# 10 October 2023 at 7.00 pm

Council Chamber, Argyle Road, Sevenoaks Published: 02.10.23



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# Cleaner & Greener Advisory Committee

# Membership:

Chairman, Cllr. McArthur; Vice-Chairman, Cllr. Roy Cllrs. Abraham, Alger, Barker, Clack, G. Darrington, Kitchener, Cathy Morgan, Shea, Varley and White

# **Agenda**

There are no fire drills planned. If the fire alarm is activated, which is a continuous siren with a flashing red light, please leave the building immediately, following the fire exit signs.

Apolo	ogies for Absence	Pages	Contact
1.	Minutes To agree the minutes of the meeting of the Committee held on 13 June 2023, as a correct record.	(Pages 1 - 6)	
2.	Declarations of Interest Any interests not already registered.		
3.	Actions from Previous Meeting	(Pages 7 - 8)	
4.	Update from Portfolio Holder		
5.	Referral from Cabinet or the Audit committee (if any)		
6.	Climate Change Update	(Pages 9 - 16)	Emma Henshall Tel: 01732227358
7.	Annual Review of Parking Fees & Charges	(Pages 17 - 26)	Trevor Kennett Tel: 01732 227407
8.	Fixed Penalty Notice (FPN) Fees Report	(Pages 27 - 30)	Trevor Kennett Tel: 01732 227407

9.	Future Demand for Electric Vehicle Infrastructure in Sevenoaks District	(Pages 31 - 74)	Nick Chapman Tel: 01732 227167
10.	Food & Safety Team - Gain or Retain a 5	(Pages 75 - 82)	Nick Chapman Tel: 01732 227167
11.	Air Quality Annual Status Report	(Pages 83 - 156)	Nick Chapman Tel: 01732 227167
12.	Future of the Air Quality Monitoring Stations	(Pages 157 - 166)	Nick Chapman Tel: 01732 227167
13.	Work Plan	(Pages 167 - 168)	

# **EXEMPT INFORMATION**

At the time of preparing this agenda there were no exempt items. During any such items which may arise the meeting is likely NOT to be open to the public.

If you wish to obtain further factual information on any of the agenda items listed above, please contact the named officer prior to the day of the meeting.

Should you need this agenda or any of the reports in a different format, or have any other queries concerning this agenda or the meeting please contact Democratic Services on 01732 227000 or democratic.services@sevenoaks.gov.uk.

# **CLEANER & GREENER ADVISORY COMMITTEE**

Minutes of the meeting held on 13 June 2023 commencing at 7.00 pm

Present: Cllr. McArthur (Chairman)

Cllr. Roy (Vice Chairman)

Cllrs. Abraham, Alger, Clack, G. Darrington, Kitchener, Morgan, Varley and White

Apologies for absence were received from Cllrs. Barker and Shea

Cllrs. Paul Darrington, Manamperi, and Manston were also present.

# 1. Appointment of Chairman

Resolved: That Cllr McArthur be appointed Chairman of the Advisory Committee for 2023/24.

(Cllr McArthur in the Chair)

# 2. Appointment of Vice Chairman

Resolved: That Cllr Roy be appointed Vice Chairman of the Advisory Committee for 2023/24.

# 3. Minutes

Resolved: That the minutes of the meeting held on 14 March 2023 be approved and signed by the Chairman as a correct record.

# 4. Declarations of Interest

There were none.

# 5. Actions from Previous Meeting

There were none.

# 6. <u>Update from Portfolio Holder</u>

The Portfolio Holder, and Chairman, presented an update on the services within her portfolio. Food inspections had occurred at 100% of High Risk establishments. A noise complaint case against a stud farm would be reheard in December. A review of the fees and charges for Environmental Health services would be undertaken in the future to ensure the service could recoup its costs.

The Licensing Team was now fully staffed and performance was high against their indicators. The application to extend the operating hours of a restaurant and bar in Sevenoaks had been refused at a Licensing Hearing. A premises license had been granted to a new corner shop in Sevenoaks. A Licensing Hearing would take place on 20 June for the Knockholt Festival. New database systems for record keeping were being investigated. The existing pavement licensing scheme would be extended on a temporary basis.

Discussions were ongoing with the Kent Climate Group regarding encouraging taxis to move to electronic vehicles.

The Direct Services team were carrying out their annual review of parking services, which would be brought to the Committee in the future. An options report on paid pest control and cesspool services will also be brought to Committee. Refuse collection weights remained at a high level, but rounds were being completed within their target timescales. The Portfolio Holder read a letter from a resident near the Mill Pond, which thanked the Committee for their work in helping clear the pond of silt.

In response to questions, the Chief Officer for Planning & Regulatory Services clarified that an update on Net Zero progress would be brought to the Committee in the future. The Council had decided against having a dedicated Climate Change Officer because it was felt that Net Zero was the responsibility of every officer in every service.

