyclists and bus users; as well as marketing materials and campaigns developed in partnership with stakeholders such as passenger transport operators
- Go-Ultra Low programme – the County Council, in partnership with Nottingham and Derby City Councils, successfully secured £6.1m of funding to deliver the Go-Ultra Low programme between 2016 and 2021. The programme includes the development and delivery of an area-wide electric vehicle charging infrastructure network; and during 2017, the partnership procured a preferred delivery partner of the charging infrastructure. Work is

now underway to identify a feasible network across the Derbyshire/Nottinghamshire area.

- Electric Vehicle Charging Points - To date 38 publicly available charge points have been installed across the Borough, 28 of these are in Broxtowe Borough Councils owned car parks in Beeston, Eastwood, Kimberley and Stapleford.
- Retrofitting of buses – In February 2018 it was announced that the County Council (and Nottingham City Council) had successfully secured funding from the Green Technology Fund to retrofit some of the most polluting buses in the County – including a number of buses that travel in the Borough. Work is now underway to retrofit the identified vehicles and will continue in to 2019/20.
- Electric Buses - Introduction of two electric buses (and their associated infrastructure) on route 510, serving communities in Beeston and Stapleford.
- Traffic signal improvements – All traffic signalling equipment at A610 Nuthall Island was replaced during 2017/18; with the installation of additional traffic monitoring cameras and advanced remote control systems to enable reactive and pro-active interventions to improve traffic flows. A review of the signal timings and linking at the signal junction was also undertaken.
- Personal travel planning with Beeston residents- which resulted in a 5% reduction of journeys to work by car amongst participants
- Effective Network Management – the County Council continues to work with stakeholders to effectively manage its highway network. With the co-ordination of works, contingency planning, and effective event and incident planning.
- Workplace Travel Plans – Broxtowe Borough Council and Nottinghamshire County Council have completed a council travel plan to determine which modes of transport are suitable. Travel Plans are also developed with businesses through the development control process.
- Joint Strategic Needs Assessment - Air Quality is now a chapter in the Joint Strategic Needs Assessment and it is part of the Health and Wellbeing Board Considerations.

- Increase in the number of members registered in the car share scheme - to 3,351 members. As a result, there was a 1.69t reduction in NOx; and a 647kg reduction in CO<sub>2</sub> during 2018.
- Cycle Training - 7,544 people received cycle training during 2018/19.

Broxtowe Borough Council expects the following measures to be completed over the course of the next reporting year:

- ❖ Cycling Networks - Completion of the improved cycle links between Beeston, the Enterprise Zone and the City.
- ❖ Local Cycling and Walking Infrastructure Plan (LCWIP) – Prioritised List of improvements to be included in the final LCWIP.
- ❖ Bus retrofitting programme - Collectively Nottingham County Council and Nottingham City Council secured £2.8 million from the Green Bus Technology Fund to retrofit older buses. This includes 6 different services that operate in the Borough of Broxtowe
- ❖ Nottinghamshire Air Quality Strategy (NAQS) - Completion of the revised NAQS, for it to be approved at the Nottinghamshire Health and Wellbeing Board and promoted within Nottinghamshire.
- ❖ Planning and Policy Guidance – the adoption of Broxtowe Borough Council's Local Plan including Policy 20 and 26 which are relevant to improving AQ within the Borough.
- ❖ Additional CCTV Enforcement Vehicle - Purchase of the third CCTV vehicle.
- ❖ Cycling Maps – To be reviewed and updated.
- ❖ Off-Street Parking Order – All of Broxtowe Borough Councils Off-street Parking orders are to be consolidated into one order and approved by the BBC's cabinet.
- ❖ Electric Fleet Vans – Two more electric fleet vans will be procured by Broxtowe Borough Council.

Broxtowe Borough Council's priorities for the coming year are predominantly through measures to make the best use of the transport networks and through smarter travel measures that will encourage people to travel more sustainably. Measures will include:

- Traffic control and information provision to minimise disruption and delay on County Council managed roads (including the A610) such as contingency planning, the effective co-ordination of works and the provision of real-time travel information
- Parking enforcement on County Council managed roads to ensure that the traffic keeps moving
- Measures to reduce the need to travel at peak times such as the provision and encouragement of flexible working arrangements
- The facilitation of smarter travel behaviour such as the provision of a car sharing scheme and integrated and concessionary ticketing schemes
- The encouragement of smarter travel behaviour such as the marketing and promotion of passenger transport, walking and cycling, provision of cycling and walking route maps, cycle training programmes, and web-based journey planners
- The encouragement of the uptake of low-emission vehicles through the delivery of the Nottingham Go Ultra Low City bid funding, including the continued identification and implementation of the Nottinghamshire public electric vehicle charging network as well as grants for businesses to install on-site charging infrastructure
- Enhancements to the local cycling and walking networks

The principal challenges and barriers to implementation that Broxtowe Borough Council and Nottinghamshire County Council anticipates facing are:

- Ensuring funding is available for the above measures to continue their delivery
- Ensuring sufficient mitigation is secured through the development control process to address the potential impacts on the highway network of not only individual developments but also the cumulative impacts of development.

Progress on the following measures has been slower than expected due to:

- Cycling Networks – Other cycling improvements are developed and delivered as part of the annual integrated transport programme but the schemes are dependant on funding being made available for such improvements.
- Public Cycle Hire Scheme – The scheme is dependent upon commercial cycle hire scheme providers committing to and delivering a scheme.

Whilst the measures stated above and in Table 2.2 will help to contribute towards compliance, Broxtowe Borough Council anticipates that further additional measures not yet prescribed will be required in subsequent years to continue to achieve compliance and enable the revocation of AQMA 1 in Trowell.

At the time of writing this report there is a currently a consultation underway regarding the potential changing of the HS2 route through the Trowell area, which may effect the AQMA in the future. The outcome of this consultation will be reported in the 2020 Air Quality Annual Status Report.

Table 2.2 - Progress on Measures to Improve Air Quality

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
1	Light rail tram infrastructure	Transport Planning and Infrastructure	Public transport improvements -interchanges stations and services	NCiC/NCC; DfT/WPL funding	Pre - 2012	2013-2016	Increased passenger transport patronage	<ul style="list-style-type: none"> <li>•NET Phase 2 (with route through Broxtowe) opened 2015</li> <li>•No further schemes other than a possible extension to the HS2 Terminus in Toton.</li> </ul>	Complete
2	Car sharing scheme	Alternatives to private vehicle use	Car & lift sharing schemes	NCC	Pre-2006	On-going	In 2018: 1.69 tonnes reduction in NOx; 647.13kg reduction in CO2	<ul style="list-style-type: none"> <li>•3,351 current members.210 members in 2018</li> </ul>	On-going
3	Introduction of car club	Alternatives to private vehicle use	Car Clubs	NCC/NCiC	2014-2017	Dependent on success of Nottingham city scheme	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•Nottm city scheme introduced in 2014.</li> <li>•Provider reviewed in 2018. Expansion of scheme into county dependent on its success which is still unclear</li> <li>•Funding for implementation to be determined</li> </ul>	On-going
4	Nottingham Go-Ultra Low programme - introduction of areawide EV charging network	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	NCiC/NCC/ BBC; OLEV funding	2015/16	2016-2021	On-going take-up of cleaner vehicles	<ul style="list-style-type: none"> <li>•£6.1m funding secured for 2016-2021</li> <li>•Site investigation to determine feasibility and installation of infrastructure underway.</li> <li>•To date 38 publicly-available charge points have been installed across the Borough. 28 are installed in BBC car parks in Beeston, Eastwood, Kimberley and Stapleford.</li> <li>•Grants also available to help businesses install charging infrastructure</li> </ul>	2021

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
5	<b>Nottingham Go-Ultra Low programme - promoting uptake of LEVs</b>	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	NCiC/NCC; OLEV funding	2015/16	2016-2021	On-going take-up of cleaner vehicles	<ul style="list-style-type: none"> <li>•£6.1m funding secured for 2016-2021</li> <li>•Preferred partner to deliver EV charging infrastructure procured during 2018</li> <li>•Promotion events held for public, businesses and fleet operators including loans of LEVs for trial use in 2018</li> </ul>	2021
6	<b>Nottingham City Clean Air Zone</b>	Promoting Low Emission Transport	Low Emission Zone (LEZ) or Clean Air Zones (CAZ)	NCiC; DfT funding	2016-2019	2019/20	Reduced Emissions	<ul style="list-style-type: none"> <li>•Nottingham City Council undertook air quality modelling of several potential CAZ options (charging and non-charging) alongside planned actions (e.g. measures to provide and promote sustainable transport infrastructure) to determine if they would deliver the required air quality objectives. This modelling has identified that air quality objectives are anticipated to be met without the introduction of a charging CAZ.</li> </ul>	2020
7	<b>Joint Strategic Needs Assessment</b>	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	NCC/NCiC/ Borough and District councils	N/A	2017	Raising awareness and reduced emissions	<ul style="list-style-type: none"> <li>•Air Quality is now a chapter in the Joint Strategic Needs Assessment and part of the Health and wellbeing Board considerations.</li> <li>•Currently being reviewed and updated in 2019.</li> </ul>	On-going
8	<b>Nottinghamshire Air Quality Strategy</b>	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	NCC/NCiC/ Borough and District councils	2018	2019 onwards	Improving Air Quality, reduced Emissions and Raising awareness.	<ul style="list-style-type: none"> <li>•Strategy reviewed and rewritten.</li> <li>•Due to be approved at Nottinghamshire Health &amp; Wellbeing Board in June 2019</li> </ul>	2019

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
9	<b>Planning and Policy Guidance</b>	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	BBC	2015-2016	2016	Reduced Emissions	<ul style="list-style-type: none"> <li>Review of the Broxtowe Local Plan to ensure that air quality remains an important consideration when granting planning permission and to encourage developers to include sustainable travel measures as part of the planning application.</li> <li>Update – Policy 20 is due to be adopted in September 2019.</li> </ul>	2019
10	<b>Developer requirements to provide of EV charging points at new development</b>	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	BBC	2015-2016	2016	Reduced Emissions	<ul style="list-style-type: none"> <li>Review of the Broxtowe Local plan includes Policy 26 that would require a Travel Plan to be submitted with any planning application for 10 or more dwellings or 1,000 square metres or more floorspace. This policy is due to be adopted in September 2019.</li> </ul>	2019
11	<b>Inspection of Permitted Processes</b>	Environmental Permits	Introduction/increase of environment charges through permit systems and economic instruments	BBC	N/A	On-going	Reduced Emissions	<ul style="list-style-type: none"> <li>Annual inspections of permitted processes were undertaken; all permitted processes were risk rated with the higher risk processes incurring a higher annual subscription fee. The risk rating did not change in 2018, and all permitted processes were fully compliant.</li> </ul>	On-going
12	<b>Encouragement of low-emission public transport fleets</b>	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	NCC/operators; NCC/OLEV - Green Bus Technology Fund	2017	2018-2020	Reduced Emissions and On-going take-up of cleaner vehicles	<ul style="list-style-type: none"> <li>NCC secured £1.3m; and NCiC secured £1.5m from the Green Bus Technology Fund in Feb 2018 to retrofit older buses</li> <li>This includes 21, 34, 35, Indigo, Rainbow 1 and Rapid 1 services in the Borough.</li> </ul>	2020

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
13	Encouragement of low-emission public transport fleets	Vehicle Fleet Efficiency	Promoting low emission public transport	NCC; NCC/OLEV - Green Bus Fund	2016	2017/18	On-going take-up of cleaner vehicles	<ul style="list-style-type: none"> <li>NCC secured £527,000 OLEV funding and will match fund the scheme with £410,000 from its transport budget.</li> <li>Introduction of two electric buses (and their associated infrastructure) on route 510, serving communities in Beeston and Stapleford.</li> </ul>	On-going <b>Complete</b>
14	Encouragement of low-emission public transport fleets	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	NCC/NCiC/PT operators; NCT (operator) funding	N/A	On-going	Reduced Emissions	<ul style="list-style-type: none"> <li>The Statutory Quality Partnership Schemes (SQPSs), which includes fleet standards is in place affecting all buses travelling through AQMA.</li> </ul>	On-going
15	Review of on-street car parking in and around the AQMA	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	NCC	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>Introduction of junction protection and targeted roadside parking restrictions (including bus stop clearways) along feeder corridors into the AQMA to help traffic flows/journey times.</li> <li>Parking restrictions already in place, no additional side-road/off-line locations currently identified as requiring restrictions to aid traffic flow</li> </ul>	On-going Implemented and On-going
16	Optimisation of traffic signals	Traffic Management	UTC, Congestion management, traffic reduction	NCC/Via EM Ltd: NCC revenue funding	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>All traffic signalling equipment at A610 Nuthall Island were replaced during 2017/18.</li> <li>Also the introduction of additional traffic monitoring cameras and advanced remote control systems were also installed to enable reactive and pro-active interventions to improve traffic flow</li> <li>A review of the signal timings and linking at the signal junction was also undertaken during 2017/18</li> </ul>	<b>Complete</b> <b>Complete</b> <b>Complete</b>

