



Contains Confidential or Exempt Information	No
Title	CEX549: Climate and Clean Air Annual Report 2021
Member Reporting	Cllr Katherine Dunne, Lead Member for Communities and Climate Emergency
Contact Details	Wayne Stephenson, Director for Environment and Climate
For Consideration By	Cabinet
Date to be Considered	7 th September 2021
Implementation Date if Not Called In	17 th September 2021
Affected Wards	All
Keywords/Index	Climate Emergency, Carbon Emissions, Sustainability. Global Warming, Air Quality, Nitrogen Dioxide Pollutants

1. Details of Recommendations

Cabinet is asked to:

1. Note the contents of the annual progress report on the Climate Emergency Action Plan (Appendix A).
2. Note the contents of the Air Quality Annual Status Report 2021 (Appendix B), which has been approved by the GLA.
3. Adopt World Health Organisations (WHO) limit values for measuring progress for Particulate Matter 2.5 and 10 across the borough, as detailed in paragraphs 3.13 to 3.15.
4. Approve the allocation of £1,220k from the New Homes Bonus reserve for the delivery of phase 1 in 2021/22 (£400k) and phase 2 in 2022/23 (£820k) of the Clean Air for All Programme, as set out in paragraphs 3.8 to 3.12 of the report, and delegate decisions on spend to the Executive Director of Environment, Culture and Customer Services.
5. Approve the addition of the Clean Air for All Programme to the general fund capital programme for 2021/22 and 2022/23.
6. Note the contents and actions proposed in the Equalities Impact Assessment (Appendix C).

If the recommendations are adopted, how will residents benefit?	
Benefits to residents and reasons why they will benefit, link to Values	Dates by which they can expect to notice a difference
<ul style="list-style-type: none"> • The Climate Emergency Action Plan (adopted in July 2020) sets out a pathway for reducing carbon emissions. • The Air Quality Action Plan (adopted in October 2018) aims to reduce air pollutants resulting in improvements to resident's health and wellbeing. Air quality has now been confirmed as being directly responsible for the death of a child in London and therefore this plan will directly save lives and reduce health inequalities. • Both documents are live and continually evolving i.e., they are updated regularly with new actions, that once developed and implemented will result in Hounslow achieving net zero carbon emissions across Council activities by 2030, influencing a reduction in wider Borough emissions and improving air quality which will result in a Cleaner, Greener Hounslow and improving resident's quality of life. 	Ongoing

2. Report Summary

<ol style="list-style-type: none"> 1. This report sets out the progress achieved to date on delivering the projects and initiatives set out in the Climate Emergency Action Plan (CEAP) which includes securing external funding to install low carbon technologies and energy efficiency measures in 33 school buildings, 25 council owned buildings, working in partnership with neighbouring Local Authorities to retrofit private sector homes to reduce fuel poverty borough wide, accelerating the roll out of the Electric Vehicle infrastructure charging programme; and designing and developing a bespoke Eco Schools programme, Green Fleet Strategy, Heat Map and Energy Masterplan as well as engaging with residents and businesses to develop net zero lifestyles and reducing their carbon footprint. 2. This report also sets out the progress achieved to date by implementing the Air Quality Action Plan (AQAP) and tackling the boroughs air quality. Approximately 47% of the actions have been completed or are ongoing; and 53% have not been commissioned yet as they are at the design stage. Many of the actions set out in the AQAP will also result in a reduction in carbon emissions and assist with the delivery of the CEAP. Progress detailed in this Cabinet Report and documented in the CEAP and Air Quality Annual Reports will be published in an accessible summary form for residents' information. These are currently being produced in conjunction with the Communications team.
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3. The report recommends that an allocation of £1,220k from the New Homes Bonus reserve for the delivery of phase 1 in 2021/22 (£400k) and phase 2 in 2022/23 (£820k) of the “Clean Air for All” Programme. This will involve upgrading the existing air quality monitoring facilities, expanding the monitoring network through the installation of new automatic monitoring stations and diffusion tubes, undertaking air pollution audits in schools and their surrounding environment; and increasing stakeholder engagement and collaboration in relation to raising awareness of the air quality agenda. Implementation of the programme will continue to improve the boroughs air quality and improve resident’s health and wellbeing; and following a recent coroner decision that poor Air Quality played a direct part in the death of a London young person, this project will also prevent the loss of lives and reduce health inequalities by adopting the World Health Organisations (WHO) limit values for measuring progress for Particulate Matter 2.5 and 10 across the borough.
4. These recommendations are being made because the Council declared a Climate Emergency at Borough Council on 18th June 2019. This committed the Council to reducing its direct emissions to net zero by 2030, alongside using such influence as it must to reduce wider emissions from across the Borough as quickly as possible. The Council also has a statutory duty to meet the air quality objectives under Part IV of the Environment Act 1995 and London Local Air Quality Management Framework and ensure that the limit values of air pollutants remain below mean averages.
5. If adopted, the key financial implications for projects set out in the CEAP and the AQAP will fall on departments responsible for delivering the projects and in some cases, these can be covered within existing approved budgets. However, where this is not feasible, additional funding will be required which will be sought from external resources or through a separate authorisation process. Note that to date the Council has been successful in securing external grant funding to deliver a range of decarbonisation schemes that have assisted with the delivery of the CEAP and AQAP.

3. Climate Emergency Action Plan and Air Quality Action Plan - Annual Review

- 3.1 In July 2020, Cabinet adopted the Climate Emergency Action Plan 2020-2030 in response to the Climate Emergency declaration made at Borough Council on 18th June 2019 to: *‘review the existing arrangements in place to reduce the Council’s carbon footprint and identify measures towards a goal of making the Council’s activities carbon neutral and ultimately zero-carbon within the shortest achievable timeframe. To enable this, the Council call upon the government to make available the appropriate powers and funding to local and regional government as well as pursuing policies to de-carbonise the national grid and support the production of renewable energy’.*
- 3.2 The Climate Emergency Action Plan sets out the ambitious target of achieving net zero carbon emissions by 2030 from Council operations whilst working with all residents and stakeholders to influence a reduction in wider borough emissions.
- 3.3 It was agreed that progress on the delivery of the Climate Emergency Action Plan will be reported back to Cabinet in the form of an annual report setting out:

- Estimated carbon emissions emitted that year.
 - A review of delivery of the actions as set out in the plan during that year including a summary from individual portfolio holders.
 - A more detailed look to action in the year ahead.
- 3.4 The Air Quality Action Plan was approved in 2018. The Local London Air Quality Management process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether the air quality objectives are likely to be achieved. This review is captured in the Annual Status Report (ASR) – see Appendix B. This is an annual report that sets out strategies employed by the Council to improve air quality and highlights any progress that has been made. As part of this year’s ASR, officers have also reviewed the progress achieved to date by adopting the AQAP and identified the additional work that will be required to continue to meet the requirements of the London Local Air Quality Management (LLAQM) statutory process.

Climate Emergency Action Plan 2021/22 – Key focus for the year ahead

- 3.5 Alongside the work that is currently being implemented (summarised in Appendix A and in sections 4.1 to 4.48 below), the Council will begin focusing on the short to medium measures set out in the Climate Emergency Action Plan and the identification of new actions and initiatives that can speed up the delivery of the target. This includes:

Energy Efficiency

- Complete the installation of smart metering in all operational corporate assets and schools to improve monitoring of energy data
- Complete the roll out of the Energy Performance Certificates Programme for properties where we are the corporate landlord and implement the required enhanced energy efficiency upgrades to achieve minimum C rating.
- Commission energy audits of Hounslow schools that have not benefited from the PSDS Fund with the aim to submit a grant application for Phase 3 of the PSDS Fund. To date 15 schools have expressed interest.
- Launch the Hounslow Eco Schools Programme in September 2021 – aim to have all schools to achieve Bronze Award by December, Silver Award by Easter 2022 and Green Award by July 2022.

Retrofitting Hounslow and delivering zero carbon housing

- In partnership with consortium of ten London boroughs, the Council will submit a grant application to secure funding from the Sustainable Warm Homes Competition which incorporates Phase 3 of the Green Homes Grant Local Authority Delivery Scheme.
- In order to develop the Council’s approach to retrofitting the housing stock, we will undertake detailed modelling and analysis of the energy data to produce an action plan that sets out action to decarbonise and retrofit the corporate and social housing stock as part of the new Corporate Property and Building Services’ Asset Management Strategy.

- Submit a grant application to secure funding from the Social Housing Decarbonisation Fund – targeting sheltered housing schemes and housing estates.
- Develop and adopt a Climate Change Supplementary Planning Document to deliver low carbon development across the borough
- Following completion of the Heat Map and Energy Masterplan, submit funding application to the Heat Network Development Unit (HNDU) to undertake a techno-economic feasibility study of the District Heat Network clusters.
- Utilise the Carbon Offset Fund to deliver energy efficiency improvements across the housing stock and fund community energy projects that have been developed in partnership with local stakeholders.