# 7. Referral from Cabinet or the Audit committee

There were none.

# 8. Role of the Advisory Committee and Key Challenges

The Chief Officer for Finance & Trading and the Chief Officer for Planning & Regulatory Services gave a <u>presentation</u> on the role of the Advisory Committee and its key challenges. These included problems that had begun with the pandemic and not abated, such as increased amounts of waste for collection. Issues around recruitment and upskilling staff were also highlighted. The Officers highlighted some of the measures that had been already brought in to address these problems, such as altering the waste collection routes and increased training, but advised that further work would be necessary.

In response to questions, they advised the Committee that demand for the car parking services provided by the Council was growing, but had not yet returned to pre-pandemic levels. Ensuring that the number of car parks and electronic vehicle charging points were balanced with the market was also a priority. The upturn in waste collection was likely due to a change in habits among customers in the District.

Resolved: That the report be noted.

# 9. Active Travel Update

The Chairman presented the report, which updated the Committee on the Council's work to provide safe and attractive walking, wheeling, and cycling routes across the District. The Principal Infrastructure Delivery Officer outlined the progress of the consultation on the Sevenoaks Town East-to-West route. The dropin session on 6 June was well attended, and another would be held on 12 July, to which Members were invited to attend. Over 120 online surveys had been completed. The consultation would run until 14 July.

A further £184,000 of funding had been secured from Active Travel England for the Sevenoaks to Otford route. This would progress the scheme to the outline and detailed design stage, after the feasibility study had been updated. Sustrans had been appointed as consultants for the Swanley Urban Area Local Cycling & Walking Infrastructure Plan (LCWIP). They previously completed the Sevenoaks Urban Area LCWIP, providing consistency across the schemes. They advised that walking would likely be the priority for the scheme, but that cycling and wheeling would not be neglected. Stakeholder engagement was planned for 29 June.

In response to questions, the Officer clarified that improvements to the roundabout near to the Quarry site were included in the planning permission for the site. Ongoing engagement between the developer of the site and the consultants would be necessary. The Sevenoaks Urban Area LCWIP aimed to be a foundation for a network to increase connectivity, but was entirely dependent on external funding. This meant that the scheme was reactive, but the completed routes would serve as hard evidence to help get further funding. The Officer agreed to provide a timeline of the plans and funding for the Active Travel scheme to the Committee.

Action: For the Principal Infrastructure Delivery Officer to provide a timeline for the Active Travel Scheme to the Committee.

Resolved: That the report be noted.

# 10. Update on Car Idling Campaign

The Chairman presented the report, which set out the Council's Vehicle Idling campaign. The campaign addressed Measures 11 & 12 of the Air Quality Action Plan. Every school in the District was approached, and 15 schools responded. The competition ran from October to December 2022, with 66 entries received. Posters of the overall winners were being produced to go out to schools, and visits were also planned to discuss vehicle idling.

The Environmental Health Manager outlined the Council's wider work to improve and monitor air quality. The Council was within DEFRA guidelines for PM2.5, but additional requirements to achieve targets and reduce population exposure by 2040 would come in. Domestic combustion was the primary source of PM2.5 within the District, accounting for 27% of emissions. A combination of monitoring and resident engagement work was planned to reduce this. No monitoring locations exceeded national objective levels in 2022.

In response to questions, the Officer explained that the uptake from schools had been relatively low, but that the scheme was ongoing; the Air Quality Promotions Officer would continue to visit schools to discuss vehicle idling, and it was anticipated that more schools would get involved in the future. The campaign was competing against other priorities at the time, but as it continues it was expected to reach a larger number of schools.

Resolved: That the report be noted.

# 11. Air Quality Assessment Swanley

The Chairman presented the report, which outlined the results from the Swanley Air Quality Assessment. The assessment validated the boundaries of the existing management area, but noted that this would be kept under review to ensure they were accurate. Consultants collected traffic data for the source apportion exercise, and determined that diesel cars, light goods vehicles, and heavy goods vehicles were responsible for the majority of emissions in both air quality management areas. This supported the actions within the action plan, and integrated well with the LCWIP. Members for Swanley will be consulted on additional measures to further reduce emissions in the area.

In response to questions, the Chief Officer for Planning & Regulatory Services explained that the Environmental Health team were engaged in the planning process to provide technical expertise. The data that had been collected would be used to better inform recommendations to the Committee. He further explained that the Council took a holistic approach to reducing emissions. Work to reduce car journeys from residents was targeted at both directly encouraging people to walk, cycle, or wheel, and removing barriers to residents that might prevent them from doing so.

Resolved: That the report be noted.