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
17	Traffic control and information	Traffic Management	UTC, Congestion management, traffic reduction	Nottinghamshire County Council (NCC)/Via EM Ltd/Nottingham City Council (NCiC): NCC and NCiC revenue funding	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>Traffic control centre that monitors traffic movement on the local highway network (not the trunk road/motorways) and provides real time traffic control over many traffic signal installations, including on A610 at Nuthall</li> <li>Potential barrier: Lack of future revenue funding</li> </ul>	On-going On-going
18	Co-ordination of street works	Traffic Management	UTC, Congestion management, traffic reduction	NCC/Via EM/NCiC: NCC and NCiC revenue funding	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>Systems for notice management and coordination have been upgraded to enhance noticing handling, monitoring of works proposals, coordination of works and directing timing of works</li> <li>Street designations/network hierarchy review is on-going to improve data quality for works promoters and network managers and to prioritise works management</li> <li>Regular coordination meetings held between all works promoters and regional partners in addition to regular meetings between HE and regional partners to create a framework programme of planned works affecting strategic and local routes</li> <li>Detailed journey time monitoring undertaken annually since 2005/06</li> <li>Implementation on-going</li> </ul>	On-going On-going On-going On-going

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
19	<b>Real time travel information</b>	Public Information	Other	NCC/Via EM Ltd: NCC revenue funding	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>Information conveyed by all forms of media (press, radio, website, social media etc.).</li> <li>The Travelwise centre remains in operation 24hrs a day, every day.</li> <li>Implementation on-going</li> </ul>	On-going On-going
20	<b>Contingency planning, and effective event and incident management</b>	Traffic Management	UTC, congestion management, traffic reduction	NCC/Via EM/NCiC/Highways England (HE): NCC, NCiC, HE revenue funding	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>The local operating agreement between the authority and HE has been comprehensively reviewed to identify the relevant parts of the network which have interaction on each authority and to put in place appropriate communication channels for management of incidents and dissemination of information</li> <li>Key locations on the local network have been identified and associated diversion routes investigated in line with the developing network hierarchy</li> <li>Incidents dealt with through agreed procedures and regular partnership meetings held. Working in close collaboration with the City and HE, tactical diversion routes have been developed for the emergency diversion of traffic from any part of the strategic road network, to reduce the delay in rerouting traffic to ease congestion at the time of incidents</li> <li>Detailed journey time monitoring undertaken annually since 2005/06.</li> <li>Implementation on-going</li> </ul>	On-going On-going On-going

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
21	<b>Bus service improvements</b>	Transport Planning and Infrastructure	Public transport improvements -interchanges stations and services	NCC/PT operators	N/A	On-going	Increased passenger transport patronage	<ul style="list-style-type: none"> <li>•Review of all of the bus services in the county, including commercial, supported and specialist services.</li> <li>•The aim of this work is to review and design cost effective services that meet local needs.</li> </ul>	On-going
22	<b>Bus infrastructure</b>	Transport Planning and Infrastructure	Public transport improvements -interchanges stations and services	BBC and NCC; integrated transport block funding	N/A	On-going	Increased bus patronage	<ul style="list-style-type: none"> <li>•An annual programme of updates and maintenance of all stops including updating network maps to ensure all information is current and accurate is on-going.</li> <li>•Implementation on-going</li> <li>•BBC provides 50% of the funds for the installation of new bus shelters and real time bus information at bus stops.</li> </ul>	On-going
23	<b>Sustainable Travel information for the Public</b>	Public Information	Via leaflets, internet, other	BBC	N/A	On-going	Increased use of public transport	<ul style="list-style-type: none"> <li>•BBC provide leaflets on safe cycling on the tram lines, bus routes, Broxtowe cycling map, Broxtowe Country and Erewash Valley routes and walking leaflets. These are all available in Council owned buildings. All of the leaflets are also available on the internet.</li> <li>•Broxtowe Matters is a pamphlet that goes out to all households in the Borough and this has information in about sustainable travel and directs the public to further information.</li> <li>•Social media is used to message the public and provide them with information about events and sustainable travel methods.</li> <li>•Sustainable Travel is also promoted in the reception on the TV at the Council buildings to increase public awareness.</li> </ul>	On-going for all

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
24	<b>Concessionary fare schemes</b>	Transport Planning and Infrastructure	Other	NCC/PT operators	N/A	On-going	Increased passenger transport patronage	•Implementation on-going	On-going
25	<b>Nottingham city workplace parking levy (WPL)</b>	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	NCiC	Pre-2012	2012 and on-going	Restrain average journey times in the morning peak to a 1% increase per year	•NCiC introduced WPL within the city in 2012 and have used funding to make passenger transport improvements in the city	Introduced 2012 and on-going
26	<b>Public sector LEV procurement</b>	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	NCC/BBC	N/A	2015-2024	Reduction in vehicle emissions due to less polluting vehicles replacing older more polluting vehicles	•NCC upgraded its pool vehicles to lower emission diesel vehicles. All new fleet vehicles at BBC are Euro6 emissions complaint. There are 90+ fleet vehicles and they are on a 10 year replacing rolling programme •Dependant on whether funding from Central Government continues	2024
27	<b>Vehicle emissions testing</b>	Vehicle Fleet Efficiency	Testing Vehicle Emissions	BBC	N/A	On-going	Reduced emissions	•All BBC Fleet vehicles (98 road vehicles including 20 LGV's) are annually emission tested in house prior to MOT Emission testing. •BBC also undertakes additional emissions tests on all fleet vehicles if any new fuel or engine components have been changed. This is to ensure vehicle emission compliance.	On-going  On-going

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
28	<b>Marketing and promotion of passenger transport</b>	Promoting Travel Alternatives	Other	NCC/NCiC/PT operators	N/A	On-going	Increased passenger transport patronage	<ul style="list-style-type: none"> <li>• Various marketing campaigns undertaken in partnership with operators and Nottingham City Council.</li> <li>• Co-ordinated through the Greater Nottingham Bus Quality Partnership.</li> <li>• Network maps produced to coincide with route/timetable changes</li> </ul>	On-going  <b>Complete</b>
29	<b>Taxi Licensing Conditions</b>	Promoting Low Emission Transport	Taxi Licensing Conditions	BBC	2016-2019	2011 2019	Reduced emissions	<ul style="list-style-type: none"> <li>• No cars normally older than 8 years will be licensed as a taxi within the borough.</li> <li>• A review of the taxi licensing conditions will be undertaken to establish a common policy of conditions throughout the County.</li> <li>• From 13th June 2018, all petrol vehicles are required to meet Euro 5 standards, all new diesel vehicles are required to meet Euro 6 emissions.</li> <li>• Hybrid and Electric Vehicles to be licensed as "Taxi's" by quoting minimum 70kW and reducing boot space requirement to allow for battery storage.</li> </ul>	On-going  On-going  <b>Complete</b>  <b>Complete</b>
30	<b>Civil Parking Enforcement</b>	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	NCC; NCC revenue funding	Pre-2008	On-going	Manage parking to improve journey time reliability.	<ul style="list-style-type: none"> <li>• Introduced on County roads in May 2008 to help ensure parking does not interfere with the free flowing traffic.</li> <li>• Implemented and on-going</li> </ul>	Implemented and On-going
31	<b>CCTV enforcement vehicle</b>	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	NCC; NCC revenue funding	N/A	On-going	Manage parking to improve journey time reliability	<ul style="list-style-type: none"> <li>• 'Camera car' to enforce school keep clear and bus stop clearway markings became fully operational during 2016</li> <li>• A second CCTV vehicle was purchased in 2018.</li> <li>• Third CCTV vehicle planned to be purchased in 2019.</li> </ul>	on-going  <b>Complete</b>  2019.

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
32	Encouraging the use of emissions standards when procuring school bus contracts and supported bus services	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	NCC/PT operators	N/A	On-going	Reduced Emissions and On-going take-up of cleaner vehicles	•On-going take-up of LEVs	On-going
33	20mph speed limits outside schools	Traffic Management	Reduction of speed limits, 20mph zones	NCC; integrated transport block funding	2012/13	2013-2017	Increased walking/cycling trips	•Advisory 20mph speed limits installed outside all feasible schools	Complete
34	School travel plans	Promoting Travel Alternatives	School Travel Plans	N/A	N/A	2000-2011	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•STPs have been developed and approved at all but 3 schools in Broxtowe</li> <li>•Update - Funding withdrawn by DfT in 2010; no pro-active STP work undertaken since that date. NCC considering the development of online advice tool for schools.</li> </ul>	Complete Complete
35	Cycling networks - development of Local Cycling and Walking Infrastructure Plan (LCWIP)	Transport Planning and Infrastructure	Cycle network	NCC/NCiC /DCC/DCiC/borough and district councils/Sustrans/other stakeholders; DfT funding	N/A	2018/19	Increased levels of cycling	<ul style="list-style-type: none"> <li>•Funding secured to develop D2N2 wide LCWIP. Data collected, three stakeholder events held</li> <li>•Prioritised list of improvements to be included in final LCWIP</li> </ul>	2019

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
36	<b>Cycling networks</b>	Transport Planning and Infrastructure	Cycle network	NCC/Via EM/NCiC: LGF, s106 funding	2015/16-2016/17	2017/18-2018/19	Increased cycling trips	<ul style="list-style-type: none"> <li>•Construction of improved cycle links between Beeston, Enterprise Zone and the City underway during 2018/19</li> <li>•Other cycling improvements are developed and delivered as part of the annual integrated transport programme and through developer funded improvements</li> </ul>	2018/19  Schemes dependent on funding being made available for such improvements
37	<b>Cycle hire scheme</b>	Transport Planning and Infrastructure	Public cycle hire scheme	NCiC/NCC ; funding source to be determined	2017/18	Dependent on commercial cycle hire scheme providers	Increased cycling trips	<ul style="list-style-type: none"> <li>•Hire schemes at the nearby University of Nottingham in place</li> <li>•Feasibility study undertaken on a city based hire scheme which potentially could include parts of the county such as Beeston</li> <li>•Scheme dependent on commercial cycle hire scheme providers committing to, and delivering a scheme</li> </ul>	Not known - dependent on commercial cycle hire scheme providers
38	<b>Cycle training</b>	Promoting Travel Alternatives	Promotion of cycling	NCC; DfT funding/PH funding	N/A	On-going	Increased cycling trips	<ul style="list-style-type: none"> <li>•7,544 people received cycle training in 2018/19.</li> <li>•Scheme dependent on DfT funding being made available for Bikeability</li> <li>•Implementation on-going</li> </ul>	On-going
39	<b>Cycle parking facilities</b>	Transport Planning and Infrastructure	Cycle network	NCC/BBC; integrated transport block/ developer contributions	N/A	On-going	Increased cycling trips	<ul style="list-style-type: none"> <li>•Cycle hub installed in 2015 to integrate with bus/rail services</li> <li>•Ad-hoc parking provided where required</li> </ul>	Complete  On-going

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
40	<b>Marketing of cycling</b>	Promoting Travel Alternatives	Promotion of cycling	NCC	N/A	On-going	Increased cycling trips	<ul style="list-style-type: none"> <li>•Cycling in Nottinghamshire has increased by 10% between 2010 and 2017; and in Broxtowe district there has been a 12% increase in cycling between 2010 and 2017.</li> <li>•Marketing of cycling is undertaken in a variety of formats for both commute and leisure trips. Various NCC campaigns have been undertaken including 'cycling week', 'Notts Routes &amp; Rides'.</li> </ul>	On-going  On-going
41	<b>Cycle maps</b>	Promoting Travel Alternatives	Promotion of cycling	NCC; DfT funding	N/A	On-going	Increased cycling trips	<ul style="list-style-type: none"> <li>•Greater Nottingham cycling maps reviewed during 2018, updated and available as a leaflet and online</li> <li>•Cycling maps to be reviewed again in 2019</li> </ul>	<b>Complete</b>  2019 and on-going