A greener and more resilient borough

- Undertake a detailed risk assessment of impact of climatic events on the boroughs infrastructure and produce a Climate Change Adaptation Action Plan
- Adopt and implement the Green Infrastructure Strategy, Nature Recovery Action Plan and Tree Policy to increase urban greening across the borough.

Waste management

- Continued implementation of the RRP and in partnership with the GLA and ReLondon, begin development of the next edition of the waste Resource and Reduction Plan (2022-2026).

Transport

- Ensure that a minimum of 50% of the Council's vehicle fleet and those used by the primary contractors are zero emission (at the tailpipe) or hybrid.
- Trial the use of biofuels (as an alternative to petrol and diesel) to power the waste vehicle fleet.
- During summer 2021, the Council will be launching a scheme called Betterpoints running for the year which encourages take up of walking and cycling and will be funded by Public Health and open to all.
- Subject to funding, Hounslow Council will look to commence detail design of the Brentford to Southall Rail Link – an application to secure the funding has been submitted and are waiting to here on whether the council has been successful in securing the funds before progressing to the next stage.
- Utilise the findings from the 15minute Neighbourhood project to develop and submit a Future Neighbourhoods 2030 bid to the GLA.
- Submit a funding bid to the Office for Zero Emissions for £1.5million with the aim to install 900 residential charge points across the borough by March 2023. Bid to be submitted by September 2021 and outcome expected in autumn 2021.
- Finalise the Electric Vehicle Strategy which is currently in development. This will set out the future work programme for increasing the EV charging infrastructure across the borough, in schools and on the social housing estates. The strategy will also explore the introduction of new car club

providers across the borough for resident use. The draft strategy to be completed by December 2021.

- Ensure all Council car parks have EV charging (fast or rapid) available. Ensure all new developments with car parking deliver EV charging in line with London Plan standards.

Culture Change, Governance and Developing net zero lifestyles

- Implement sustainable procurement guide and roll out procurement training programme to all staff.
- Work with suppliers to ensure that they are adopting the principles of ISO 14001, 9001 etc. to the best of their ability
- Continue engagement with Climate and Clean Air Community Reference Group (CRG) and regional partnerships
- Host an Environmental Youth Summit for Hounslow Schools and an Environment and Climate Summit during COP26 bring together CRG's, Environmental Champions, Community Groups, Residents, Businesses etc. We want to mobilise the community and will encourage them to take charge and play their part in advocating the importance of protecting the local and global environment by hosting their own events which we can support them with.
- Roll out Climate View software for Service Areas to track progress of projects against emissions reduction
- Encourage community kitchen garden schemes and indoor markets for the sale of local goods. Promote the growth of local produce on disused lands, such as the community project piloted at Harlech Gardens.
- Community network established in every ward.
- Continued promotion, community engagement and awareness raising in relation to the CEAP and the Green Recovery. Using all available mediums i.e., Hounslow Matters, social media, digital platforms etc.

3.6 This is by no means an exhaustive list and new actions and initiatives will continue to be incorporated within the Action Plan especially as new funding streams come available and is secured.

Green skills and employment

3.7 In January 2021, the Council adopted the Green Recovery Strategy which aims to accelerate the delivery of the Greener Borough Framework and the Climate Emergency Action Plan. This will be achieved by designing and delivering the five key flagship programmes that will focus on low carbon neighbourhoods, green economy, 21st Century Mobility, Green growth; and community buy in and collaboration. The Coronavirus pandemic has exposed the vulnerability of key employment sectors for the Borough. We need to use the transition to define green employment and understand the opportunities that exist to strengthen our resilience and diversify away from our reliance on certain sectors as Transport. The Strategy also seeks to establish new approaches to support green growth, with green educational opportunities, skills & upskilling acting as a pathway to well paying, secure jobs in the Green Economy.

3.8 To achieve this, we will be producing a green skills and employment plan which will include a Green Skills Academy offering to provide residents with opportunities to retrain and obtain skills that are relevant to the Green Economy so that they are in a position to apply for current and future job opportunities. To

develop this further we are utilising strategic reports on growth areas for the Green Economy to understand what types of jobs these will translate to and in which sectors. This will enable us to make sure our academies skills offering is meeting market demand. Initial supplier engagement continues to create a strong link between relevant courses and a pathway to employment utilising industry links.

- 3.9 On a regional level, Hounslow is working with London Councils to deliver the pan-London response to climate emergency by leading on the Build the Green Economy Programme. This programme will develop a vision and roadmap that will aim to build London's green economy by piloting flagship and demonstrator projects that will benefit Londoners and businesses. This will be supported by an advocacy and communications strategy. Hounslow is also actively engaged with the West London Alliance to account for economic connectivity amongst our neighbouring Boroughs and link with Heathrow Airport on the creation of a West London innovation District.

Air Quality Action Plan 2021/22 – Key focus for the year ahead

- 3.10 Following the review of the AQAP, the Council is committed to improving public health in Hounslow in the shortest time possible whilst ensuring compliance with the Council's legal requirement to work towards meeting air quality objectives under Part IV of the Environment Act 1995 and London Local Air Quality Management Framework. This will be achieved by adopting the following objectives:
- Monitoring of air pollution data - To meet and exceed all statutory limits for air pollution (NO₂, PM₁₀, PM_{2.5}) across Hounslow.
 - Delivery and Action - To drive pollution levels down to WHO guideline levels to deliver clean, healthy air for Hounslow.
 - Communications - Provide a high-quality knowledge base of information that can be communicated to all internal and external stakeholders.
 - Undertaking the Clean Air for All programme.
 - Implementing actions that address the findings of Ella Adoo-Kissi-Debrah coroner's inquest.
- 3.11 Through the Clean Air for All programme, the following deliverables will be achieved by 2023:
- To identify areas in Hounslow where air quality monitoring can be improved and to upgrade the existing monitoring stations.
 - To expand air quality monitoring (through the installation of additional automatic monitoring stations and diffusion tubes) throughout Hounslow to understand the distribution of pollution and any high-risk areas.
 - To identify and implement actions that will reduce pollution down to WHO guideline levels in order to deliver clean, healthy air for all in the first instance focusing on schools and public buildings this will be part of the Clean Air for Schools Project (see table one below)
 - To identify and implement actions that will not detrimentally impact vulnerable populations and the environment whilst enabling future economic growth across the borough.

- To develop a high-quality knowledge base of air quality information by working collaboratively with stakeholders to understand their needs in order to meet requirements.

3.12 Table one below is the revised delivery programme that identifies seven projects that will be implemented as part of the AQAP and phased over two years. These have been costed based on initial quotes provided by suppliers and benchmarked against similar work being undertaken by neighbouring boroughs. To deliver the capital projects it will cost £400,000 in Phase 1 (2021/22) and £820,000 (2022/23) in Phase 2.

3.13 The revenue work (see table one below) will cost £82,500 in 2021/22 and £72,500 annually from 2022/23. Revenue budget of £80,000 exists to meet these costs. Any revenue spends incurred from the installation of additional monitoring stations in year 1 and 2 can be covered by the existing budgets. However, the budget will need to be reviewed at the end of year 2 to account for any potential growth to ensure there is no overspend for maintenance of new monitoring sites.

3.14 The £10,000 needed to develop the Air Quality and Noise Supplementary Planning Document can be funded from the Environment Fund.

Table one – summary of revised programme of works to deliver the AQAP.

		Phase 1				Phase 2				Phase 3			
		2021/22				2022/23				2023/24			
	Cost	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
CAPITAL													
1. Upgrade of the existing air quality monitoring stations – six in total.	£220,000		£100,000			£120,000							
2. Clean Air for Schools (includes school streets – note that the audits will be undertaken by Council officers)	£500,000		£150,000			£350,000							
3. Identification of areas where additional new automatic monitoring stations and diffusion tubes can be installed to further improve the data capture with the aim to improve the understanding of the boroughs air pollution (this includes examining and modelling the existing traffic patterns across the borough)	£500,000		£150,000			£350,000							
Total costs	£1,220,000		£400,000			£820,000							

REVENUE					
4. Monitoring and data analysis of air pollution in Hounslow. Plus, maintenance	£41,500		Per annum	Per annum	Per annum
5. Communicating Hounslow's air quality i.e. internal staff training, Clean Air Borough Status, stakeholder engagement, website upgrades, AirText promotion	£5,000		Per annum	Per annum	Per annum
6. Retain specialist technical planning advice service for Development Management	£30,000		Per annum	Per annum	Per annum
7. Develop and adopt Air Quality and noise Supplementary Planning Document	£10,000		One-off		
Total Cost			£82,500	£72,000	£72,000

3.15 The projects will be managed by the Climate Emergency and Environmental Strategy Unit; however a cross departmental project team will be set up to lead on the development and implementation of the individual schemes. The Team will be responsible for project managing the delivery of the actions, monitoring emissions and ensuring the objectives and deliverables of the project are achieved.