# 12. Liability for Trees on Common Land

The Chairman introduced the report which updated Members on the current management of a number of Commons pursuant to a scheme made under the Commons Act 1899 and the extent of the Council's liability. The Head of Direct Services advised that the Council made a scheme for the regulation and management of any Common within the District, under Section 1 on the Commons Act 1899 which was approved in 1925 by the Secretary of State and amended in 1963 and 1966. The Scheme identified approximately 280 hectares of commons land.

Legal advice on the Council's liability for trees on commons land had significantly changed. The Council's primary obligation is to preserve and protect the trees from harm, such as stopping unauthorised felling, rather than to active arboriculture management. As there were identified owners of the Commons, the duty of care under the Occupiers Lability Act imposed a statutory duty on the occupier on visitors' safety. The Council should thus also change its working

# Cleaner & Greener Advisory Committee - 13 June 2023

practice, to reflect Counsel's advice and recent case law, as it was not reasonable to expect the Council to bear all costs for arboriculture works across the commons land scheme.

Members discussed the report. The Head of Direct Services explained that the Council could intervene in cases where land owners were not responding to health & safety issues, such as diseased trees. In these instances the Council would be able to recoup costs after the fact. This change would not affect any ongoing tree works.

# Public Sector Equality Duty

Members noted that consideration had been given to impacts under the Public Sector Equality Duty.

Resolved: That it be recommended to Cabinet that the report be approved.

# 13. Government's Resilience Framework

Members considered the report which provided an update on the UK Government Resilience Framework which had been published in December 2022. The new framework was built around three fundamental principles: a need for a shared understanding of the risks we face; focus on prevention and preparation; and that resilience requires a whole of society approach. The Government framework proposed a number of fundamental changes to the current local arrangements for resilience forums and accountability.

The Head of Direct Services advised that the framework was the first articulation of how the UK Government would deliver on a new strategic approach to resilience. He further highlighted to Members that the multi-agency work across planning, preparation, response and recovery at the local level would continue to be the building block of the UK's resilience. All risks and emergencies and their impacts were local; only some are regional or national.

In recognition of the central, and growing, role of Local Resilience Forum (LRF) and to ensure that all parts of England could anticipate, prevent, prepare for, respond, and recover from risks and emergencies, the UK Government planned to work to significantly strengthen LRFs. The Kent Resilience Forum had been recognised as current best practice. The three pillars to the reform were Leadership, Accountability, and Integration of resilience into the UK's levelling up and growth mission and wider local policy and place making.

# Public Sector Equality Duty

Members noted that consideration had been given to impacts under the Public Sector Equality Duty.

Resolved: That it be recommended to Cabinet that the report be noted.

# 14. Work Plan

# Agenda Item 1 Cleaner & Greener Advisory Committee - 13 June 2023

The Work Plan was noted, with the following additions:

# 10 October 2023

• Climate Change Update

THE MEETING WAS CONCLUDED AT 8.03 PM

**CHAIRMAN** 

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Action(s)	from the meeting held on 13 June 2023 (as at 12/0	9/2023)	
Action	Description	Status	Contact Officer
Action	Action: For the Principal Infrastructure Delivery Officer to provide a timeline for the Active Travel Scheme to the Committee.	An email was sent on 13 July 2023 to Members setting out the timeline for the Active Travel Scheme.	Emma Henshall Ext. 7358

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### **CLIMATE CHANGE UPDATE**

# Cleaner and Greener Advisory Committee - 10 October 2023

Report of: Deputy Chief Executive and Chief Officer for Planning and Regulatory

Services

Status: For information

Also considered by:

N/A

Key Decision: No

**Executive Summary:** This report updates members on the progress made towards

tackling the challenge of climate change in Sevenoaks District.

This report supports the Key Aim of: The Council's commitment to tackling

climate change.

Portfolio Holder: Cllr. McArthur

Contact Officer(s): Emma Henshall, Ext. 7358; Margaret Carr, Ext. 7341

**Recommendation to Cleaner and Greener Advisory Committee:** 

To note this update report for information.

**Reason for recommendation:** To ensure that the District Council continues to play its part in tackling the challenge of climate change.

# **Introduction and Background**

- The challenge of tackling climate change is a key priority that encompasses all aspects of the Council. It incorporates energy efficiency and generation, sustainable transport and active travel, air quality, health and wellbeing, habitats and biodiversity, flooding, water supply and consumption, and more.
- The Council has committed to tackling climate change in two parts. The first is in relation to the Council's own assets and services, which during 2022–2023 produced 2,612 tCO<sub>2</sub>, equating to 0.36% of the District's overall emissions. The second is a much wider ambition to help reduce the carbon emissions of the

- District, which make up the vast majority of the District's total emissions, at approximately  $714,600 \text{ tCO}_2^1$  (99.6%).
- The Council therefore has an important role to play in community engagement and leadership, to encourage low carbon measures across the District through education, best practice, incentives, policy and opportunities. This includes working collaboratively with Kent County Council (KCC), Town and Parish Councils, local interest groups and the Local Government Association.
- This report provides an update on the progress made by the Council towards the challenge of tackling climate change over the last 12 months.