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
42	Marketing of cycling	Promoting Travel Alternatives	Promotion of cycling	BBC	2012-2017	On-going.	In Broxtowe district there has been a 30% increase in cycling between 2010 and 2014	<ul style="list-style-type: none"> <li>•Cycling in Broxtowe has increased by 12% between 2010 and 2017.</li> <li>•Review installing new cycle stands in Broxtowe with partners. Beeston Train station complete with the installation of cycle hub in the Council car park, trialled removable stands in Stapleford, new stands installed Eastwood/Beeston Town Centres, improved/more stands Kimberley Leisure Centre and Council Offices.</li> <li>•Develop and promote the Broxtowe Cycle Quest 2016 and 2017. BBC and Ridewise Ltd with funding from the Lifestyle fund in 2016 developed the scheme. The Quest includes 8 routes promoted on trails in Broxtowe/surrounding area with a quiz and prize draw. Promoted throughout Broxtowe and Ridewise networks in Greater Nottingham through social media/posters/email networks/Broxtowe Matters to every household in the borough.</li> <li>•As a follow on from the TravelRight project in Broxtowe two cycle centres will be kept open until September 2017 being run by Ridewise Ltd. External funding will be required to keep these open beyond September. These provide free cycle training for families, advice and led group rides weekly.</li> <li>•Hi Vis slap bands and rucksack covers have been given out at events.</li> </ul>	<p>On-going</p> <p><b>Complete</b></p> <p><b>Complete</b></p> <p><b>Complete</b></p> <p><b>Complete 2017/18</b></p>

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
42	Marketing of cycling Cont	Promoting Travel Alternatives	Promotion of cycling	BBC	N/A	On-going	Increased cycling trips	<ul style="list-style-type: none"> <li>•Cycle security events and locks have been given away at Beeston Train Station, Beeston Town Centre and at other events in partnership with the Police, BBC and the TravelRight project. Poster campaign promoting securing cycles properly to be completed 2017.</li> <li>•Promote safe cycling on tram lines at events/social media and leaflets.</li> <li>•Produce and promote Broxtowe Cycling Map.</li> <li>•Promotion to staff yearly about sustainable travel options. A number of sites have lockers/shower facilities/secure cycle parking for staff who commute to work other than by car and for leisure use encouraging healthy living.</li> </ul>	<p><b>Complete</b></p> <p>On-going</p> <p><b>Complete/</b> promotion on-going</p> <p>On-going</p>
43	Marketing of walking	Promoting Travel Alternatives	Promotion of walking	NCC	N/A	On-going	Increased walking trips	<ul style="list-style-type: none"> <li>• Marketing of walking is undertaken in a variety of formats for both commute and leisure trips. Various NCC campaigns have been undertaken including 'walk week', 'Notts Routes &amp; Rides'.</li> </ul>	On-going
44	Marketing of walking	Promoting Travel Alternatives	Promotion of walking	BBC	N/A	On-going	Increased walking trips	<ul style="list-style-type: none"> <li>•Develop Broxtowe Country Trail and promote it.</li> <li>•BBC promote walking for health programmes</li> <li>•Promotion of Erewash Valley Trail and other local walks.</li> </ul>	<b>Complete/</b> promotion on-going
45	Pedestrian infrastructure improvements	Transport Planning and Infrastructure	Other	NCC/BBC	N/A	On-going	Increased walking trips	<ul style="list-style-type: none"> <li>•Pedestrian improvements developed and delivered as part of the annual integrated transport programme. Funding also secured to deliver improvements through the planning process.</li> <li>•Potential barrier: Lack of future funding</li> </ul>	On-going

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
46	<b>Review of off-street car parking charging</b>	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	BBC	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•BBC is currently consolidating all of their Off-Street Parking Orders into one Order. Cabinet approval is required and the charges will also be reviewed as well.</li> <li>•Charges will also be reviewed on an adhoc basis</li> </ul>	2019  On-going
47	<b>Flexible working arrangements</b>	Promoting Travel Alternatives	Encourage / Facilitate home-working	NCC/BBC	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•NCC operates flexible working arrangements for all its staff</li> <li>•BBC New Ways of working being introduced. Increase in Home working expected.</li> </ul>	On-going  On-going
48	<b>Workplace travel plans</b>	Promoting Travel Alternatives	Workplace Travel Planning	BBC planning/ NCC	N/A	On-going	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•Developed with businesses as part of planning conditions.</li> <li>•BBC and NCC have a travel plan</li> <li>•BBC has undertaken a review of the Councils travel plan by reviewing Lease cars, car allowances and work place parking. Produced a transport map specifying the modes of transport the organisation considers acceptable if other modes or transport are not suitable. Feasibility study of having bus card/Tickets for employee use.</li> </ul>	On-going  <b>Complete</b>  <b>Complete</b>
49	<b>NCC car pool vehicles</b>	Alternatives to private vehicle use	Car Clubs	NCC	N/A	2016/17	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•NCC upgraded its pool vehicles to lower emission diesel vehicles</li> </ul>	<b>Complete</b>

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
50	<b>Low emission vehicle procurement</b>	Promoting Low emission transport	Company vehicle Procurement - prioritising uptake of low emission vehicles	BBC	2015	2015-2024	Reduced emissions	<ul style="list-style-type: none"> <li>All new fleet vehicles at BBC are Euro6 emissions compliant. There are 90+ fleet vehicles and they are on a 10 year replacing rolling programme.</li> <li>BBC has purchased three new Euro 6 vehicles in 2017/2018 replacing three older vehicles.</li> <li>Update – BBC will be procuring two electric vans in 2019 and subject to satisfactory trials another two vehicles will be purchased in 2020.</li> </ul>	<p>2024</p> <p><b>Complete</b></p> <p>2019 and 2020.</p>
51	<b>Eco-driver training sessions</b>	Vehicle Fleet Efficiency	Driver training and ECO driving aids	NCC	2012	2012	Reduced emissions	<ul style="list-style-type: none"> <li>Eco-driving training sessions held for NCC staff</li> </ul>	<b>Complete</b>
52	<b>Fleet vehicle tracking system</b>	Vehicle Fleet Efficiency	Driver Training and ECO driving aids	BBC/NCC	N/A	2015-2017	Reduced emissions	<ul style="list-style-type: none"> <li>All BBC and NCC fleet vehicles are fitted with a vehicle tracking system, which records vehicle speed and idling time.</li> <li>A review of the journeys undertaken will ensure that if necessary measures can be implemented e.g. staff training, to improve fleet efficiency.</li> </ul>	<p><b>Complete</b></p> <p><b>Complete</b></p>
53	<b>Zoning of refuse collections</b>	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	BBC	N/A	2016-2017	Reduced emissions	<ul style="list-style-type: none"> <li>A review of the refuse collection areas at BBC to enable the areas to be zoned to ensure that the collection rounds are within the designated zone, which reduces the amount of non-productive travelling time.</li> <li>Update - The Refuse round restructure is now complete and we have reduced the fleet size by one vehicle.</li> </ul>	<b>Complete</b>

Measure No.	Measure	EU Category	EU Classification	Organisation involved and funding source	Planning Phase	Implementation Phase	Key Performance Indicator and reduction in pollutant	Progress to Date, comments / barriers of implementation	Estimated Completion Date
54	<b>Integrated ticketing</b>	Transport Planning and Infrastructure	Other	NCC/NCiC/PT operators	N/A	On-going	Increased passenger transport patronage	<ul style="list-style-type: none"> <li>•Integrated ticketing strategy developed in 2014/15.</li> <li>•New smartcard platform introduced in 2014. Robin Hood card scheme introduced in 2015</li> <li>•Further smartcard/contactless improvements being developed</li> </ul>	On-going
55	<b>Personalised travel planning</b>	Promoting Travel Alternatives	Personalised Travel Planning	NCC/AECOM	2015/16	2016/17	Restrain average journey times in the morning peak to a 1% increase per year	<ul style="list-style-type: none"> <li>•Personalised Travel Planning undertaken in Beeston during 2016/17</li> <li>•No DfT funding currently available</li> </ul>	<b>Complete</b> On-hold.
56	<b>Web based journey planners</b>	Public Information	Via the Internet	NCC	N/A	On-going	Increased walking/cycling/ passenger transport trips	<ul style="list-style-type: none"> <li>•Nottinghamshire is part of the national, multi-modal Traveline journey planner Web links to the Traveline site are publicised and available from the County Council's website.</li> <li>•Implementation on-going</li> </ul>	On-going
57	<b>Broxtowe Transport Sub Group</b>	Transport Planning and Infrastructure	Other	BBC	N/A	On-going	Reduced emissions	<ul style="list-style-type: none"> <li>•BBC facilitates a transport sub group to bring together partners and stakeholders to discuss transport issues and share information in the Borough. Partners include NCC, NCT buses, Barton buses, PEDALS( local cycling pressure group) and Sustrans.</li> </ul>	The group is no longer operating

**BBC**= Broxtowe Borough Council, **NCC**= Nottinghamshire County Council, **HE** = Highways England, **NCiC**= Nottingham City Council, **DfT** = Department for Transport

## 2.3 PM<sub>2.5</sub> – Local Authority Approach to Reducing Emissions and or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM<sub>2.5</sub> (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that PM<sub>2.5</sub> has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

As BBC does not currently monitor PM<sub>2.5</sub> the only methods that can be used to try and determine what the potential levels of PM<sub>2.5</sub> in the Borough are is to review the nearest relevant Automatic Urban and Rural Network (AURN) site which monitors PM<sub>2.5</sub> and to identify the modelled background levels for the Borough from Defra's webpages.

The nearest AURN site is in Nottingham City and for 2018 the annual mean concentration is 10.01µg/m<sup>3</sup>. The modelled background level provided by Defra for the Borough of Broxtowe are predicted to be between 8µg/m<sup>3</sup> and 11µg/m<sup>3</sup> for 2018, with the annual mean for 2018 being 10µg/m<sup>3</sup>. The modelled background concentrations are shown to be in the higher range along the M1 Motorway, The background maps are shown in Appendix G.

The Air Quality Objective (AQO) for PM<sub>2.5</sub> is an annual mean of 25µg/m<sup>3</sup>. However, the World Health Organisation guideline value are more stringent for PM<sub>2.5</sub>, as it is currently 10µg/m<sup>3</sup> (although it is believed that the guideline value will be reviewed in the future) therefore the modelling results show that parts of the Borough are exceeding WHO guideline but meeting the AQO . Therefore, BBC are working towards reducing the PM<sub>2.5</sub> levels by taking the following measures:

- Ensuring that dust management plans are requested during the planning application stage for all sites that involve large scale demolition and building works.

- To ensure that best practicable means of dust control measures are being used regardless of how large the development is. These measures can include the use of bowsers, road sweepers and dust suppression to prevent 'trackout'. Also minimise dust generating activities on dry windy days and if there are stockpiles ensure they are covered to prevent wind-whipping.
- Ensuring that developers are carrying out dust suppression monitoring on site at large development sites.
- Ensuring that water suppressants are in use when Nibblers and mobile crushers are on site.
- Educating the public in matters that contribute to air quality e.g. not having bonfires.
- Educate and advise the public about using exempt appliances with the correct fuel for that appliance in BBCs smoke control areas.
- Enforcing the Clean Air Act 1993 and the Environmental Protection Act 1990 where necessary to minimise the risk of particulates becoming air borne.
- To continue to manage, advice and enforce the Pollution Prevention and Control Regulations 1999 and the Environmental Permitting (England and Wales) Regulations 2010 on permitted processes when necessary
- To encourage, support and promote sustainable travel within the Borough by working with a variety of organisations and neighbouring local authorities.
- To continue to promote green travel e.g. walking, cycling, low emissions/ electric vehicles and the tram network.
- To continue to support bus companies and taxis that operate within the Borough to reduce emissions.
- To continue to review suitable research methods for reducing air quality levels for particulate matter e.g. the use of vegetation.
- Promote and encourage the use of the final version of the "EMAQN Air Quality and Emissions Mitigation: guidance for developers" document.
- To assist and advice consultants working on the proposed HS2 project. This ensures that suitable dust control measures will be used throughout the project.