Adopting WHO limit values for Particulate Matter

3.16 The UK's (and EU's) legal limit values for annual particulate matter pollution are 40 micrograms per metre cubed ($\mu\text{g}/\text{m}^3$) for PM_{10} and 25 $\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$. Hounslow has consistently far exceeded these targets in recent years and our understanding of the impact of particulate matter has come on leaps and bounds since the PM_{10} limit was introduced in 2004. With $\text{PM}_{2.5}$ particularly, there is no level deemed safe to human health as the particulates are so small that they can pass from the lungs into the bloodstream and aggravate respiratory conditions like asthma and can lead to lung cancer, coronary heart disease and strokes.

3.17 The World Health Organisation has more stringent guideline limit values of 20 $\mu\text{g}/\text{m}^3$ for PM_{10} and 10 $\mu\text{g}/\text{m}^3$ For $\text{PM}_{2.5}$. In the wake of the coroner's report into the death of Ella Adoo Kissi-Debrah in Lewisham, pressure is growing on the Government to adopt these limits in the new Environment Bill. Table two below shows average annual mean pollution levels for each of the three 'main' pollutants we monitor for the past three years, along with UK and WHO limits.

Table two – average annual mean pollution levels for three main pollutants

Pollutant	UK/EU	WHO	2018	2019	2020
NO2	40	40	37.95	34.97	29.12
PM10	40	20	20.86	19.33	20.03
PM2.5	25	10	13.98	13.22	11.36

- 3.18 As part of our developing 'Clean Air for All' programme, it is recommended that the council adopt the WHO limits for Hounslow. As progress made in implementing the Clean Air for All Programme will ensure we remain below the limit values. This will include upgrading the equipment at our existing monitoring stations and expanding our PM_{2.5} monitoring from two (Brentford & Chiswick) to all seven sites and taking action where required to address the exceedances.

4(a) Progress on implementing the Climate Emergency Action Plan

- 4.1 Please see Appendix A for the Climate Emergency Action Plan Annual Review July 2020 - July 2021 which sets out in detail the progress made to date to deliver the actions since the Plan was adopted by Cabinet in July 2020.

Council Direct Emissions – Carbon Footprint

- 4.2 In March 2020, central government implemented a nationwide lockdown as a result of the Coronavirus Pandemic. This resulted in a temporary shutdown of the economy, schools, non-essential shops, amenities and the population were instructed to stay at home to prevent the spread of the virus. Whilst some services did reopen in summer 2020, a further two lockdowns were put in place in November 2020 and January – March 2021. As a result, throughout most of 2020/21, nearly all corporate Council buildings, libraries, leisure centres remained closed to the public and staff were instructed to work from home. Many services that were provided to the public were digitised (available online) and or were temporarily were unavailable i.e. libraries and leisure centres remained closed. This resulted in a reduction in the energy consumption of the buildings that are part of the Council's operations and due to the significant gaps in the data collection, the emissions profile set out in table three below does not provide a full picture of the Council's carbon footprint, had services continued to be delivered under a 'business as usual' scenario.

Table three – summary of emissions reduction

Estimated Carbon Direct Emissions by Source	2018/19 Emissions tCO ₂ e/yr	2020/21 Emissions tCO ₂ e/yr	Commentary
Fleet	1,300	105.84	
Employee travel	678	N/A	No data due to staff working from home and business commuting was paused.
Authority gas	4,085	4472.93	Due to the pandemic, there was limited data available to calculate the carbon footprint as many buildings remained out of service such as the offices, libraries, leisure centres, schools, community halls etc.
Social housing gas	34,492		
Authority electric	2,107	4166.02	
Social housing electric	6,211		
Total (tCO ₂ e)	48,873	N/A	

Embedded Carbon Emissions

- 4.3 Embedded carbon is defined as the total carbon emitted during the production of materials. It is estimated from the energy used to extract and transport raw materials as well as emissions from manufacturing processes. For example, the embedded carbon of a building will include all the emissions from the construction materials, the building process, all the fixtures and fittings inside as well as from deconstructing and disposing of it at the end of its lifetime.
- 4.4 When it comes to understanding embedded carbon emissions and how we reduce our carbon footprint, we have partnered with our neighbouring West London boroughs to understand consumption emissions from our procurement processes and how these can be reduced. The Council is also working with London Councils to develop and refine the methodology to improve the carbon accounting and reporting process.
- 4.5 The Council has also developed planning policies with regards to new housing developments in the borough, such that the council now expects developers to consider circular economy and in particular the embodied carbon at the design stage of development as per London Plan policy SI 7 (Reducing waste and supporting the circular economy) and emerging Local plan review policies GWC 5 and WoB5 which seeks to have full regard to circular economy principles in the design and implementation of energy (including heating and cooling), water and waste infrastructure. This is an area of work that the council will be exploring further in order to improve our understanding in reducing the embodied carbon emissions from our own buildings, operations and the supply chain.

Council Direct Emissions – Programme Updates

- 4.6 In order to reduce Council Direct Emissions, the following seven programmes were developed and progress, to date, on actions being delivered are summarised below:
1. Energy efficiency
 2. Renewable energy
 3. Electrify vehicle fleet
 4. Reducing employee transport
 5. Waste management
 6. Culture change and governance
 7. Sustainable investment and funding

Energy efficiency

- 4.7 The Council has implemented exemplar **energy efficient solutions for new council homes** that we are building. For example, the Orchard Road development will be an exemplar zero carbon development *that is utilising* a simple building design which will minimise heat loss and maximise energy efficiency. The site comprises three and four-bedroom homes, all of which will feature open living space, inset entrances to create convenient cycle and bin storage, as well as rear gardens benefitting from natural sunlight and a mixture of paved and lawn areas. Other integral sustainability features include zero carbon technologies such as an air source heat pump to provide hot water and heating, and photovoltaic panels on the roof to supply low carbon electricity. As a result of these features, the design aims to exceed the London Energy

Transformation Initiative (LETI). These highly sustainable homes will not only have minimal impact on the environment but also reduced energy bills for residents.

- 4.8 In partnership with Keep Britain Tidy (KBT), a **bespoke Eco-Schools programme** has been developed for Hounslow schools and will be launched in September 2021. We have set ambitious targets whereby all schools in Hounslow will have a Green Award by August 2022 and in doing so will be working towards declaring their own climate emergency and working towards achieving net zero by 2030.
- 4.9 In Spring 2021, Hounslow secured funding from the Heat Network Development Unit (HNDU) to develop a **Heat Map and Energy Masterplan of the borough** to enable the Council to develop and implement District Heat (DH) networks across the borough. This project will investigate the energy supply and demand loads in order to identify the opportunities available to develop District Heat Networks (DHN) in Hounslow. This project aims to analyse and map the energy data available for existing and emerging development and to identify opportunities for DHN focusing on key areas such as Feltham, Hounslow Town Centre, Central and Hounslow West, and Brentford to begin with. The Heat Map will inform the development of an energy masterplan which will: identify, evaluate and prioritise the potential heat network opportunities in the short and long term; as well as set out the strategic evidence base that will be used in development planning documents to help shape policies that will enable us to deliver our carbon reduction targets.
- 4.10 **Secured £18.9 million from the Public Sector Decarbonisation Fund** to retrofit 33 school buildings (project completion date September 2021) and over 25 corporate buildings (project completion date March 2022).

Renewable energy

- 4.11 In Autumn 2020, the Council entered into a Pan-London Energy Project Framework Agreement for Flexible Procurement and Supply with Kent County Council (via LASER) using Npower Ltd (now E-ON) to **purchase 100% renewable green electricity and Corona Energy for gas**. Where required this will power all council buildings, communal areas in social housing estates, community halls and so forth.

Electrify vehicle fleet

- 4.12 In February 2021, the Council introduced **emissions-based parking charges for Pay and Display parking and business permits**. The new charging schedule for both on-street and off-street parking charges and business permits will see lower charges for electric vehicles, a continuation of existing charges for low emission vehicles and higher charges for more polluting, higher emission petrol and diesel vehicles.
- 4.13 The Council is currently developing a **Green Fleet Strategy** which seeks to provide the framework for the future management of fleet services and procurement of fleet vehicles, aimed at achieving carbon emissions commitments, support growth in core business areas, support sustainability and the modernisation of the services. We will be investing £7m to upgrade our

vehicle fleet (approximately 230 vehicles) that will deliver on climate emergency commitment as well as and improve air quality.