# Sustainable Transport and Active Travel

- Following the adoption of the Movement Strategy in 2022, the Council secured funding to undertake a Local Cycling and Walking Infrastructure Plan (LCWIP) for Sevenoaks urban area. The LCWIP identifies eight walking, wheeling and cycling routes, mapped at Appendix 1, and prioritises them in terms of benefits and likelihood of achieving modal shift.
- Working in partnership with KCC, the Council has secured significant funding from Active Travel England to progress three of the identified routes, as well as to complete a LCWIP for Swanley. These projects are all making good progress an update on each project is set out at Appendix 2.
- These projects aim to improve the walking, wheeling and cycling infrastructure to provide safer and more attractive environments for users in the District. They promote active travel and reduce the need for short car journeys, in time helping to reduce emissions, improve air quality and benefit the health and wellbeing of our communities.
- A new 'rail trails' app has been launched, offering short and longer walks from each of the railway stations along the Darent Valley, from Swanley to Sevenoaks, offering insights into local history and landscape features along the way and encouraging people to walk, wheel or cycle. It is free to download and the app is the result of collaborative working between the Darent Valley Landscape Partnership, the Darent Valley Community Rail Partnership and local residents. Printed copies of the trails are also available at stations along the Darent Valley line.
- We have also launched a new Workplace Travel Plan, to facilitate our staff to travel to work more sustainably, where they can. A staff survey was undertaken to understand travel preferences and barriers to change, and the

<sup>&</sup>lt;sup>1</sup> (Source: www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gasemissions-national-statistics)

Plan promotes incentives such as car sharing, pool e-bikes, cycle training and workplace travel challenges.

# **Electric Vehicle Charging Points**

- In 2022 the Council commissioned Field Dynamics to complete a study into future electric vehicle demand within the District. This has now been completed and forms a separate report to this committee. The Study:
  - Identifies future EV ownership in the District;
  - Identifies future residential demand for public charging;
  - Creates demand zones to help with prioritisation of future charging infrastructure; and
  - Models the impact of public EV chargers, existing and proposed.
- 11 The demand identified in the Study will help inform future provision through the emerging Local Plan and Infrastructure Delivery Plan.

# **Energy Efficiency**

- Last year the Council was successful in securing £402,500 from the Department for Business, Energy and Industrial Strategy's (BEIS) Home Upgrade Grant, to help tackle fuel poverty for low income families by providing energy efficiency upgrades, insulation and low-carbon heating to low-income households in the District. This project is led by the Energy Efficiency Project Officer, working with communities to identify suitable households. Since receiving the funding the inflation crisis has meant that all costs were higher than anticipated. That said, we still completed 14 properties. We have since been successful in securing an additional £1.2m through the Home Upgrade Grant Tranche 2, to support energy efficiency installation to 60 homes over the next 2 years. Work has started and so far 11 properties have been assessed. Properties benefitting from solar panels through the Home Upgrade Grant will save approximately 8,900kg of carbon per year.
- The solar panels that have been installed by households in the District as part of the Solar Together scheme last year will save 190,058kg of carbon per year. Phase 3 of Solar Together opened in August and so far has had 191 registrations.
- The Council also took part, alongside Tonbridge & Malling Borough Council, in the Green Business Grant scheme, funded through the UK Shared Prosperity Fund. This scheme was for businesses based in the two local authority areas operating in the low carbon and renewable energy economy to help them develop new ideas, and for any business operating from commercial premises located within these areas that were looking to reduce their carbon footprint. Priority sectors, in case the scheme was oversubscribed, were food

production, tourism and hospitality, distribution and logistics, construction and independent retail. Funding was awarded to two businesses and applications will open again next year.

# **Community Engagement**

- We have continued to engage with our communities to publicise how we are working to tackle the challenge of climate change, and how residents and businesses can reduce their own carbon emissions.
- We have continued to share at least one climate change social media post each week including World Environment Day, Bike Week, Big Green Week, National Clean Air Day, World Refill Day, National Picnic Week, Plastic Free July, Recycle Week and Net Zero Week. We will continue to dedicate a section of grapevine to climate change and encourage behaviour changes in our staff.
- 17 The Summer 2023 edition of In Shape included key statistics on what the Council is achieving in its ambition to tackle climate change.
- This year's Community and Voluntary Awards included two categories that incorporated climate change as a consideration, and looked at how communities and businesses are doing things differently. These were the Best Business Award (Sevenoaks Chamber of Commerce) and the Environmental Award (Fidelity Western).
- This autumn, we will be talking to the Climate Change Youth Forum about walking, wheeling and cycling, recycling and air quality, and attending a local primary school's environmental awareness assembly.