## **3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance**

### **3.1 Summary of Monitoring Undertaken**

This section sets out what monitoring has taken place and how it compares with the air quality objectives.

#### **3.1.1 Automatic Monitoring Sites**

BBC does not currently utilise any automatic air quality monitoring within the Borough

#### **3.1.2 Non-Automatic Monitoring Sites**

BBC undertook non- automatic (passive) monitoring of NO<sub>2</sub> at 43 sites during 2018. Table A.1 in Appendix A shows the details of the sites.

Seven sites were discontinued at the end of 2017 for having consistently low NO<sub>2</sub> concentrations. Seven new sites were chosen for 2018, to have a greater understanding of what the levels of NO<sub>2</sub> are within the Borough.

Maps showing the location of the monitoring sites are provided in Appendix E. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. “annualisation” and/or distance correction), are included in Appendix D.

### **3.2 Individual Pollutants**

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, “annualisation” and distance correction. Further details on adjustments are provided in Appendix D.

### 3.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

Table A.2 in Appendix A compares the ratified and adjusted monitored Nitrogen Dioxide (NO<sub>2</sub>) annual mean concentrations for the past 5 years with the air quality objective of 40µg/m<sup>3</sup>.

For diffusion tubes, the full 2018 dataset of monthly mean values are provided in Table B.1 of Appendix B.

#### **Nitrogen Dioxide Diffusion Tube Monitoring Results**

The results from the bias corrected NO<sub>2</sub> diffusion tube monitoring have shown that there are no exceedences of the 40µg/m<sup>3</sup> air quality objective at any of the 43 monitoring locations within the Borough for 2018.

Although there are no exceedances of the NO<sub>2</sub> objective there is still one AQMA within the Borough, which is situated in Trowell. The monitoring results from the diffusion tubes sited in the AQMA will be discussed in greater detail below.

As well as discussing the results from the recently revoked AQMA in Nuthall and the current AQMA. The following chapter will discuss areas of concern within the Borough where the air quality levels are higher than average, but still within the Air Quality Objective. This is to determine whether any trends are developing, which will allow suitable measures if necessary, to be put in place to reduce the likelihood of an exceedance in the future.

#### **Revoked AQMA in Nuthall**

There are three diffusion tube sites located on Nottingham Road in Nuthall that are located within the recently revoked AQMA in Nuthall. The results below show that since 2012 the levels of NO<sub>2</sub> are consistently below the objective of 40µg/m<sup>3</sup> for all three sites.

**Table 3.1 – Results for the Revoked AQMA in Nuthall 2012 – 2018.**

Site ID	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> )						
	2012	2013	2014	2015	2016	2017	2018
BX01 or 33	31	33	29	28	29	29	23
BX05 or 34	32	33	32	29	29	27	28
BX13 or 35	35	33	34	34	32	34	30

Monitoring will continue to be undertaken at these three sites and the results will be reported in the 2020 Air Quality Annual Status Report.

### AQMA in Trowell

Since January 2016 there are now two monitoring sites within the AQMA in Trowell as opposed to just one site. They are situated between Junction 25 and 26 of the M1 and are monitoring NO<sub>2</sub> levels from the M1 Motorway. The tubes are sited on the façade of properties that are the closest to the M1.

The original monitoring site is on the façade of a property on Iona Drive, which has been there since 2011. The new monitoring site is on the façade of a property that is in Tiree Close (See Appendix F for the map of the AQMA and the tube locations).

The diffusion tube monitoring results from 2012 to 2018 are shown below.

**Table 3.2 – Results for AQMA in Trowell 2012 – 2018.**

Site ID	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> )						
	2012	2013	2014	2015	2016	2017	2018
18	-	-	-	-	34	33	28
BX11 or 19	42	39	38	42	38	37	32

Although the 2016 and the 2017 NO<sub>2</sub> results for both sites in the AQMA are below the air quality objective, the 2015 data did show an increase in NO<sub>2</sub>. This may have been as a result of the Smart Motorway scheme on the M1 between junctions 28 and 31 (junctions 25 to 28 were completed in 2010), which had just been opened at the time of writing the 2016 report. Therefore it was considered that this may have caused congestion further South, which could have had an effect on increasing the air quality levels in 2015.

However, the results do show that there is a decreasing trend (if the 2015 data is seen as an anomaly due to the Smart Motorway Scheme), as the NO<sub>2</sub> levels have reduced by 5µg/m<sup>3</sup> from 2017 to 2018 for both sites. BBC will continue to monitor NO<sub>2</sub> levels in this area and work alongside Highways England to improve air quality levels.

**A610/B600 Nuthall Island**

Since 2016 there have been two new sites for monitoring the air quality levels on the Nuthall Island (Site's 36 and 37). The reason for changing the original site (BX 22) was due to the diffusion tube being located less than 1m from Nottingham Road which was very near to the A610/B600 Nuthall Island but not near the residential properties. Therefore, the site was not a true representation of the levels that receptors are receiving at their properties so the site was relocated to the façade of a residential property in January 2016 (See Appendix H for the Map of the roundabout and the current monitoring locations).

In January 2016 a second site was also chosen to determine what the NO<sub>2</sub> levels are on a residential property that is situated on the opposite side of the roundabout to Site 36 where the traffic is leaving Nottingham City and travelling into the Borough of Broxtowe. The results from 2012 to 2015 are shown for the 'old' site and the 2016 to 2018 results for the 'new' sites are shown below.

**Table 3.3 – Results for Nuthall Island 2012 – 2018.**

Site ID	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> )						
	2012	2013	2014	2015	2016	2017	2018
BX 22	42	41	39	41	-	-	-
36	-	-	-	-	35	35	33
37	-	-	-	-	32	30	29

The results above show that that the original site did not provide a true representation of NO<sub>2</sub> levels at the façade of the properties. However, the two 'new' sites are showing that the levels are below the air quality objective by 7µg/m<sup>3</sup> for site 36 and 11µg/m<sup>3</sup> for site 37 in 2018 and are showing a decreasing trend.

BBC will continue to monitor NO<sub>2</sub> levels at these sites and provide an update in the 2020 ASR. BBC will continue to work alongside Nottinghamshire County Council to improve air quality levels.

**Bramcote Island, Derby Road, Bramcote**

Since January 2016, increased monitoring has been undertaken at this location due to the original site showing exceedances of the air quality objective of 40µg/m<sup>3</sup>. The original site (BX04) was discontinued and relocated in January 2016 to a neighbouring property at a more suitable height and nearer to Bramcote Island (Site 41). An additional site was also chosen to determine whether the concentration reduces further away from the roundabout (Site 40). Both sites are on the façade of properties on Derby Road. (See Appendix I for the Map of the roundabout and the monitoring locations).

As discussed in the 2016 ASR, the diffusion tube results were believed to be over the objective level for several years as there were a number of parallel traffic schemes which were being undertaken in the Borough and also within Nottingham City. Therefore as suspected, the traffic schemes affected the results when comparing the past results to the results since 2016.

**Table 3.4 – Results for Bramcote Island 2012 – 2018.**

Site ID	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> )						
	2012	2013	2014	2015	2016	2017	2018
BX 04	42	38	42	41	-	-	-
40	-	-	-	-	38	33	34
41	-	-	-	-	37	36	34

The table above shows that in 2018 Site 40 is 34µg/m<sup>3</sup>, which is a slight increase of 1µg/m<sup>3</sup> and Site 41 is 34µg/m<sup>3</sup>, which is a reduction of 2µg/m<sup>3</sup> in comparison to the 2017 results.

Although this is an overall downward trend for both sites from 2016 and they are below the objective level. There is a slight increase by 1µg/m<sup>3</sup> at Site 40. This could

be due to localised roadworks that were taking place on the A52, which has resulted in an increase in stationary traffic near to this site . However, BBC will continue to monitor and report on the NO<sub>2</sub> levels in this area, to note any works that are being undertaken and to continue to work alongside Highways England to improve the air quality levels in this area.

**Town Street, Bramcote.**

In December 2016 a review was undertaken of the monitoring network and as Town Street is often used as a ‘rat run’ in rush hour to avoid the A52 a decision was made to monitor at this location.

The new site started in January 2017 and the exact location was picked as the street is narrowed due to residents parking outside their properties, which tends to cause a ‘bottle neck’ situation in rush hour (See Appendix J for the Map identifying the monitoring location). The siting of the tube has been chosen so that it is parallel with the façade of a nearby residential property as there were no suitable downpipes to attach it to the façade of the property.

**Table 3.5 – Results for Town Street 2016 – 2018.**

Site ID	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> )		
	2016	2017	2018
48	-	38	36
56	-	-	25

Above is the result for the sites for 2017 and 2018. The result for 2017 is 38µg/m<sup>3</sup>. The result at site 48 for 2018 is 36µg/m<sup>3</sup> which is a reduction of 2µg/m<sup>3</sup> in comparison to the 2017 results, which shows a downward trend.

Due to the result in 2017, a decision was made to start monitoring at a second location on Town Street (Site 56) in 2018 (the tube is sited on the façade of a house that is near to the Bramcote Island end of Town Street). The additional site in 2018 was to determine whether there is a potential issue along all of Town Street, or just at

the site where there is a bottle neck. The results for Site 56 in 2018 are  $25\mu\text{g}/\text{m}^3$ , which enforce the theory that the results are higher on site 48 due to the 'Bottle neck' situation.

BBC will continue to monitor  $\text{NO}_2$  levels at these sites and provide an update in the 2020 ASR. BBC will continue to work alongside Nottinghamshire County Council to improve air quality levels.

### **The Results and Trends for the Thirteen Monitoring Sites 2013 - 2018.**

As mentioned previously in Chapter 2.2 of this report. Defra requested that trend graphs and comparisons are made for the thirteen sites that have been continuously monitored since 2013. See Appendix C for the trend graph for all thirteen sites.

The trend graph in Appendix C shows that out of the thirteen sites, ten of the sites are showing a downward trend since 2013 (Sites 1, 5, 7, 19, 20, 22, 31, 33, 35, 38). The three remaining sites are showing an overall downward trend since 2013 but have increased in 2018 (Sites 34, 39 & 43) but the increase for all of them is by  $1\mu\text{g}/\text{m}^3$ . These are discussed in greater detail below.

#### **Site 34- 19a Nottingham Road, Nuthall.**

Since 2013, Site 34 has shown a downward trend until 2018 when there has been a slight increase of  $1\mu\text{g}/\text{m}^3$  in comparison to 2017 result. Overall since 2013 there had been a decrease of  $5\mu\text{g}/\text{m}^3$  with the highest concentration being  $32\mu\text{g}/\text{m}^3$  it is currently  $28\mu\text{g}/\text{m}^3$ , which is below the air quality objective of  $40\mu\text{g}/\text{m}^3$ . The reason for the slight increase is unknown as this is a co-location study with Site 33 which has not shown an increase.

#### **Site 39 – 9 Bembridge Court, Bramcote**

Since 2013, Site 39 has shown a general downward trend until 2018 when there has been a slight increase of  $1\mu\text{g}/\text{m}^3$  in comparison to 2017 result. Overall since 2013

there had been a decrease of  $6\mu\text{g}/\text{m}^3$  with the highest concentration being  $32\mu\text{g}/\text{m}^3$  it is currently  $27\mu\text{g}/\text{m}^3$ , which is below the air quality objective of  $40\mu\text{g}/\text{m}^3$ . The reason for the slight increase may be due to an increase in traffic on the A52 due to roadworks and sporadic closures on the M1 Motorway.

#### **Site 43- Broxtowe Borough Council Offices.**

Since 2013, Site 43 has shown a downward trend until 2018 when there has been a slight increase of  $1\mu\text{g}/\text{m}^3$  in comparison to 2017 result. Overall since 2013 there had been a decrease of  $5\mu\text{g}/\text{m}^3$  with the highest concentration being  $23\mu\text{g}/\text{m}^3$  it is currently  $19\mu\text{g}/\text{m}^3$ , which is below the air quality objective of  $40\mu\text{g}/\text{m}^3$ . This is one of the urban background sites. The other urban background site is Site 5 which has shown a decrease of  $2\mu\text{g}/\text{m}^3$  since last year, therefore this may be a localised increase in  $\text{NO}_2$ .

The breakdown of the annual figures for each year from 2013 to 2018 can be viewed in Appendix A, Table A.2 of this report.