4.14 Throughout 2020/21, Hounslow Highways:

- **purchased seven electric vans** for use by staff,
- an **electric chipper** for use by the Tree Surgery Team, the first in the country,
- introduced a **fully electric 7.2 Tonne cleansing vehicle** into the fleet which will be joined by other vehicles that have been completing trails, including a new 3.5 tonne tipper range, which is 100% electric; and
- secured funding to **install 16 Electric Vehicle Charging points** around the Jubilee House depot yard. This is an important investment for the long-term carbon-reduction of the organisation and the further planning for the electrification of the fleet which will also bring added co benefits for reducing air pollution.

4.15 At present the Council has ten pool cars of which five are based at Hounslow House and five are located on street. Out of the ten vehicles, one is hybrid, and the rest are petrol. Due to the Covid19 Pandemic, council employees were instructed to work from home until it was reasonably safe to return back to Hounslow House. As a result, work to progress these actions is currently on hold but will be addressed as part of the emerging EV Charging Strategy and Action Plan where action to introduce electric car clubs for staff and resident use will be incorporated and implemented.

Reducing employee transport

4.16 Due to the Covid19 Pandemic, council employees were instructed to work from home until it was reasonably safe to return back to Hounslow House. As a result, work to progress these actions is currently on hold. However, the Council continues to offer the following **sustainable transport initiatives to employees:**

- **All-Ability Cycling** - These are inclusive cycling session that are open to anyone with a disability or age-related mobility. Riders are encouraged to try different bikes during the sessions to find a bike that best suits them.
- **Cycle to Work Scheme** is an employee benefit that helps employees to get a bike through a salary sacrifice arrangement, allowing them to benefit from tax savings on a new bike and accessories.
- **Try Before You Bike** - This is a flexible bike scheme run by Peddle My Wheels that allows employees and their families to try a new or nearly new bike for a monthly fee. If they like the bike, they can later buy it at a discounted price or continue to pay monthly until you own it.
- **Council Bike Loan** - These Council owned bikes are available to staff on a free 30-day loan basis. Colleagues can choose from a range of bikes, including hybrids, mountain, folding, and step through bikes (available in different sizes). Electric bikes are also available to loan on a 30-day basis. E-bikes are beneficial for staff who must travel long distances or those looking for pedal assistance.
- Staff who want to try cycling for the first time or who want to try a new type of bike can loan a bike free of charge before they look to purchase one. Bikes can be used for work and leisure trips.

- **Bike Health Checks.** Offered to employees that have a bike which requires maintenance. Employees are encouraged to bring it along for a health check at one of the free weekly Dr Bike sessions taking place around the borough.

Waste management

- 4.17 The **Reduction and Recycling Plan was adopted in 2020** and is currently in implementation phase. Progress on the RRP is reported bi-annually and published online on the London Councils website: [Hounslow Reduction and Recycling Plan - London Datastore](#) . **Since 2017/18, the recycling rates have increased from 29.9% to 35.3% (2020/21 provisional figures)**. This is a significant achievement and attributed to the implementation of the RRP. Food Waste captured increased by 9% from 2019/20 to 2020/21 saving £40k on disposal charges. Bulky waste collection policy adopted and implemented providing residents with a lower cost means of recycling larger bulky items of waste.

Culture change and governance

- 4.18 A number of initiatives have been promoted to date to inform, raise awareness and educate employees about the action that they can take in the work place, at home, in their projects, service delivery to contribute to the delivery of the Climate Emergency Action Plan and the Green Recovery Strategy. This includes:

- **Spring into Summer webinars** which focused on circular economy, air quality, retrofitting buildings, active travel etc.
- **Promotion of active travel initiatives** such as Cycle to Work Scheme, Try Before You Bike, Council Bike Loan, Dr Bike Health Checks etc.
- **Internal workshops to design projects** that will deliver the CEAP and the Green Recovery Strategy
- Encouraging staff who live in the borough to become an **Environmental Champion**.

- 4.19 The Councils Constitution was also reviewed and as a result we now have a Lead Member portfolio which has responsibilities for Communities and Climate Emergency.

- 4.20 As part of the **One Hounslow Community Awards** which will take place in Autumn 2021, two categories have been included, these are: 1) **Green Innovation** which awards outstanding contribution to addressing environmental challenges through creative new technologies, ideas or approaches; and 2) **Cleaner, Greener Champion** which awards outstanding contribution to improving local area, galvanising and educating communities to think green and respect their environment.

Sustainable investment and funding

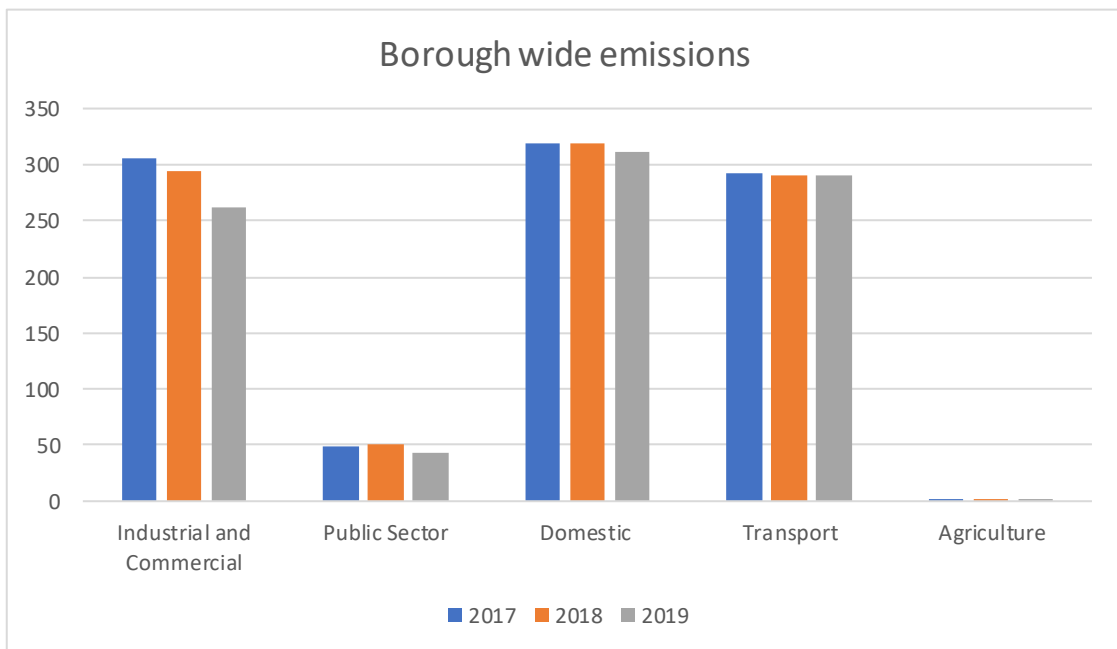
- 4.21 To date the Council has secured the following external funding which will support the delivery of the actions set out in the CEAP and the Green Recovery Strategy:
- Public Sector Decarbonisation Fund – Schools Decarbonisation Project - £7.7million

- Public Sector Decarbonisation Fund – Corporate Buildings Decarbonisation Project - £11.2million
- Green Homes Grant Local Authority Delivery Scheme Phase 1 – approximately £580,000 to retrofit private sector homes
- Green Homes Grant Local Authority Delivery Scheme Phase 2 – approximately £822,000 to retrofit private sector homes
- Heat Network Development Unit – Hounslow Heat Map and Energy Masterplan - £50,000
- Hounslow Carbon Offset Fund
- CIL Funding – Parks and Green Infrastructure Projects - £2.3million
- £300,000 grant funding was secured from the Office for Zero Emissions and Gold CITI Scheme to supercharge the installation of EV charging points across the borough

4.22 Through engagement with London Councils and the West London Climate Emergency Officers Group, the Council has actively pursued opportunities to work collaboratively with our neighbouring local authorities to secure additional investment to deliver the actions set out in the CEAP and the wider environment and climate portfolio. For example: Hounslow has also been working collaboratively with London Councils, Connected Places Catapult and Core Cities UK to commission research and analysis, to help determine the potential investment opportunity for low carbon technologies across the UK's largest cities. This work will develop the ask for the boroughs to secure further investment to deliver climate emergency action plans and achieve our net zero ambitions.