# **Sevenoaks District Council Emissions Report**

- The Council reports annually on its carbon emissions, so that we can measure our progress and the impact our actions are having on reducing these emissions. The latest report was published in August 2023 covering the period 1 April 2022 to 31 March 2023.
- 21 We use the Department of Energy Security and Net Zero (formerly the Department of Business, Energy and Industrial Strategy) reporting guidance, which categorises emissions under Scope 1, 2 or 3, as defined by the Greenhouse Gas Reporting Protocol. Scope 1 reports on the emissions from gas and fuel for our fleet; Scope 2 reports on emissions from electricity and water; and Scope 3 captures emissions from staff travel for business purposes.
- The assets in the report for 2022-23 include Argyle Road, the depot, the Council's three leisure centres in Sevenoaks, Swanley and Edenbridge, and the

Council's fleet. Emissions have reduced slightly in the past year, in part due to efficiencies with the waste and recycling service, use of EVs and a reduction in gas and electricity usage. As indicated in paragraph 2 above, the Council's emissions as they are currently measured make up 0.36% of the District's overall emissions. The Council's main sources of emissions continue to be produced from the use of gas used for heating our built assets followed by electricity.

## **Carbon Reduction Plan**

- 23 Expert consultants LASER have been appointed to undertake a study to include:
  - Heat decarbonisation plans for Argyle Road, Dunbrik, and Sevenoaks and Edenbridge Leisure Centres;
  - A Carbon Reduction Plan looking at for the Council's assets to set out what will need to be done to reduce carbon emissions; and
  - A report that considers what the Council can do with partners to help reduce the overall emissions in the District.
- The Plan will identify three options for moving away from fossil fuels and reducing the carbon emissions of our assets: business as usual, medium level interventions and high level interventions. The Plan will identify actions and draft costings for each option, including the amount of off-setting that will be required in order to reach net zero.

# **Moving Forward**

To ensure that we all continue to play our part in tackling the challenge of climate change, work has begun on developing a Climate Change Strategy for the District. It is envisaged that this will identify a set of principles that we can all work to and share with our communities, businesses and other key partners. We will seek to build on our existing commitment to strengthen resilience to climate change. The Climate Change Working Group will shortly meet to develop the Strategy.

# Other options Considered and/or rejected

The Council has made a commitment to tackle the challenge of climate change.

### **Key Implications**

### **Financial**

Funding for the initiatives referred to in this report has been met through existing budgets or secured through external funding. Any costings arising in the Carbon Reduction Plan are not currently budgeted for.

# Agenda Item 6

# Legal Implications and Risk Assessment Statement

No legal implications have been identified.

# **Equality Assessment**

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

# **Net Zero Implications**

Members are reminded of the Council's stated ambition to be Net Zero with regards to carbon emissions by 2030. The decisions recommended in this paper directly impact on this ambition. The impact has been reviewed and there will be a decrease in carbon emissions produced in the District as a result of this decision.

# **Appendices**

Appendix 1 – Walking & Cycling Routes identified in the Sevenoaks Urban Area LCWIP

Appendix 2 - SDC Active Travel Projects

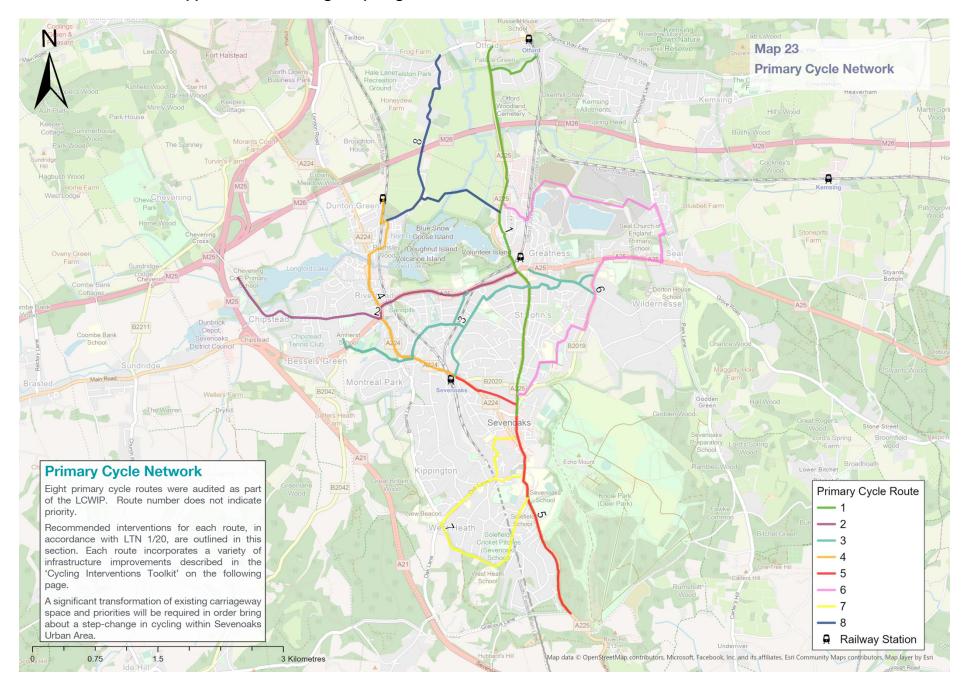
# **Background Papers**

None.