#### **3.2.2 Particulate Matter ( $\text{PM}_{10}$ )**

BBC does not currently monitor  $\text{PM}_{10}$  within the Borough. However, discussions are currently taking place with Nottinghamshire District and Borough Authorities and Nottinghamshire County Council, to collectively buy and maintain particulate monitors in the future. The outcome of this will be discussed in the air quality report for 2020.

#### **3.2.3 Particulate Matter ( $\text{PM}_{2.5}$ )**

BBC does not currently monitor  $\text{PM}_{2.5}$  within the Borough. However, discussions are currently taking place with Nottinghamshire District and Borough Authorities and Nottinghamshire County Council, to collectively buy and maintain particulate monitors in the future. The outcome of this will be discussed in the air quality report for 2020.

**3.2.4 Sulphur Dioxide (SO<sub>2</sub>)**

Previous air quality reports have shown there are no relevant sources of Sulphur Dioxide within the Borough. Subsequently, the Council does not monitor for this pollutant

## Appendix A: Monitoring Results

Table A.1 – Details of Non-Automatic Monitoring Site.

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
1	113 Wollaton Road, Beeston	R	452527	337313	NO <sub>2</sub>	N	0	1^	N	1.9
50	309 Wollaton Road, Beeston	R	452114	338018	NO <sub>2</sub>	N	0	16^	N	1.7
2	166 Derby Road, Beeston	R	452091	338122	NO <sub>2</sub>	N	0	7^	N	1.8
3	8 Queens Road East, Beeston	R	453659	337412	NO <sub>2</sub>	N	0	12^	N	1.8
4	226 Queens Road, Beeston	R	453361	336627	NO <sub>2</sub>	N	0	6^	N	1.8
51	36 Meadows Road, Beeston	R	453537	336100	NO <sub>2</sub>	N	0	4^	N	1.7

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
52	228 Station Road Beeston	R	453287	336349	NO <sub>2</sub>	N	0	4^	N	1.7
5	Chilwell Olympia School, Beeston	UB	451782	335320	NO <sub>2</sub>	N	0	104^	N	1.9
7	31 Hickton Drive, Chilwell	R	450756	334328	NO <sub>2</sub>	N	0	10^	N	1.9
53	1 Calverton Close, Chilwell	R	450360	334982	NO <sub>2</sub>	N	0	5^	N	1.7
8	The Manor Pub, 350 Nottingham Road, Toton	R	450422	334243	NO <sub>2</sub>	N	0	5^	N	1.8
9	Toton branch Surgery, 2 Banks Road, Toton	R	449876	334804	NO <sub>2</sub>	N	0	8^	N	1.8

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
10	1 Katherine Drive, Toton	R	449748	335472	NO <sub>2</sub>	N	0	13^	N	1.7
11	269 Stapleford Lane, Toton	R	449694	335501	NO <sub>2</sub>	N	0	7^	N	1.8
12	Lamppost, Stapleford Lane, Toton	R	449615	335664	NO <sub>2</sub>	N	0	2^	N	1.9
45	209 Toton Lane, Stapleford	R	449467	336220	NO <sub>2</sub>	N	0	16^	N	1.8
15	George Spencer Academy, Stapleford	R	449406	336135	NO <sub>2</sub>	N	0	9^	N	1.9
13	George Spencer Lower School, Toton	R	449266	336075	NO <sub>2</sub>	N	0	16^	N	1.8

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
16	24 Brampton Drive, Stapleford	R	449516	336216	NO <sub>2</sub>	N	0	11^	N	1.7
54	195 Derby Road, Stapleford	R	448467	336591	NO <sub>2</sub>	N	0	4^	N	1.8
17	Lamppost Church Street, Stapleford	R	448890	337190	NO <sub>2</sub>	N	0	3^	N	1.8
55	12 Ilkeston Road, Stapleford	R	449814	338471	NO <sub>2</sub>	N	0	11^	N	1.8
18	20 Tiree Close, Trowell	R	448560	338889	NO <sub>2</sub>	Y	0	26	N	1.7
19	15 Iona Drive, Trowell	R	448586	339023	NO <sub>2</sub>	Y	0	23	N	1.9
20	30 Derbyshire Avenue, Trowell	R	448652	339652	NO <sub>2</sub>	N	0	39	N	1.9

Broxtowe Borough Council

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
22	81 Nottingham Road, Trowell	R	448832	340098	NO <sub>2</sub>	N	0	33	N	1.8
44	32 Mansfield Road, Eastwood	R	446509	347091	NO <sub>2</sub>	N	0	2^	N	1.8
27	Sun Inn Pub, 6 Derby Road, Eastwood	R	446465	346985	NO <sub>2</sub>	N	0	6^	N	1.8
30	560 Nottingham Road, Giltbrook	R	448544	345241	NO <sub>2</sub>	N	0	3^	N	1.9
31	15 Hayley Close, Kimberley	R	448826	344883	NO <sub>2</sub>	N	0	11^	N	1.9
32	59b Main Street, Kimberley	R	450122	344658	NO <sub>2</sub>	N	0	5^	N	1.8
33	19a Nottingham Road, Nuthall*	R	451631	344526	NO <sub>2</sub>	Y	0	42	N	1.7

Broxtowe Borough Council

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
34	19a Nottingham Road, Nuthall*	R	451631	344526	NO <sub>2</sub>	Y	0	42	N	1.7
35	20 Nottingham Road, Nuthall	R	451728	344440	NO <sub>2</sub>	Y	0	32	N	1.9
36	113 Nottingham Road, Nuthall	R	452232	344033	NO <sub>2</sub>	N	0	20^	N	1.7
37	114 Nottingham Road, Nuthall	R	452331	343910	NO <sub>2</sub>	N	0	27^	N	1.7
38	Opp Sherwin Arms, Derby Road, Bramcote	R	450389	337866	NO <sub>2</sub>	N	2	1^	N	1.8
39	9 Bembridge Court, Bramcote	R	450434	337781	NO <sub>2</sub>	N	0	6^	N	1.6
56	10 Town Street, Bramcote	R	450570	337851	NO <sub>2</sub>	N	0	10^	N	1.9

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA ?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube co-located with a Continuous Analyser?	Height (m)
40	153 Derby Road, Bramcote	R	450632	337929	NO <sub>2</sub>	N	0	14 <sup>^</sup>	N	1.7
41	169 Derby Road, Bramcote	R	450555	337909	NO <sub>2</sub>	N	0	11 <sup>^</sup>	N	1.8
48	Near 73 Town Street, Bramcote	R	450817	337592	NO <sub>2</sub>	N	0	2	N	1.8
43	Broxtowe Borough Council Offices	UB	452733	336962	NO <sub>2</sub>	N	0	10 <sup>^</sup>	N	1.8

**Notes:**

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on/adjacent to the façade of a residential property).

(2) N/A if not applicable.

(<sup>^</sup>) All distance to kerb to nearest road relate to the M1 which is the primary source of NO<sub>2</sub> throughout the borough unless indicated using the <sup>^</sup> symbol

(\*) Co-located tubes

Table A.2 – Annual Mean NO<sub>2</sub> Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2018 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>					
					2013	2014	2015	2016	2017	2018
46	Roadside	Diffusion Tube	-	-	-	-	-	-	24	-
47	Roadside	Diffusion Tube	-	-	-	-	-	-	25	-
1	Roadside	Diffusion Tube	100	100	32	32	29	30	28	26
50	Roadside	Diffusion Tube	100	100	-	-	-	-	-	28
2	Roadside	Diffusion Tube	100	100	-	-	-	31	29	27
3	Roadside	Diffusion Tube	100	100	-	-	-	26	22	22
4	Roadside	Diffusion Tube	100	100	-	-	-	30	28	26
51	Roadside	Diffusion Tube	92	92	-	-	-	-	-	18

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Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2018 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>					
					2013	2014	2015	2016	2017	2018
52	Roadside	Diffusion Tube	100	100	-	-	-	-	-	23
5	Urban Background	Diffusion Tube	92	92	22	21	20	20	19	17
6	Roadside	Diffusion Tube	-	-	-	-	-	26	25	-
7	Roadside	Diffusion Tube	100	100	27	26	26	27	26	23
53	Roadside	Diffusion Tube	100	100	-	-	-	-	-	19
8	Roadside	Diffusion Tube	100	100	-	-	-	31	29	27
9	Roadside	Diffusion Tube	100	100	-	-	-	24	21	22
10	Roadside	Diffusion Tube	92	92	-	-	-	26	26	21
11	Roadside	Diffusion Tube	100	100	-	-	-	30	29	26

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2018 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>					
					2013	2014	2015	2016	2017	2018
12	Roadside	Diffusion Tube	100	100	-	-	-	29	25	24
13	Roadside	Diffusion Tube	100	100	-	-	-	31	34	26
45	Roadside	Diffusion Tube	100	100	-	-	-	28	29	26
15	Roadside	Diffusion Tube	92	92	-	-	-	36	26	28
16	Roadside	Diffusion Tube	100	100	-	-	-	28	26	26
54	Roadside	Diffusion Tube	100	100	-	-	-	-	-	30
17	Roadside	Diffusion Tube	100	100	-	-	-	37	35	33
55	Roadside	Diffusion Tube	100	100	-	-	-	-	-	25
18	Roadside	Diffusion Tube	100	100	-	-	-	34	33	28

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2018 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>					
					2013	2014	2015	2016	2017	2018
19	Roadside	Diffusion Tube	100	100	39	38	42	38	37	32
20	Roadside	Diffusion Tube	100	100	33	30	26	26	24	24
22	Roadside	Diffusion Tube	100	100	30	30	26	27	24	24
23	Roadside	Diffusion Tube	-	-	-	-	-	24	22	-
24	Roadside	Diffusion Tube	-	-	-	-	-	26	24	-
44	Roadside	Diffusion Tube	100	100	-	-	-	36	33	34
27	Roadside	Diffusion Tube	100	100	-	-	-	26	24	24
28	Roadside	Diffusion Tube	-	-	-	-	-	25	21	-
30	Roadside	Diffusion Tube	92	100	-	-	-	27	28	23

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2018 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>					
					2013	2014	2015	2016	2017	2018
31	Roadside	Diffusion Tube	92	92	30	32	30	30	32	26
32	Roadside	Diffusion Tube	100	100	-	-	-	30	29	29
33	Roadside	Diffusion Tube	83	83	33	29	28	29	29	23
34	Roadside	Diffusion Tube	100	100	32	32	29	29	27	28
35	Roadside	Diffusion Tube	100	100	33	34	34	32	34	30
36	Roadside	Diffusion Tube	100	100	-	-	-	35	35	33
37	Roadside	Diffusion Tube	100	100	-	-	-	32	30	29
38	Roadside	Diffusion Tube	100	100	22	34	31	34	30	30
39	Roadside	Diffusion Tube	100	100	32	32	28	31	26	27

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2018 (%) <sup>(2)</sup>	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>					
					2013	2014	2015	2016	2017	2018
56	Roadside	Diffusion Tube	100	100	-	-	-	-	-	25
40	Roadside	Diffusion Tube	100	100	-	-	-	38	33	34
41	Roadside	Diffusion Tube	100	100	-	-	-	37	36	34
48	Roadside	Diffusion Tube	100	100	-	-	-	-	38	36
49	Roadside	Diffusion Tube	-	-	-	-	-	-	24	-
43	Urban Background	Diffusion Tube	100	100	22	23	21	21	18	19

**Notes:** Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

<sup>(1)</sup> Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

<sup>(2)</sup> Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

<sup>(3)</sup> Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per Technical Guidance LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details

Diffusion tube data has been bias corrected

Annualisation has been conducted where data capture is <75%

If applicable, all data has been distance corrected for relevant exposure

## Appendix B: Full Monthly Diffusion Tube Results for 2018

Table B.1 – NO<sub>2</sub> Monthly Diffusion Tube Results - 2018

Site ID	NO <sub>2</sub> Mean Concentrations (µg/m <sup>3</sup> )												Annual Mean		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.93) and Annualised <sup>(1)</sup>	Distance corrected to Nearest Exposure <sup>(2)</sup>
1	28	32	29	28	24	17	26	25	29	31	32	28	27	26	-
50	36	40	35	30	22	14	18	20	26	43	34	46	30	28	-
2	29	32	31	31	27	17	25	26	27	27	38	33	29	27	-
3	26	30	26	27	23	18	16	19	21	28	25	32	24	22	-
4	28	34	29	28	26	18	22	23	30	31	29	36	28	26	-
51	23	25	25	22	(a)	11	18	15	20	23	26	28	20	18	-
52	27	31	28	26	22	13	17	20	22	27	30	33	25	23	-
5	21	28	22	17	16	(b)	14	16	19	23	24	17	18	17	-
7	28	30	28	25	21	17	21	24	22	28	32	20	25	23	-
53	26	28	25	20	18	12	17	18	20	23	21	20	21	19	-
8	30	31	35	31	25	18	28	26	26	33	32	33	29	27	-
9	26	29	29	23	24	16	20	20	18	26	24	28	24	22	-