Borough-wide Emissions – Carbon Footprint

- 4.23 The CEAP uses the 2017 CO₂ emissions dataset produced by BEIS to calculate the **wider borough emissions** baseline. It should be noted that there is a two-year time lag for emissions reporting. **Since 2017, the wider borough emissions have reduced by 55.9kilotonnes of CO₂.** BEIS reports that the main driver of the decrease in emissions in 2019 was a change in the fuel mix for electricity generation, with a decrease in the use of coal and gas and more use of renewables. However, it should be noted that agriculture, domestic gas and transport emissions from minor roads have increased (see table four below). Per capita emissions have also decreased from 3.6t to 3.3t.
- 4.24 The chart below summarises the emissions reductions across the wider borough:



4.25 The 2017 to 2019 data are set out in the table four below:

Table four – summary of borough wide emissions reduction

Wider borough emissions	Emissions kt CO2e / yr * for 2017	Emissions kt CO2e / yr * for 2018	Emissions kt CO2e / yr * for 2019
Industry and Commercial Electricity	207.5	191.5	163.9
Industry and Commercial Gas	82.5	86.1	83.1
Large Industrial Installations	0	0	0
Industrial and Commercial Other Fuels	15.8	16.2	15.5
Industrial and Commercial Total	305.8	293.8	262.5
Public Sector electricity	26.1	25	20.3
Public sector gas	22.1	25.1	22.4
Public sector other fuels	0.1	0.1	0.1
Public Sector Total	48.3	50.2	42.8
Domestic Electricity	97.1	88.9	78.9
Domestic Gas	216.5	225.9	228.1
Domestic 'Other Fuels'	4.6	4.7	4.5
Domestic Total	318.2	319.5	311.5
Road Transport – A roads	169.1	162.4	156.4
Road Transport – Minor Roads	120.4	126.5	132.7
Transport – others	2.0	1.9	2.0
Transport Total	291.4	290.8	291.1
Agriculture	0.4	0.3	0.4
TOTAL (kt CO2e)	964.1	954.6	908.2
Per capita emissions(t)	3.6	3.5	3.3
Population estimates	269.1	270.8	271.5
Area (km ²)	56.6	56.6	56.6
Emissions per km (kt)	17.0	16.9	16.1

*For ease of reading these numbers are provided in kilo tonnes.

Borough wide Emissions – Programme Updates

4.26 The Action Plan also recognises the Council’s community leadership role across Hounslow and sets out the commitment to work with our strategic partners, businesses and the community to deliver six further programmes that would aim to influence a reduction in emissions attributed to activities in the Borough.

1. Retrofit Hounslow and deliver zero carbon housing
2. Sustainable travel promotion
3. A transition to electric mobility
4. A greener and more resilient Hounslow
5. Develop net zero lifestyles
6. Stimulate the local green economy

Progress to date on actions being delivered are summarised below:

Retrofit Hounslow and deliver zero carbon housing

4.27 The Council continued to support the Better Homes, Better Health Programme which aim to provide free advice and support to low-income households in order to improve their energy efficiency of their homes. Given the pandemic hit year, Groundwork London reached the **Better Homes, Better Health** 2020-21 target of 395 telephone consultations and provided suitable assistance to homeowners. The scheme was promoted alongside the Green Homes Grant Local Authority Delivery Scheme Phase 1 and enabled the identification of private homeowners that were eligible for the grant.

4.28 **Carbon offset cost** for new developments has been increased to £95/tonne of carbon so that it is in line with the new London Plan.

4.29 Opportunities are currently being scoped out in partnership with community groups for developing community energy projects. These will be captured as part of the energy master planning for the borough.

Sustainable travel promotion

4.30 Following the easing of restrictions in June 2020, the Council adapted the **free cycle training scheme** that was offered to residents. The revised offer allowed residents to book one-to-one cycle training sessions for free and provided bikes where needed. This was successful in such that the number of participants utilising the scheme increased due to resident’s reluctance for using public transport. Table five below highlights the number of children that have benefited from Bikeability training and the number of residents that participated in cycle training sessions.

Table five – summary of children participating in Bikeability training

Total number of unique children participated in Bikeability training	446
Uptake of adult cycle training	
No. 1-1 Adult Cycle Skills Sessions	189
No. Group Adult Cycle Skills Sessions	0
No. Family Group Cycle Skills Sessions	7

Total No. Cycle Skills Sessions	196
Total Number of Adult Attendances	190

- 4.31 The April 2021, the Council launched the **'Try before you Bike'** scheme which provides residents with the opportunity to try the bike before purchasing it. A wide range of bikes are available for children and adults of all ages and this also includes adaptive bikes. To date, 77 residents have signed up to the scheme.
- 4.32 During October – December 2020, the Council piloted the Street Tag game across the borough encouraging children and parents to get active by walking and cycling everywhere. Throughout the pilot over **100 million steps have been taken by Hounslow families and schools playing the game and residents have walked, run, and cycled over 110,000 miles with Street Tag.** This is the equivalent of over 4 times around the world. Over 20 schools signed up to the pilot and this gave students the opportunity to earn points for their schools enabling them to win prizes. Strand on the Green Junior School, Strand on the Green Infant and Nursery, Edison Primary and Belmont Primary took the top spots, winning sports vouchers for their school.
- 4.33 Other project delivery included:
- The Legible London Pedestrian wayfinding signage was introduced across all the town centres apart from Feltham,
 - 23 school streets implemented as part of the Street scape programme
 - Working with Connected Places Catapult to develop the 15minute Neighbourhood concept through engagement with local communities and council departments.
 - New anti-idling signage, along with schools-based campaign days which helped us raise awareness of the anti-idling campaign in Hounslow and how it benefits communities and the environment. This included working with Idling Action to host two workshops with school children as well as disseminating online material to be used as part of the school curriculum. Engagement with local businesses took place in Osterley and in partnership with Hounslow Chamber of Commerce, the council hosted a webinar on Clean Air Day, setting out the action SMEs can take to reduce their carbon footprint and impact on the boroughs air quality.
 - Throughout 2021, the council will continue to promote the new 'Engines Off, Every Stop' campaign through social media, billboards, press releases, in Hounslow Matters magazine etc.

A transition to electric mobility

- 4.34 In 2020, the Council **installed 47 new charge points across the borough.** This is a mix of lamp column and floor-mounted charge points. £300,000 grant funding was secured from the Office for Zero Emissions and Gold CITI Scheme and is being used to install over 250 total lamp column and Source London charging points across Hounslow, with a goal to increase this to 400 by the end of 2021. Currently on track to meeting this target.
- 4.35 The Council is currently **piloting the installation of the EV charge points at Meadowbank Education Centre** for staff to utilise – following the outcome of the pilot, the Council will roll out EV charging programme to schools.

- 4.36 In autumn 2021, the Council will be rolling out a pilot for trailing cables across the footway, residents will be able to complete an e-form requesting authorisation from the council to trail cables across the footway.
- 4.37 Hounslow Council **tried the cargo bike scheme in 2020**. As a result, 21 businesses made a total of 244 deliveries by cargo bike, covering almost 500 miles, during a five-month trial which saved a total of 127kg of CO2 vs using cars for collection or vans for delivery. 100% of customers said they were 'very likely to use the scheme again'.

A greener and more resilient Hounslow

- 4.38 Hounslow is currently **producing the boroughs Green Infrastructure Strategy, Tree Management Policy and Nature Recovery Action Plan** which will be adopted in Autumn 2021 following public consultation in Summer 2021.
- 4.39 Hounslow's green spaces were **awarded a Borough-record 17 Green Flags in October 2020**, recognising the well managed parks and spaces in Hounslow which provide important green infrastructure for people in the borough.
- 4.40 In 2020, Hounslow Council adopted the Greener Borough Framework which sets out a proposal to move towards planting one carbon capturing tree or large hedge specimen for every child born in the borough over the next 10 years and we are committed to working with our partners to fulfil this ambition. To date **4500 trees have been planted**.
- 4.41 Heathrow Airport Limited funded corporate volunteer day and planted **64 trees in Hanworth Air Park, Grantley Road, Bedfont Green and Heston Green** in 2020.
- 4.42 **Hounslow Highways have planted over 200 trees in 2019/20 under the Mayor of London's Tree Planting initiative**. That was additional to the 144 trees planted in 2020, one for each team member.