# **Richard Morris**

Deputy Chief Executive and Chief Officer for Planning and Regulatory Services

Appendix 1 - Walking & Cycling Routes identified in the Sevenoaks Urban Area LCWIP



# Agenda Item 6

# Appendix 2 – SDC Active Travel Projects

		F P			Datasif		Funding completed within			
Project title		Funding secured	Funding source (via KCC)	Funding scope	Date of funding	Funding duration	required timescale?	Project start	Project complete	Project notes (July 2023)
	To prepare a LCWIP for Sevenoaks urban area, to identify walking, wheeling and cycling improvements that, if delivered, will provide safe and attractive alternatives to the car.	£15,000	Active Travel England Capability & Ambition Fund	Development of LCWIPs		Spend to be committed by March 2022 (1 year)	Yes	•	December 2022	Total cost £32,400 using top up funding from S106 receipts and net zero budget.
Sevenoaks Town East to West Walking, Wheeling and Cycling Route	To deliver walking, wheeling and cycling improvements identified as 'route 3' in the Sevenoaks Urban Area LCWIP, connecting the east and west of Sevenoaks town, schools along the route and the communities they serve.		Active Travel England Active Travel Fund Tranche 3	Capital funding to support the delivery of ambitious new cycling and walking infrastructure schemes	March 2022	Spend to be committed	TBC	September 2022	In progress	Public consultation concluded July 2023. The Sevenoaks JTB (18 September 2023) considered the consultation report and resolved to proceed to detailed design and construction working closely with Sevenoaks Town Council and landowners specifically to mitigate concerns.
Swanley Local Cycling and Walking Infrastructure Plan (LCWIP)	To prepare a LCWIP for Swanley urban area, to identify walking, wheeling and cycling improvements that, if delivered, will provide safe and attractive alternatives to the car.	£25,000	Active Travel England Capability & Ambition Fund 2022-23	Development of LCWIPs	January 2023	Spend to be committed by January 2024 (1 year)	ТВС	March 2023	In progress - expected end	Sustrans appointed. Stakeholder engagement to capture routes/barriers undertaken June 2023. Network of routes drafted subject to further stakeholder engagement W/C 25 September 2023.
Sevenoaks LCWIP route 6 (Otford to Sevenoaks via Seal) feasibility study	To undertake detailed feasibility of the walking, wheeling and cycling improvements identified as 'route 6' in the Sevenoaks Urban Area LCWIP, connecting Sevenoaks with Seal and Otford.	£15.000	Active Travel England Capability & Ambition Fund 2022-23	Scheme planning and design	January 2023	Spend to be committed	ТВС	June 2023	In progress - expected late 2023	PJA appointed. Site visit undertaken. Stakeholder engagement to capture opportunities, risks and challenges scheduled W/C 25 September 2023.
Sevenoaks LCWIP town centre walking improvements	To further develop the walking improvements identified for Sevenoaks town centre in the Sevenoaks Urban Area LCWIP.	£5,000	Active Travel England Capability & Ambition Fund 2022-23	Scheme planning and design	January 2023	Spend to be committed by January 2024 (1 year)	TBC	June 2023	In progress - expected late 2023	PJA appointed. Site visit undertaken. Draft report received.
Throaks LCWIP route 1 (Otford to enoaks) feasibility study and outline common (stage 1)	To undertake detailed feasibility of the walking, wheeling and cycling improvements identified as 'route 1' in the Sevenoaks Urban Area LCWIP, connecting Otford with Sevenoaks, including a review of previous studies undertaken. Then to prepare outline and detailed designs for phase 1 of the route (Otford to	£184,000	Active Travel England Active Travel Fund Tranche 4	Capital & revenue funding to support the delivery of ambitious new cycling and walking infrastructure		Spend to be committed by April 2024 (1 year)	TBC	July 2023		PJA appointed. Site visit undertaken. Stakeholder engagement to capture opportunities, risks and challenges scheduled W/C 9 October 2023.
noaks LCWIP route 1 (Otford to Sevenoaks) detailed designs (stage 2)	Bat & Ball). The work has been split into two projects to allow for evaluation at outline design stage, before proceeding to detailed design.			schemes			ТВС	TBC - expected April 2024		Appointment TBC.