Site ID	NO <sub>2</sub> Mean Concentrations (µg/m <sup>3</sup> )														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (0.93) and Annualised <sup>(1)</sup>	Distance corrected to Nearest Exposure <sup>(2)</sup>
10	27	30	29	24	18	14	22	24	27	(a)	23	32	22	21	-
11	30	29	31	22	28	20	26	27	28	31	30	33	28	26	-
12	29	27	29	29	23	14	21	21	22	31	30	30	25	24	-
13	30	38	29	28	29	25	24	22	24	29	27	31	28	26	-
45	30	35	31	30	22	15	24	26	27	31	33	30	28	26	-
15	38	41	41	(a)	14	23	35	33	32	34	37	36	30	28	-
16	29	36	32	29	27	18	24	24	23	27	31	35	28	26	-
54	34	36	35	39	33	23	28	27	28	34	33	36	32	30	-
17	35	43	37	34	34	21	33	33	34	39	41	41	35	33	-
55	29	28	30	27	23	17	22	23	26	30	31	32	26	25	-
18	34	33	35	30	23	18	31	31	32	33	28	35	30	28	-
19	40	39	34	32	27	26	34	34	36	39	31	38	34	32	-
20	27	36	32	31	23	25	21	19	19	23	30	26	26	24	-
22	27	35	31	31	25	20	22	20	21	24	34	24	26	24	-
44	37	39	38	41	39	24	31	34	31	40	38	42	36	34	-

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Site ID	NO <sub>2</sub> Mean Concentrations (µg/m <sup>3</sup> )														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (0.93) and Annualised <sup>(1)</sup>	Distance corrected to Nearest Exposure <sup>(2)</sup>
27	28	30	28	29	26	20	25	22	23	28	27	24	26	24	-
30	30	30	30	27	22	16	24	(a)	28	30	34	29	25	23	-
31	34	30	33	33	25	16	29	32	30	(a)	32	37	28	26	-
32	29	37	36	32	33	24	31	27	28	35	33	29	31	29	-
33	31	34	32	30	27	19	26	(b)	(b)	34	39	27	25	23	-
34	31	38	32	36	28	24	28	25	22	30	36	30	30	28	-
35	36	36	33	36	23	20	33	37	36	34	30	34	32	30	-
36	38	38	41	30	24	20	35	41	44	36	38	38	35	33	-
37	34	33	36	33	36	29	27	26	30	34	26	29	31	29	-
38	35	39	37	32	34	29	25	26	28	29	35	35	32	30	29
39	30	36	32	32	36	21	26	21	23	30	30	30	29	27	-
56	29	32	30	27	25	18	24	24	29	32	28	25	27	25	-
40	38	37	41	35	42	31	35	32	37	39	37	34	37	34	-
41	43	42	41	38	36	24	37	36	39	38	36	31	37	34	-
48	43	38	40	36	36	25	40	39	45	45	36	27	38	36	-

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Site ID	NO <sub>2</sub> Mean Concentrations (µg/m <sup>3</sup> )														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (0.93) and Annualised <sup>(1)</sup>	Distance corrected to Nearest Exposure <sup>(2)</sup>
43	25	27	26	18	17	13	13	15	17	23	23	24	20	19	-

**Notes:**

Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

<sup>(1)</sup> See Appendix C for details on bias adjustment and annualisation.

<sup>(2)</sup> Distance corrected to nearest relevant public exposure.

**(a)** Missing tubes

**(b)** Result not valid

- Local bias adjustment factor used
- National bias adjustment factor used
- Annualisation has been conducted where data capture is <75%
- Where applicable, data has been distance corrected for relevant exposure

## Appendix C: A Trend Graph for 13 Continuous Monitoring Sites from 2013 to 2018

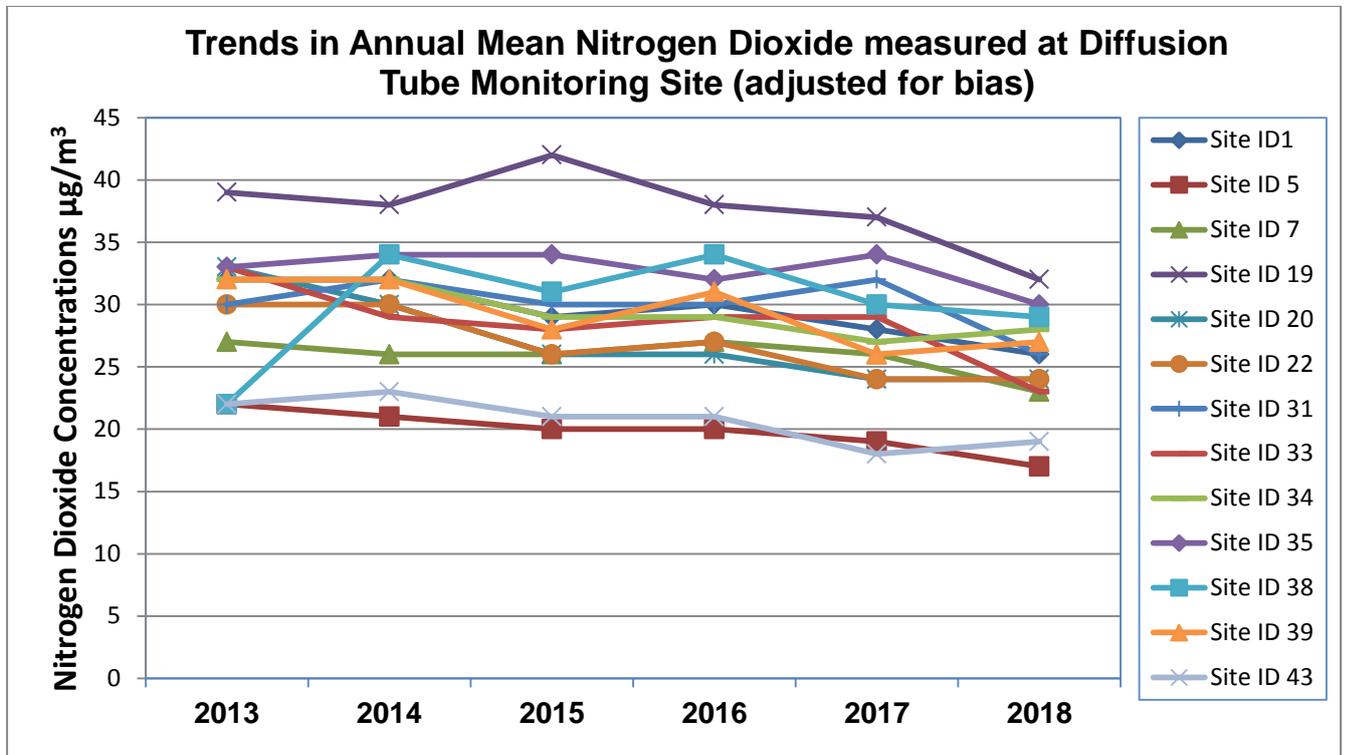


Figure C.1 – Trend Graph of 13 Sites 2013 to 2018.

Site ID 1 = 113 Wollaton Road, Beeston

Site ID 5 = Chilwell Olympia School, Beeston

Site ID 7 = 31 Hickton Drive, Chilwell

Site ID 19 = 15 Iona Drive, Trowell

Site ID 20 = 30 Derbyshire Avenue, Trowell

Site ID 22 = 81 Nottingham Road, Trowell

Site ID 31 = 15 Hayley Close, Kimberley

Site ID 33 = 19a Nottingham Road, Nuthall

Site ID 34 = 19a Nottingham Road, Nuthall

Site ID 35 = 20 Nottingham Road, Nuthall

Site ID 38 = Opposite Sherwin Arms, Derby Road, Bramcote

Site ID 39 = 9 Bembridge Court, Bramcote

Site ID 43 = Broxtowe Borough Council Offices

## **Appendix D: Supporting Technical Information / Air Quality Monitoring Data QA/QC**

### **Nitrogen Dioxide Diffusion Tube Adjustment Information**

BBC diffusion tubes are supplied and analysed by Gradko Ltd. Since April 2008 BBC has entered into a contract with Gradko along with all Nottinghamshire Local Authorities to ensure that any deviations within different laboratory practices are ruled out. This enables data to be easily compared between the County authorities. The tubes are prepared using a 20% solution of triethanolamine (TEA) in de-ionised water. The tubes are exposed for one month before being returned for laboratory analysis.

### **Diffusion Tube Bias Adjustment Factors**

The national bias adjustment factor was used to bias correct the data. The adjustment factor specific to each year is shown below.

### **2018 Figures**

The Review and Assessment (R&A) Helpdesk Database 2018 bias adjustment factor for Gradko 20% TEA in water tubes = 0.93. This figure is the average of 30 studies and was taken from Spreadsheet Version Number: 03/19.

Diffusion tube precision was good for 28 of the 30 studies used to derive the national bias adjustment factor. Tube precision is categorised as “good” where the coefficient of variation (CV) of triplicate diffusion tubes for eight or more periods during the year is less than 20%, and the average CV of all monitoring periods is less than 10% (LAQM.TG(16)).

### **Annualisation**

As the data capture was not below 75%, it was not necessary for the data to be annualised.

## Distance Correction

One site (Site 38) has been distance corrected to the nearest public exposure using the NO<sub>2</sub> fall-off with distance calculator available on the LAQM website

<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html> .

**Enter data into the pink cells**

Step 1	How far from the KERB was your measurement made (in metres)?	1.6	metres
Step 2	How far from the KERB is your receptor (in metres)?	3	metres
Step 3	What is the local annual mean background NO <sub>2</sub> concentration (in µg/m <sup>3</sup> )?	19	µg/m <sup>3</sup>
Step 4	What is your measured annual mean NO <sub>2</sub> concentration (in µg/m <sup>3</sup> )?	30	µg/m <sup>3</sup>
Result	The predicted annual mean NO <sub>2</sub> concentration (in µg/m <sup>3</sup> ) at your receptor	28.5	µg/m <sup>3</sup>

Figure D.1 - Road Calculation to nearest Receptor for Site 38.

## QA/QC Data for Non-Automatic Sites

### Broxtowe Borough Council

The QA/QC procedure's that are followed when deploying diffusion tubes are:

- The diffusion tubes on arrival are labelled (including the travel blank), put back in a sealed bag then stored in a fridge until they are deployed.
- The diffusion tubes (including the travel blank) are removed from the fridge 10 minutes before undertaking the changeover.
- All of the diffusion tubes are deployed vertically in a spacer at each location and the date and time of their removal is recorded. The travel blank is not exposed e.g. the end cap is not removed.
- After all of the diffusion tubes have been changed over, they are then put back into the fridge until they are sent to the laboratory.

- The paperwork is then filled in and the diffusion tubes and the associated paperwork are sent to the laboratory for analysis.

### **Gradko**

Gradko International (diffusion tube supplier and analyst) is United Kingdom Accreditation Service (UKAS) accredited; it is assessed annually for compliance to ISO 17025 and participates in other proficiency schemes.