Develop net zero lifestyles

- 4.43 Council supported **Car Free Day** on 20th September 2020 which involved working with Cabinet Members and Residents to promote active travel i.e. walking and cycling whilst offering free Dr Bike Sessions, cycle training etc.
- 4.44 Council commissioned Collaborate CIC to explore the different options for developing **social contracts** with residents and communities.
- 4.45 The Council in partnership with Hounslow Chamber of Commerce hosted a **business engagement webinar on Clean Air Day 2020** (8th October) to highlight the work currently being done on AQ in the borough by the council and businesses. This is attended by a wide range of SMEs from Hounslow.
- 4.46 On behalf of all London Boroughs, London Councils conducted public polling on climate change. The Poll asked over 1,000 London residents about their level of awareness, concern, impacts from, and motivation to take action regarding climate change. Whilst the survey results were not categorised by borough, the poll highlighted that a significant majority of Londoners across all groups are concerned about climate change and believe that everyone should be taking

action to address it. For further information, please see web link: <https://www.londoncouncils.gov.uk/members-area/member-briefings/environment/poll-attitudes-climate-change>

4.47 Throughout 2020/21, **Hounslow Matters** featured a number of articles on **how residents can reduce their carbon footprint and develop net zero lifestyles**:

- Spring 2020 edition focused on the Climate Emergency Action Plan and the Greener Borough Framework and set out the action communities and businesses can take to develop net zero lifestyles: https://www.hounslow.gov.uk/downloads/file/2649/hounslow_matters_-_spring_2020
- Summer 2020 edition set out information on the emerging Green Recovery Strategy, Environmental Champions Scheme, Air Quality, creating and cleaner, greener borough
- https://www.hounslow.gov.uk/downloads/file/2796/hounslow_matters_-_summer_2020
- Autumn 2020 edition provided information on developing zero carbon homes, recycling, investment in parks and open spaces and the active travel opportunities across the borough
- <https://www.hounslow.gov.uk/hounslowmatters>
- Winter 2020 sets out information on Green Homes Grant LAD Scheme, tree planting, e scooter trail and EV charge points
- https://www.hounslow.gov.uk/downloads/file/3026/hounslow_matters_-_winter_2020
- Spring 2021 edition included information on the action you can take to make the borough a cleaner and greener borough, anti idling campaign, new Greentalk app allowing residents to connect with nature, new zero carbon developments and the 30 actions you can take to reduce your carbon footprint
- https://www.hounslow.gov.uk/downloads/file/3026/hounslow_matters_-_winter_2020

4.48 The **Climate and Clean Air Community Reference Group** was formed in February 2020. Membership is made of eleven residents selected from across the borough. The remit of the Climate and Clean Air CRG is to encompass the monitoring and implementation of the CEAP and AQAP. The CRG works with the internal Council officer led Board to co-create and prioritise actions, as well as assist in increasing transparency and public understanding around the Council's opportunities and constraints for action. The groups' purpose is also to assist the Council in galvanising the required wider civic support necessary to deliver the ambitious changes required to respond to the declaration of an emergency. Table six below summarises the dates and themes of the meetings that have taken place:

Table six– summary of Climate and Clean Air CRG meetings

Month and year	Theme
February 2020	Borough Vehicle Fleet
April 2021	Cancelled due to the pandemic
July 2020	Adopting the Climate Emergency Action Plan
July 2020	iLab: Green Recovery
October 2020	Business Engagement

December 2020	Communicating Climate and Clean Air
January 2021	Utilising the planning process to respond to climate and clean air action
April 2021	Sustainable transport
July 2021	Draft Climate and Clean Air annual report

- 4.49 As part of the Cleaner Greener Hounslow Programme, the Council launched a community volunteering opportunity in 2020 to get residents from all parts of the borough to make Hounslow a cleaner and greener place to live. The aim of the Environmental Champions scheme is to empower communities to make a difference by developing a volunteering network bringing everyone together to tackle environmental priorities. Environmental Champions can get involved in various activities, including creating their own activities and joining the Council organised activities. The Environmental Champions Programme is very open and we'd like people to come up with their own actions, organise their own events, get involved in local issues and plan actions themselves but we will also be offering out opportunities and actions to get involved in and hopefully there'll be something that suits everyone. To date over **130 residents from across the borough have signed up to be an Environmental Champion.**

Stimulate the local green economy

- 4.50 As part of the London Councils approach to coordinating delivery of climate actions across London, Hounslow is leading the **development of the Green Economy working across London** to define the investible infrastructure development propositions and exploring options such as creating green bonds to enable action to mitigate the effects of climate change.
- 4.51 Hounslow Council worked with partners to launch **the Digital Dock in Brentford Town Centre**. This is a modern and affordable workspace in the heart of Brentford for local entrepreneurs and small businesses. The refurbished former shop in Brentford High Street will provide a co-working space, with desks available on an ad-hoc and fixed-term rental basis, micro-offices, meeting rooms and a break-out area for networking and collaboration.
- 4.52 In January 2021, the Council adopted the **Green Recovery Strategy** which aims to accelerate the delivery of the Greener Borough Framework and the Climate Emergency Action Plan. To achieve this, the Strategy has identified the following key flagship programmes:
- Low Carbon Neighbourhoods
 - Green Enterprise Zone and Innovation District
 - Green Skills Academy
 - Heathrow Active Travel Demonstrator
 - Green Logistics and Travel

The details of these flagships and supporting interventions are outlined in the Green Recovery Strategy. See

link: <https://democraticservices.hounslow.gov.uk/documents/s165886/CEX524-%20-%20Green%20Recovery%20Strategy%20-%20Strategy%20document.pdf>

- 4.53 Through engagement with London Councils and the West London Climate Emergency Officers Group, **the Council has actively pursued opportunities**

to work collaboratively with our neighbouring local authorities to secure additional investment to deliver the actions set out in the CEAP and the wider environment and climate portfolio. For example: Hounslow has also been working collaboratively with London Councils, Connected Places Catapult and Core Cities UK to commission research and analysis, to help determine the potential investment opportunity for low carbon technologies across the UK's largest cities. This work will develop the ask for the boroughs to secure further investment to deliver climate emergency action plans and achieve our net zero ambitions.

- 4.54 In October 2020, the Council was part of a consortium of seven boroughs who were awarded £4.78million to deliver private sector home energy upgrades as part of the first phase of the **Green Home Grant Local Authority Delivery (GHG LAD) Scheme to retrofit between 600-700 homes by September 2021.** The allocation for Hounslow will be approximately £600k. The Consortium of boroughs continue to work together to secure funding for GHG LAD Phase 2 and are exploring options to develop a funding bid the Sustainable Warmth Competition.

4(b) Air Quality Action Plan Annual Review

- 4.55 The current Air Quality Action Plan 2018-2023 (AQAP) was produced as part of Hounslow Council's duty to meet the air quality objectives under Part IV of the Environment Act 1995 and London Local Air Quality Management Framework. The current AQAP aims to improve the borough's air quality by reducing air pollutants such as Nitrogen Dioxide and Particulate Matter by prioritising the need to provide sustainable transport, reduce peak-time congestion, limit exposure to harmful roadside pollutants, install electric vehicle charging points; as well as collaborate with community groups, government agencies and businesses that have a significant influence on the Boroughs air quality. The current action plan aligns with existing council and government policy such as the Local Implementation Plan, Local Plan, Mayor of London's Environment Strategy and DEFRA Air Quality Strategy.

Progress on implementing the Air Quality Action Plan

- 4.56 What we know to date:
- **Automatic Monitoring Stations: Nitrogen Dioxide** - Annual mean NO₂ levels measured at Hounslow's automatic monitoring stations continue to show a declining trend over the past 7 years. Data from the six automatic monitoring stations which were active throughout 2020 all show a decrease, with roadside sites at Brentford, Chiswick and Gunnersbury all dipping beneath the 40-microgram annual limit for the first time.

This is the first year that all of Hounslow's automatic monitoring stations have measured an annual mean below the annual limit for Nitrogen Dioxide. This is likely to be due in large part to reduced volumes of traffic due to the pandemic, as well as a gradual shift towards cleaner vehicles with the upcoming expansion of London's ULEZ. This follows two years where NO₂ levels at these sites remained between 40-50 µg m⁻³.

Additionally, none of the sites recorded any exceedances of the short term mean limit of 200-microgram (1-hour). This is the third consecutive year that this has been achieved in Hounslow.

- **Diffusion Tubes: Nitrogen Dioxide** – In 2020, Hounslow had 49 permanent diffusion tube sites, six triplicate colocation studies at automatic monitoring stations; and five short term sites which were used for 2019 and part of 2020. No new diffusion tube sites were added in 2020.

In Hounslow, one diffusion tube site registered an annual mean value in exceedance of the 40 $\mu\text{g m}^{-3}$ limit in 2020. This is located at Busch Corner with a bias adjusted annual mean of 40.5 $\mu\text{g m}^{-3}$. Compared to 2019, this is a significant reduction when 11 sites recorded a mean over 40 $\mu\text{g m}^{-3}$.

Much of the reduction seen in nitrogen dioxide was seen in the early part of the year, in the wake of the UK's first national lockdown. Following an initial dip, NO₂ levels rose in the latter part of the year to levels similar to those seen at the same time in 2019.

- **Particulate Matter** - In contrast to the NO₂ pollution levels in Hounslow, PM₁₀ data has been more static over the past seven years. All sites remain at or below 25 micrograms per metre cubed ($\mu\text{g m}^{-3}$), annual average, although three sites saw an increase from 2019. This is well below the UK limit value of 40 $\mu\text{g m}^{-3}$ but still in exceedance of the WHO's guideline value of 20 $\mu\text{g m}^{-3}$.