### **ANNUAL REVIEW OF PARKING FEES & CHARGES 2024/25**

# Cleaner & Greener Advisory Committee - 13 October 2023

Report of: Deputy Chief Executive & Chief Officer, Finance & Trading

Status: For Decision

Key Decision: Yes

**Executive Summary:** This report is the annual review of parking management for 2024/25. It proposes for consultation changes to hours of operation and the fees and charges in on and off street parking schemes.

This report supports the Key Aim: pledge to reach net zero carbon emissions produced by the Council and our assets by 2030, providing value for money, and supporting and developing the local economy.

Portfolio Holder: Cllr. Margot McArthur

**Contact Officer:** Trevor Kennett, Ext. 7407

Adrian Rowbotham, Ext. 7153

Recommendation to Cleaner & Greener Advisory Committee: That the parking management proposals detailed in this report be considered by the Committee, and its views on the available options be submitted for consideration by Cabinet, prior to consultation.

**Recommendation to Cabinet**: That the revised parking management proposals along with any proposals submitted by the Cleaner & Greener Advisory Committee be considered and the preferred option be approved for consultation.

**Reason for recommendation:** To help regulate and manage the use of on and off street parking facilities in the District; to ensure car parking charges are set to support a sustainable local economy; and, to support services for residents as set out in the approved 10-year budget.

### Introduction

- This report considers the hours of operation and the setting of parking charges in the Council's off-street car parks and the fees for on-street parking for the financial year 2024/25.
- 2 This report details options for increasing off-street car parking income and onstreet parking fees as part of additional income and growth items.
- While the Council continually work hard to support communities through general cost of living rises, we inevitably face extra cost pressures, within parking.
- 4 Since the recovery from the pandemic, demand for parking spaces has changed across the district. As before the pandemic, the council will endeavour to set charges to reflect local circumstances, provide consistency across the district parking spaces, while supporting high streets and businesses.

# **Background**

- The Council operates a number of public car parks and on-street pay and display facilities in towns and villages across the District. It is important to regulate these finite resources in order to balance the needs of parking users, including commuters, local businesses, residents, shoppers and other visitors including tourists. It is also important to ensure all parking fees and charges are set consistently across the district.
- The Council's approach has been to ensure our parking charges are set to encourage people to use parking spaces responsibly while at the same time promoting a good turnover of parking spaces for the benefit of businesses and visitors. Parking charges are one aspect of effective parking management; however, others such as hours and days of operation and maximum stay periods are also kept under review.
- In addition to rising operational costs such as non-domestic rates, insurance, general maintenance, utilities, enforcement and security, it is important to reinvest in the Council's car parks to ensure these assets remain welcoming, safe and fit for purpose. Improvements have included the installation of contactless payment facility on all of the district's payment machines, new safety barriers, increasing capacity, resurfacing, renewing drainage and upgrading lighting.

The assumption for parking income increases in the 10-year budget approved by Council on 9 February 2023 for 2024/25 is as follows:

Inflationary Increase	Covid: Assumed 25% reduction in 2021/22, improving by 5% per year	Adjustment for exceeding budget performance in 2022/23	Total
£94,000	£206,000	(£160,000)	£140,000

# **Options**

- 9 Caveat on all options are based on assumptions and estimates in relation to parking behaviour and any potential income that generates.
- There are a number of options on how to try and deal with the car parking income increase assumption, which are detailed below.
- In all Option circumstances, an increase in the costs of bay suspensions, and vehicle access protection (dog bone) markings application and renewals, would be implemented to cover the higher costs of conducting these activities, as detailed in **Appendix A**.
- Details of the parking charges for surrounding Kent district councils is detailed in **Appendix B.**
- Option 1 Overall percentage increase on all parking fees and charges

This option would require;

- 14 For example, a 4% increase could raise £140,000 (based on Trailing Twelve Month {TTM} average)
- The risk with this overall option is that our customers had to already absorb increases in 2022/23, and another general increase could make us uncompetitive in certain parking schemes across the district, which could decrease the amount of users.
- Option 2 A smaller percentage increase on all Parking Fees & Charges, with an end to free parking and an expansion of operating hours/days.