Gradko International confirms that:

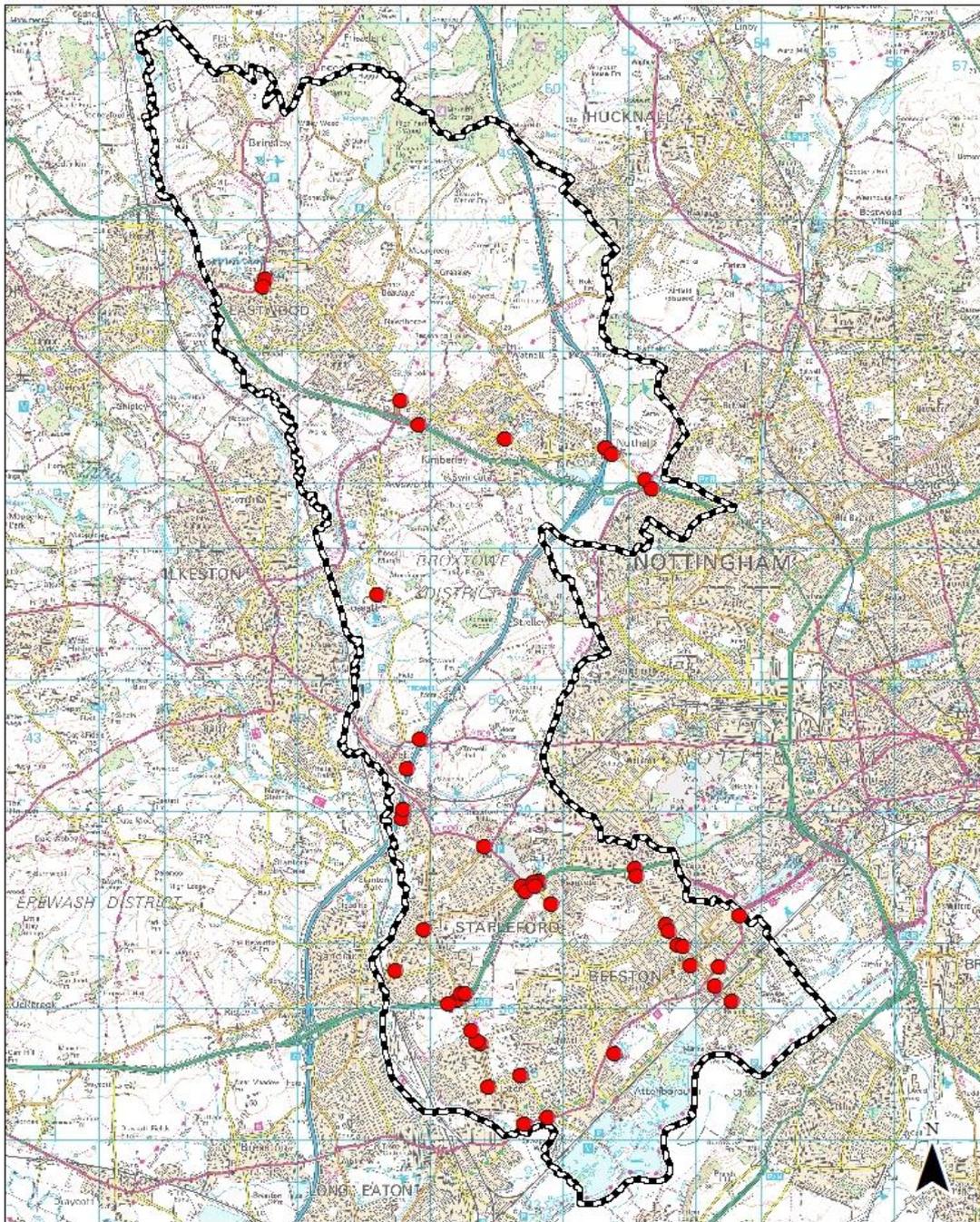
- Their procedures have been amended to follow the guidance issued on behalf of Defra (AWA Energy & Environment, Feb 2008) relating to the preparation, extraction, analysis and calculation procedures for passive NO<sub>2</sub> diffusion tubes. And
- That most of these procedures were in force before the guidance was introduced and any amendments necessary in achieving compliance were minimal

Gradko International also participates in a number of QA/QC monitoring systems to demonstrate satisfactory performance:

- The Workplace Analysis Scheme for Proficiency (WASP) programme to ensure uniformity of data throughout the year. Only laboratories that are in the WASP scheme are used for analysing tubes from the National Nitrogen Dioxide Diffusion Tube Network.
- The monthly field inter-comparison exercise with other laboratories to enable assessment of bias and precision undertaken by AEA Energy & Environment

An external QC scheme to check solutions is run by AEA Energy & Environment

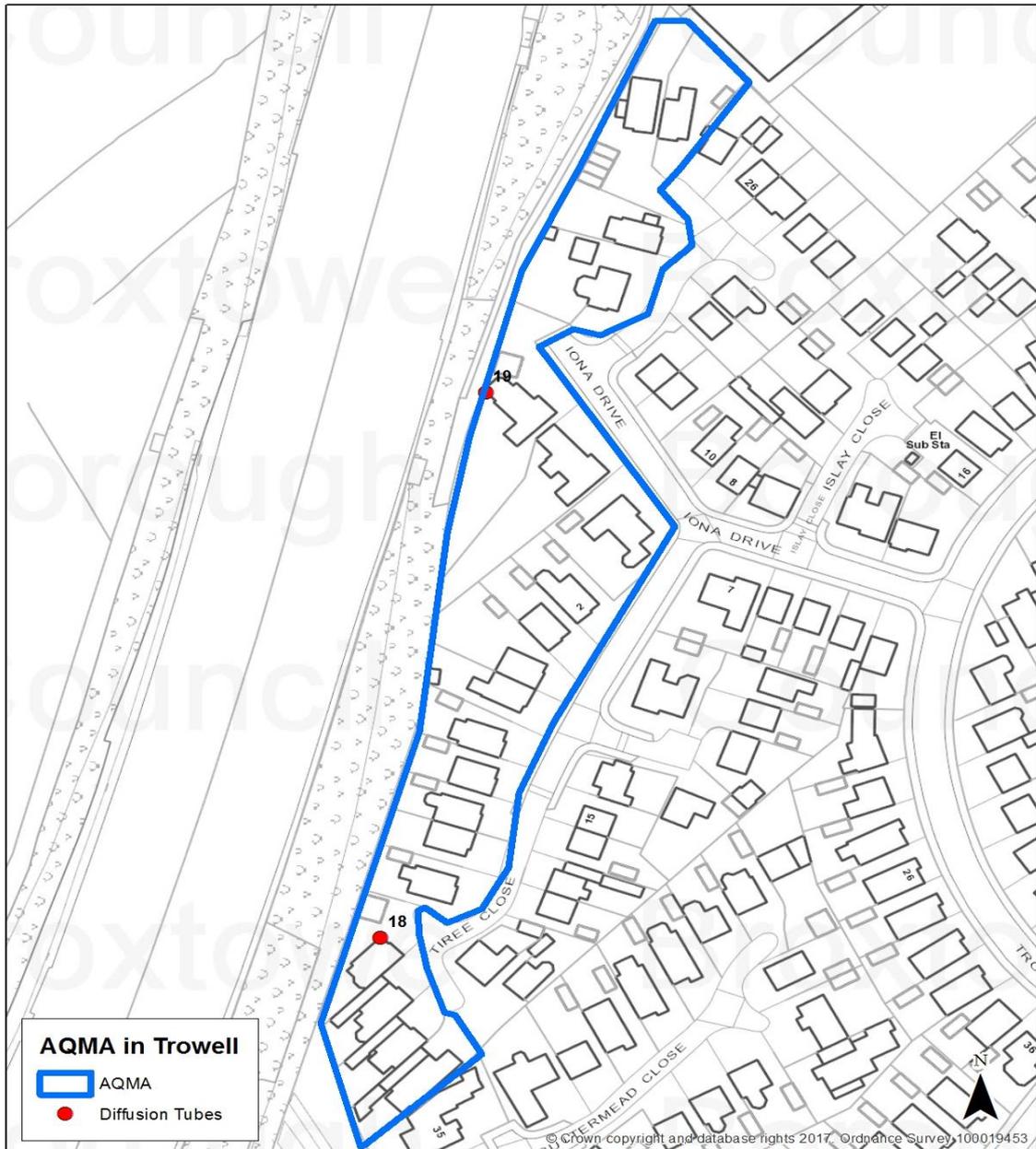
## Appendix E: Map of All Monitoring Locations within the Borough of Broxtowe.



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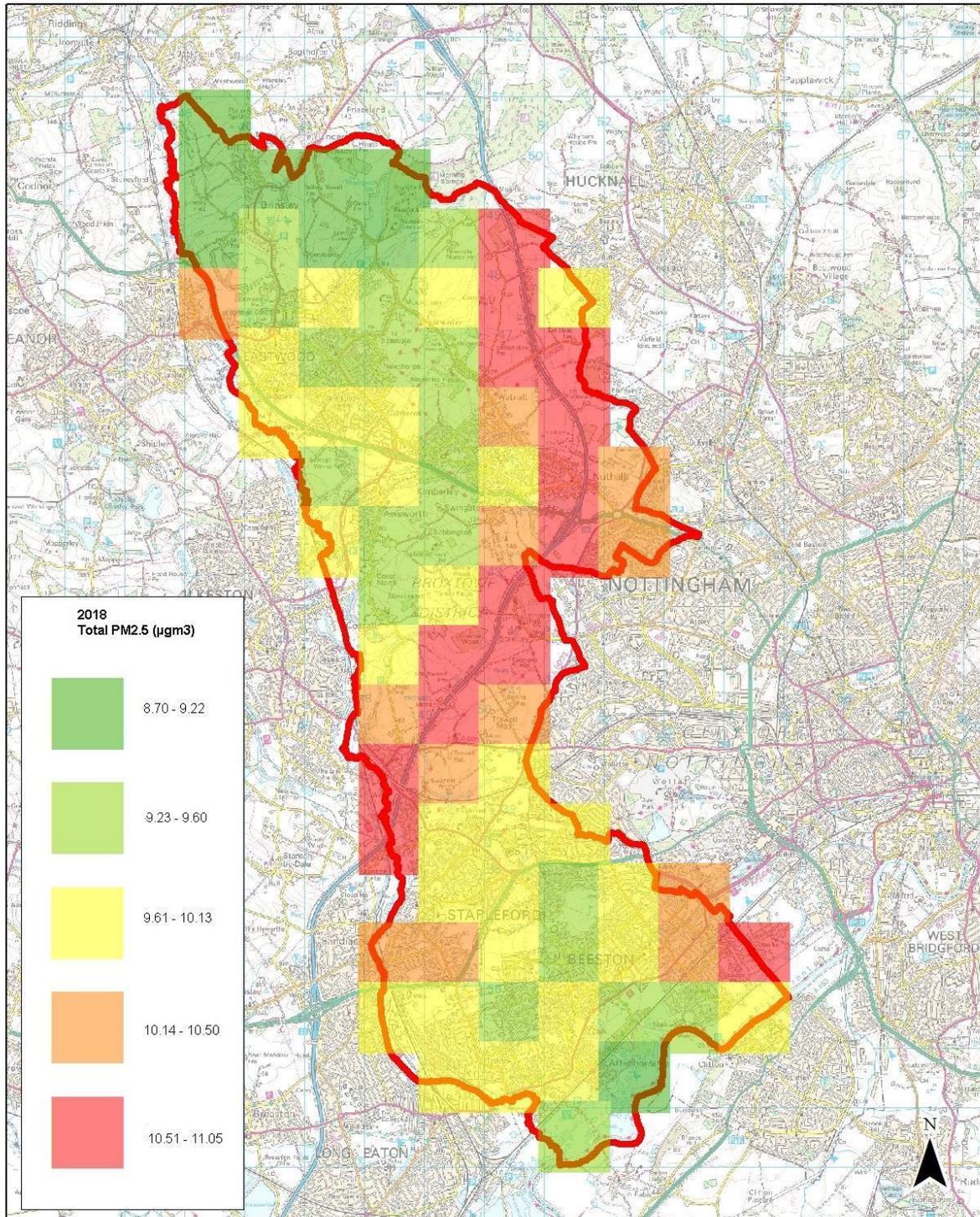
Figure E.1 – Diffusion Tube Locations

## Appendix F: Map of AQMA in Trowell.



**Figure F.1 - AQMA 1 encompassing twenty properties on parts of Iona Drive and Tiree Close next to the M1 motorway and the Trowell Park estate (boundary marked in blue).**

# Appendix G: Map of the Borough showing the 2018 modelled background levels of PM<sub>2.5</sub>.



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Figure G.1 - Map of the Borough showing the modelled background levels of PM<sub>2.5</sub>.