In 2020, the total number of exceedances of the 24-hour mean limit value for PM₁₀ (50 $\mu\text{g m}^{-3}$) was 26 days. This is 16 fewer than 2019 and fewer than the per-site limit of 35 per year despite being across six sites. This shows an improvement in short term exceedances year-on-year.

PM_{2.5} is currently monitored at two Hounslow roadside sites: Brentford and Chiswick. This monitoring has been conducted alongside NO₂ and PM₁₀ since 2017. In the past four years PM_{2.5} pollution monitored at these sites has decreased by 3-4 $\mu\text{g m}^{-3}$. These levels are well within the UK limit value of 25 $\mu\text{g m}^{-3}$ but exceed the WHO guideline of 10 $\mu\text{g m}^{-3}$.

- **Progress on the Air Quality Action Plan** – The AQAP contains 53 actions across the seven different themes. Approximately 47% of the actions have been completed or are ongoing; and 53% have not been commissioned yet or are in progress.

4.57 The work undertaken as part of the ASR has allowed us to baseline the pollution levels borough wide and enabled us to identify areas where additional monitoring is required to ensure that we capture the data required to deliver action that will reduce emissions and protect vulnerable communities.

4.58 Furthermore, we have audited the condition of the existing seven monitoring stations, and it is evident that the sites require significant upgrades if we are going to continue to collect robust pollution data. The existing sites are over 15 years old and are reaching the end of shelf life. Improving our ability to monitor air pollutants in Hounslow will support future schemes such as school streets, which to date have shown to reduce NO₂ at school drop of times by up to 23%.

Air pollution impact on public health

- 4.59 Air pollution is associated with a number of adverse health impacts and is a contributing factor in the onset of heart disease and cancer. Across Hounslow it has been estimated that more than 100 deaths can be attributed annually to poor air quality. Air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. Please see Appendix D for completed Equalities Impact Assessment for further information.
- 4.60 Earlier this year, the GLA presented findings from the inquest into the death of Ella Adoo-Kissi-Debrah, a young girl who died following an asthma attack but has become the first person in the UK to have air pollution listed as a cause of death. The coroner's inquest into her death highlighted that there wasn't enough information provided to Ella's family, about the risks of exposure to air pollution when taking into consideration Ella's pre-existing health condition (asthma). The inquest also highlighted that whilst there have been a number of good policies, such as the Low Emissions Zone, the failure to tackle/reduce NO₂ levels in London and further afield has been seen across all levels of government. In some instances, the power to tackle significant sources of emissions from traffic such as the south circular fall outside the control of the local authority. Therefore, there is a need for coordination and a shared goal across all levels of government. Efforts to meet legal limit values, while important, mustn't get in the way of reducing exposure for everyone i.e., an individual's exposure is different to pollution measured at monitoring stations. As a result, the inquest highlighted that:
- There should be no delay in delivering further action to address the public health crisis.
 - Pressure is mounting to look beyond achieving national/European legal limits towards exceeding WHO guidelines, particularly on PM_{2.5}.
 - There's a need for increased collaboration between council's air quality, transport and public health functions as well as impacts on wider responsibilities such as planning to ensure that there is a shared strategic approach to reduce pollution and raise awareness.
- 4.61 To address the findings of the inquest and the bridge the gap between existing projects, the council is developing a Clean Air for Schools Project which will aim to reduce young people's exposure in and around schools and the local area. The key aim of the project will be to undertake air quality audits of all the boroughs school building and local environment and implement the recommendations set out in the borough. The audits will be undertaken by the Climate Emergency and Environmental Strategy Team with support from London Schools Pollution Helpdesk – a service provided by the Mayor of London for schools and LA to utilise (for free) to audit air pollutants in school buildings and the local environment. The recommendations emerging from the audits will need to be implemented for which additional capital funding is required. This project will be aligned with existing council programmes such as Street Space and the Climate Emergency. To date, the Council has collaborated with the Chiswick Oasis Project which brought together key stakeholders that aimed to address the air pollution in and around schools in Chiswick. The council supported the Chiswick Oasis project at St Mary's RC School, in the form of match funding new air purifiers for classrooms. The findings from the project have highlighted that 95% improvements in air quality in school

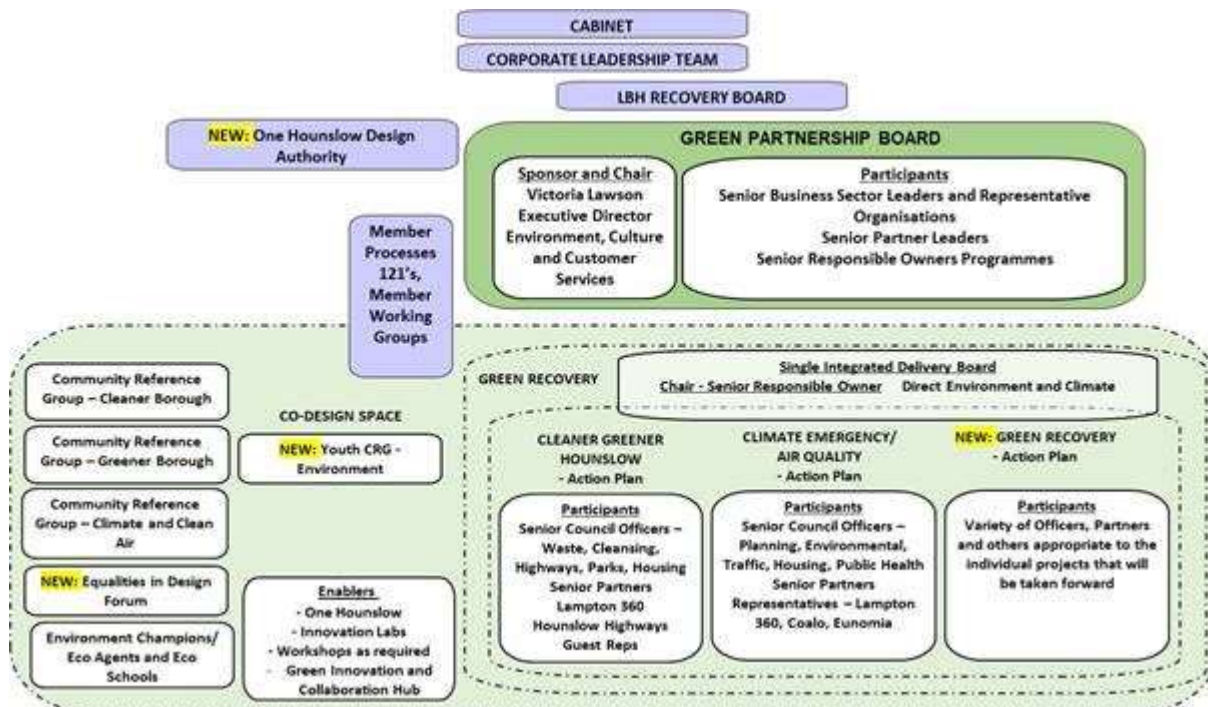
classrooms. The aim of the Clean Air for Schools project is to replicate the pilot project so that it benefits all of Hounslow schools and young people.

Awareness raising and communication

- 4.62 A key aspect of increasing the amount information available to Hounslow residents is for the Council to have a coordinated communication strategy around air quality, helping people understand the impact that exposure to poor air quality can have and providing information about what steps can be taken to minimise personal exposure. To achieve this, we will: promote and communicate the airTEXT scheme to residents with the aim to increase the number of signups, increase community buy from the outset when implementing transport schemes, ensure our policies align with London Plan requirements for all new developments, ensure information is disseminated to all schools and health centres on a monthly basis; and improving publication of data. The projects set out in this document will support activities across the Council by providing high quality data and information to improve understand the impact of our projects.

4(c) Governance and accountability

- 4.63 As part of an internal review, the Council commissioned Price Waterhouse Coopers (PWC) to review the governance arrangements in place for delivering the Climate Emergency Action Plan and to identify those areas which could be strengthened to increase transparency and accountability as well as to ensure alignment with workstreams being delivered across the organisation.
- 4.64 The review highlighted the need to establish good practice and formalisation of the governance arrangements for reporting progress on delivery of the Action Plan and the projects within it across the Council and within the community. As a result, the Council has adopted the One Hounslow Project and Programme Framework to design, develop and implement projects. To date, 15 Project Initiation Documents have been developed along with roadmaps setting out delivery timelines and milestones.
- 4.65 In order to align the workstreams being delivered across the wider Environment and Climate Division, the governance arrangements for monitoring the implementation of the CEAP has been updated to include the Green Recovery Strategy which aims to accelerate the delivery of the climate emergency. This is set out in the chart below:



5. Comments of the Executive Director, Finance and Resources

- 5.1 This report updates Cabinet on the progress made in the delivery of the Climate Emergency Plan adopted in July 2020 and the Air Quality Action Plan adopted in October 2018.
- 5.2 The report seeks funding of £1.22m to update the Council's air quality monitoring infrastructure through the delivery of the Clean Air for All programme in 2021/22 and 2022/23.
- 5.3 It is proposed to allocate £1.22m from the New Homes Bonus reserve to fund this programme.
- 5.4 The projects and initiatives outlined in the Plans need to be funded from approved budgets with further budget approvals being sought as necessary to deliver specific actions.