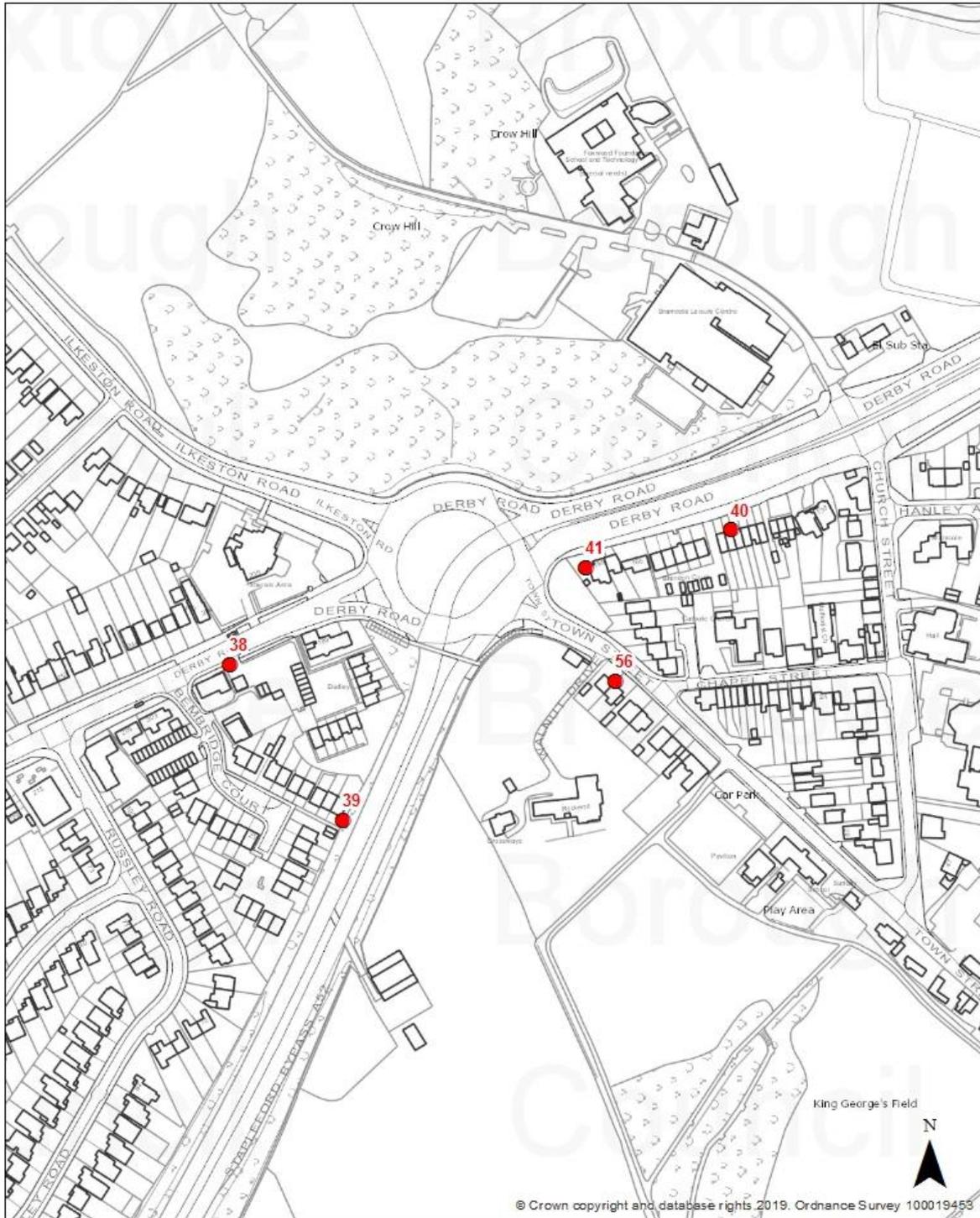
## Appendix H: Map of A610/B600 Nuthall Island showing the Monitoring Locations.



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Figure H.1 – Nuthall Island and Diffusion Tube Location.

# Appendix I: Map of Bramcote Island, Derby Road, Bramcote showing the Monitoring Locations.



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Figure I.1 – Bramcote Island and Diffusion Tube Location

# Appendix J: Map of Town Street, Bramcote showing the Monitoring Location.



Figure J.1 – Map of Town Street, Bramcote and Diffusion Tube Location

## Appendix K: Summary of Air Quality Objectives in England

Table K.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective <sup>7</sup>	
	Concentration	Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>10</sub> )	50 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>2.5</sub> )	Work towards reducing emissions/concentrations of fine particulate matter (PM <sub>2.5</sub> )	Annual mean
Sulphur Dioxide (SO <sub>2</sub> )	350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean

<sup>7</sup> The units are in microgrammes of pollutant per cubic metre of air (µg/m<sup>3</sup>).

## Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Air Quality Annual Status Report
AURN	Automatic Urban and Rural Network
BBC	Broxtowe Borough Council
CAZ	Clean Air Zone
COMEAP	Committee on the Medical Effects of Air Pollution
CV	Coefficient of Variation
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
D2N2	Local Enterprise Partnership for Derby, Derbyshire, Nottingham and Nottinghamshire
EMAQN	East Midlands Air Quality Network
EU	European Union
HE	Highways England
HGV's	Heavy Goods Vehicles
HS2	High Speed Train 2
ITSO	Integrated Transport Smartcard Organisation
LAQM	Local Air Quality Management
LAQM.PG(16)	LAQM Policy Guidance 2016
LAQM.TG(16)	LAQM Technical Guidance 2016
LCWIP	Local Cycling and Walking Infrastructure Plan

LGA	Local Government Association
LSTF	Local Sustainable Transport Fund
$\mu\text{g}/\text{m}^3$	Microgrammes of pollutant per cubic metre of air
NEPWG	Nottinghamshire Environmental Protection Working Group
NET	Nottingham Express Transit
NCT	Nottingham City Transport
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
Notts CC	Nottingham City Council
NCC	Nottinghamshire County Council
O <sub>3</sub>	Ozone
OLEV	Office for Low Emission Vehicles
PHE	Public Health England
PM	Particulate Matter
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10 $\mu\text{m}$ (micrometres or microns) or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5 $\mu\text{m}$ or less
PTP	Personalised Travel Planning
QA/QC	Quality Assurance and Quality Control
R&A	Review and Assessment
SAFED	Safe And Fuel Efficient Driving
SO <sub>2</sub>	Sulphur Dioxide
SQPS	Statutory Quality Partnership Schemes
TEA	Triethanolamine
UK	United Kingdom

ULEVs	Ultra Low Emission Vehicles
WASP	Workplace Analysis Scheme for Proficiency
WHO	World Health Organisation
WPL	Workplace Parking Levy

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Local Authority:	<b>Broxtowe Borough Council</b>
Reference:	<b>ASR19-0193</b>
Date of issue	<b>November 2019</b>

## APPENDIX 2

# Annual Status Report

The Report sets out the Annual Status Report, which forms part of the Review & Assessment process required under the Environment Act 1995 and subsequent Regulations.

Broxtowe Borough Council currently has one AQMA, in Trowell, for exceedances in the NO<sub>2</sub> annual mean. The AQMA has an AQAP which was first published in 2008. The M1 and the A52 are the major sources of emissions in the borough, being the main connecting roads from Nottingham to Derby, and heavily used by commuters. The remaining AQMA is associated with traffic emissions from the M1 motorway.

In 2018, the Local Authority carried out passive NO<sub>2</sub> monitoring across a network of 43 diffusion tubes. Though some diffusion tubes have been relocated. There were no exceedances of the annual mean NO<sub>2</sub> objective in the borough in 2018, with the highest measured concentrations inside the remaining AQMA being 32 µg/m<sup>3</sup>, and 36 µg/m<sup>3</sup> measured outside the AQMA, at site 48 in Town Street.

The Local Authority has completed the majority of their AQAP measures. Their last AQAP was published in 2008 and is out of date. The Local Authority state that they plan to review their AQAP.

QA/QC procedures have been applied for bias adjustment (using a national factor). The Council have performed distance corrections with calculations provided. No annualisation was required. The report provides good discussion of local PM<sub>2.5</sub> issues and the measures the Council have in place to tackle PM<sub>2.5</sub>.

On the basis of the evidence provided by the local authority the conclusions reached are acceptable for all sources and pollutants, with the provisos listed in the commentary below. Following the completion of this report, Broxtowe Borough Council should submit an Annual Status Report in 2020.

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Local Authority:	<b>Broxtowe Borough Council</b>
Reference:	<b>ASR19-0193</b>
Date of issue	<b>November 2019</b>

## Commentary

The report is very well written, detailed, and provides the information specified in the Guidance. The following comments are made:

1. The Local Authority provide a very detailed discussion of the NO<sub>2</sub> trends within the borough. In addition to this they discuss the trends in relation to locations which is extremely useful and this approach to data discussion is encouraged in future reports.
2. There have been no exceedances of national air quality objectives in 2018 and concentrations in the Trowell AQMA continue to fall. The Council have stated that they plan to implement measures to ensure NO<sub>2</sub> concentrations are below the AQOs and when long-term compliance is achieved they will revoke the AQMA. If current NO<sub>2</sub> trends continue and concentrations decline, then the revocation of the AQMA is strongly supported.
3. It would be useful if Section 2.3 could make reference to the Public Health Outcomes Framework, and the local indicator for PM2.5 in the district. The Council may wish to consider comparing the '3.01 - Fraction of mortality attributable to particulate air pollution indicator' value for Broxtowe to nearby LAs and National indicator values. This can be found in the link below.  
<https://fingertips.phe.org.uk/profile/public-health-outcomesframework/data#page/0/gid/1000043/pat/6/par/E12000005/ati/101/-are/E07000194>.

This commentary is not designed to deal with every aspect of the report. It highlights a number of issues that should help the local authority either in completing the Annual Status Report adequately (if required) or in carrying out future Review & Assessment work.

**Issues specifically related to this appraisal can be followed up by returning the attached comment form to Defra, Welsh Assembly Government, Scottish Government or DOE, as appropriate.**

For any other queries please contact the Local Air Quality Management Helpdesk:  
Telephone: 0800 0327 953  
Email: LAQMHelpdesk@uk.bureauveritas.com

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Local Authority:	<b>Broxtowe Borough Council</b>
Reference:	<b>ASR19-0193</b>
Date of issue	<b>November 2019</b>

## **Appraisal Response Comment Form**

Contact Name:	
Contact Telephone number:	
Contact email address:	UKLAQMAppraisals@aecom.com

**Comments on appraisal/Further information:**

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**Report of the Strategic Director**

**WORK PROGRAMME**

1. Purpose of report  
To consider items for inclusion in the Work Programme for future meetings.
  
2. Background  
Items which have already been suggested for inclusion in the Work Programme of future meetings are given below. Members are asked to consider any additional items that they may wish to see in the Programme.

15 June 2020	<ul style="list-style-type: none"> <li>• Climate Change and Green Futures Update</li> <li>• Clean and Green Update</li> <li>• Tree Planting and Meadow Update</li> <li>• Fuel Strategy Update</li> <li>• Home Composting</li> <li>• Transport and Fleet Strategy</li> <li>• Update on 'Bring Days' and Free Waste Collection</li> </ul>
14 September 2020	<ul style="list-style-type: none"> <li>• Air Quality Action Plan Update</li> <li>• Performance Management – Review of Business Plan Progress – Environment</li> <li>• Pride in Parks Update</li> <li>• Allotments - Review of concessions and water charges</li> <li>• Improving the boroughs recycling rates and providing more opportunities for residents to recycle</li> <li>• Investment in Parks</li> <li>• Terms of reference</li> <li>• Environment Establishment Review</li> </ul>
23 November 2020	<ul style="list-style-type: none"> <li>• Performance Management – Review of Business Plan Progress – Environment</li> <li>• Garden Waste Charges 2021/22 Subscription Fee</li> <li>• Clean and Green Update</li> <li>• Green Futures and Climate Change Strategy progress</li> <li>• Protecting and Enhancing the Green Environment</li> <li>• Free Tree Giveaway</li> <li>• Trade Waste Fees and Charges</li> </ul>
1 February 2021	<ul style="list-style-type: none"> <li>• Business Plans and Financial Estimates 2019/20 – 2021/22 – Environment</li> <li>• Pride in Parks Update</li> <li>• Clean and Green Update</li> <li>• Broxtowe Parks Standard</li> <li>• Tree Planting Update</li> <li>• Transport and Fleet Strategy Update</li> </ul>

**Recommendation**

**The Committee is asked to CONSIDER the Work Programme and RESOLVE accordingly.**

Background papers: Nil

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