6. Legal and the Assistant Director of Governance comments

- 6.1 Recommendations 1-3 of the Report ask Cabinet to note the contents of the annual progress report on the Climate Emergency Action Plan (Appendix A) and Air Quality Annual Status Report 2021 (Appendix B) and to approve the adoption of the World Health Organisations (WHO) limit values for measuring progress for Particulate Matter 2.5 and 10 across the borough.
- 6.2 Recommendations 4 and 5 of the Report seek Cabinet's approval to allocate £1,220k of funding from the New Homes Bonus reserve for the delivery of phase 1 in 2021/22 (£400k) and phase 2 in 2022/23 (£820k) of the Clean Air for All Programme and approve the addition of the Clean Air for All Programme to the general fund capital programme for 2021/22 and 2022/23.

- 6.3 The above Recommendations fall within the parameters of the executive functions of the Council and can be considered by Cabinet in accordance with the Local Government Act 2000 and Part 3B of the Constitution.
- 6.4 Paragraph 5.4 of the Executive Director, Finance and Resources comments advise that the projects and initiatives outlined in the Plans need to be funded from approved budgets with further budget approvals being sought as necessary to deliver specific actions in accordance with due process and financial vires.
- 6.4 There are no significant legal implications arising from the recommendations in this report, but the Assistant Director of Governance will provide advice to officers on any legal and governance issues arising during the continuing development of the respective plans and programme.
- 6.3 The Council has the legal power to undertake the activities referred to in this report in accordance with the General Power of Competence (s1 Localism Act 2011) which affords a local authority with the power to do anything which an individual may do provided this is not prohibited under any statutory provision.
- 6.5 Additionally, the Council has a legal duty to undertake a competitive exercise prior to award contracts for the supply of goods and services in compliance with the law, the Council's Constitution, and its Best Value Duty (Local Government Act 1999).
- 6.6 The Best Value Duty requires local authorities to "make arrangements to secure continuous improvement in the way in which its functions are exercised, having regard to a combination of economy, efficiency and effectiveness." The report sets out the Council's broad compliance with this duty and demonstrates how the Climate Emergency Plan and Air Quality Action Plans provide value for money.
- 6.7 Cabinet will note the EQIA appended at Appendix C and equalities implications set out in paragraph 11 of the report and the Council's consideration of its Public Sector Equality Duty (Equality Act 2010) which has been given due regard.

7. Value for Money

- 7.1 The Climate Emergency Action Plan has undergone a robust review of the current emissions the Council is responsible for and an initial analysis of value for money options for abating different emission sources based on currently available technology when it was adopted in July 2020. The annual report highlights the significant external investment that has been awarded to the Council to deliver decarbonisation projects that once fully implemented will enable the Council to achieve its emissions reduction target whilst delivering financial savings to the Council and local communities.
- 7.2 When the Air Quality Action Plan was adopted in October 2018, the plan aimed to deliver improvements by implementing cost-effective action by utilising the planning and procurement processes thereby resulting in minimal cost to the borough and public purse. However, it has become evident that if the Council is to deliver significant improvements to the boroughs air quality then significant investment is required and the proposed projects will aim to deliver a better understanding of air pollutant levels in Hounslow and tangible environmental

improvements through the implementation of projects procured collaboratively across service areas and through partnership working with our communities, schools, PTA's and other partners.

8. Sustainability Impact Appraisal

- 8.1 The intent of the Climate Emergency Action Plan is to put in place a deliverable plan to reduce emissions resulting from the Council's operations. It will also contain measures to reduce emissions arising more widely in the Borough that the Council may have some influence over. Reducing our contribution to the climate emergency is a key sustainability consideration.
- 8.2 Equally, ongoing implementation of the Air Quality Action Plan will aim to reduce air pollution through a range of actions, making a clear contribution towards improving environmental sustainability.

9. Risk Management

- 9.1 As noted in the original motion taken forward at Borough Council in June 2019 when the Climate Emergency Declaration was made, is that the majority scientific consensus is that wider risk of inaction on tackling emissions is considered to be high. Continued implementation of the Climate Emergency Action Plan along with the Green Recovery Strategy will enable the council to achieve net zero Council direct emissions, whilst ensuring a substantial reduction in wider emissions over which we may have some influence. Risks associated with the projects included in the Climate Emergency Action Plan and the Air Quality Action Plan will be considered at the individual project level using the Council's normal processes.

10. Links to Council Priorities

- 10.1 The Corporate Plan 2021 sets out to the Council's commitment to ensure residents and businesses benefit from a sustainable and green borough where clean air, green jobs and good environment improve wellbeing. By continuing to implement the Climate Emergency Action Plan and the Air Quality Action Plan the Council will be in a stronger position to deliver this commitment and the priorities associated with it.

11. Equalities, Human Rights and Community Cohesion

- 11.1 Please refer to Appendix D for the completed Equalities Impact Assessment for this report. The Council must give due regard to its Equalities Duties, in particular with respect to general duties arising from section 149 of the Equality Act 2010. Having due regard to the need to advance equality involves the need to remove or minimize disadvantages suffered by equalities groups.
- 11.2 The Council has considered the relevance of the proposal to the provisions of the Equality Act 2010, in particular for those with the following protected characteristics: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, sexual orientation and the Human Rights Act 1998. The assessment concluded that Equalities Duties are not engaged by this proposal at the current level of development. The proposal is also compatible with Human Rights Articles and as the report does not have any significant bearing on the substantive equality duty it is not considered

necessary to undertake an Equality Analysis at this stage. Poor air quality and the impacts of climate change have been shown to disproportionately impact the most vulnerable members of society, including those in deprived areas, the elderly, and people with disabilities. Tackling the impacts of climate change in Hounslow and delivering improved air quality to residents will be beneficial for all in Hounslow.

- 11.3 When implementing projects, the Council has been mindful of any feedback made through engagement with Climate and Clean Air Community Reference Group, stakeholders, Service Areas and local business and communities. It is also noted that that individual projects set out within both the CEAP Annual Report and Clean Air for All programme proposal will continue to be likely require further discrete approvals in due course, which may need to include a separate assessment on any equality impacts.

12. Staffing/Workforce and Accommodation implications:

- 12.1 Implementation of the action taken to date deliver reduction in carbon emissions and improve the boroughs air quality will lead to improvements for staff and their working environment.

13. Property and Assets

- 13.1 Ongoing implementation of the Climate Emergency Action Plan and Air Quality Action Plan includes actions that relate to reducing emissions from Council's estate and vehicle fleet.
- 13.2 With regards to the Air Quality Action Plan, the existing monitoring stations and diffusion tubes are located on cCouncil land and property i.e. road network, streetlamps, parks and open spaces. The Climate Emergency and Environmental Strategy Officer also undertakes local site operations on a monthly basis to ensure the equipment is maintained and managed. Where additional support is required, the Council has commissioned contractors to provide technical expertise, data management, calibration and auditing of the sites along with ratification and publication of data; as well as to service equipment, respond to call outs, provide parts and labour as supply of equipment.

14. Any Other Implications

- 14.1 None noted.

15. Consultation

- 15.1 The report has been drafted and discussed with the Climate and Clean Air Community Reference Group and internal Council departments. The comments have been taken on board and where appropriate have been included within the body of the report and or the documents attached as appendices.

16. Timetable for Implementation

- 16.1 This annual review has set out the progress achieved to date in delivering the Climate Emergency Action Plan that was adopted in July 2020. The Climate Emergency Action Plan sets out a set of projects that are in turn broken down

into year 1, year 2 – 5 and years 6 -10. As well as keeping the plan under regular review, the anticipation is the full plan will require renewal after year 5 to ensure that the Council is on track to achieve its objective.

16.2 The Air Quality Action Plan has undergone a mid-year review and progress has been reported in the ASR and further actions have been identified to continue the ongoing improvements. The Council will continue to implement the plan until 2023 but will endeavour to refresh it in 2022.

17. Appendices

17.1 There are two appendices to this report, these are:

- Appendix A: Climate Emergency Action Plan Annual Review – September 2021
- Appendix B: Air Quality Annual Status Report 2020
- Appendix C: Climate and Clean Air Equalities Impact Assessment

18. Background Information

18.1 N/A

REPORT ENDS