This option would require;

# Agenda Item 7

- For example, a 1% increase which could contribute to the raising of circa £35,000 (TTM calculation)
- A further contribution from an end to free parking and an expansion of operating hours across the district as detailed in Appendix A. This could contribute to the raising of an additional £140,000 (total £175,000).
- The risks with this option are as per Option 1, plus there could be displacement to permit parking zones and single yellow lines, some of which do not operate on weekends in Swanley, or on Sunday in Sevenoaks and Westerham.
- Option 3 Zero percentage increase on all parking fees and charges, but an end to free parking and an expansion of operating hours/days across the district.
- This option appreciates that fees and charges were raised to our customers in 2022/23, and that the large majority of the deferred income inflation increase since 2021/22 has been recovered. This could contribute to the raising of £140,000.
- This option robustly supports the Council's Net Zero ambitions, by ending free parking, expanding the operating times for on and off street parking, and actively discouraging town centre driving.
- There is a risk of displacement to permit parking zones and single yellow lines, some of which do not operate on Saturday/Sunday in Swanley, or on Sunday in Sevenoaks and Westerham.
- 24 Option 4 Do nothing
- This option would not meet the agreed 10-year budget requirements and savings would need to be made in other areas.

# **Key Implications**

### **Financial**

All options that contain financial implications have been detailed within this report.

Parking income in 2023/24 is currently forecast to exceed the budget but the 5% annual increase in the budget to reinstate to pre Covid budget levels is required to continue up to and including 2026/27. Therefore, it is important to continue to make changes each year that deliver additional income.

Legal Implications and Risk Assessment Statement.

All parking fees and charges are subject to statutory public consultation and a notice of variation in accordance with the Road Traffic Regulation Act 1984 and the Parking Places (Variation of Charges) Act 2017.

# **Equality Assessment**

There is a low risk that the proposals in this report would have any implications under the Equality Act 2010.

Sevenoaks District Council supports the Blue Badge Scheme allowing free parking in all of its off-street car parks and in on-street pay and display bays.

# **Net Zero Implications**

Achieving Net Zero carbon emissions is a top priority for the Council as outlined in our Net Zero 2023 action plan and Movement Strategy. It encompasses all aspects of the Council. It incorporates actions on sustainable transport, active travel and air quality. One of the Council's commitments is to encourage, and support our residents and visitors to our District to reduce carbon emissions.

Members are reminded of the Council's stated ambition to be Net Zero concerning carbon emissions by 2030. The decisions recommended in this paper directly impact on this ambition. The impact has been reviewed and there could be a noteworthy decrease on carbon emissions produced in the district because of this decision.

Increasing parking fees and charges, and eliminating free parking, could encourage car park users to find alternative travel and transport options, such as public transport, walking and cycling.

### **Conclusions**

Proposals to review the off-street car parking charges and on-street parking fees are detailed within this report.

**Appendices** Appendix A – Dog Bone / Bay Suspension Increases

Appendix B -

**Background Papers** Sustainable Movement - Greener Travel

https://www.sevenoaks.gov.uk/sustainabletravel

# Agenda Item 7

Adrian Rowbotham

Deputy Chief Executive and Chief Officer - Finance &

Trading

# (i) All Options - Increase fees and charges for parking bay suspensions

Cha	Charge Pay-&-Sta		Suspension Fee Pay-&-Stay Parking Bay (per 6m length)		nsion Fee ermit Parking Bay per 6m length)
Current	Proposed	Current	Proposed	Current	Proposed
£30	£80	£10 per day	£10 per day plus lost revenue, calculated by multiplying the hourly pay-&-stay rate by the charging period per day	£10 per day	£10 per day plus the cost of a daily visitor per day in the case of shared use (limited wait/permit parking) bays

# (ii) All Options - Increase fees and charges for parking waivers

On-Street	er Fee Pay-&-Stay (per vehicle)	On-Street Limi	ver Fee ted Wait/Permit v (per vehicle)	Waiver Fee Off-Street (Car Park) Pay-&-Stay Parking Space (per parking space)		
Current	Proposed	Current	Proposed	Current	Proposed	
£6 per day	£10 per day plus lost revenue, calculated by multiplying the hourly pay-&-stay rate by the charging period per day	£6 per day	£10 per day plus the cost of a daily visitor per day in the case of shared use (limited wait/permit parking) bays	£10 per day	£10 per day plus lost revenue, calculated by multiplying the hourly pay-&-stay rate by the charging period per day	

# (iii) All Options - Increase fees and charges for vehicle access protection ("dog bone") markings

_	one Marking in length)	_	Dog Bone Marking in length)		nal Cost ver 6m in length)
Current	Proposed	Current	Proposed	Current	Proposed
£90 per marking	£120 per marking	£60 per marking	£80 per marking	£9 per metre	£12 per metre

# Page 25

# Agenda Item 7

# BENCHMARK EXERCISE

# **SURROUNDING KENT DISTRICT CAR PARK CHARGES**













	Mon - Sun		Mon - Sun		Mon - Sat		Mon - Sat		Mon - Sat		Mon - Sat
Blighs	08.30-20.30	Meadow Rd	08.00-18.00	Acacia	08.00-20.00	Parrock St	08.00-18.00	Sovereign Way	08.00-18.00	King Street	08.00-18.00
1 hour	£1.00	1 hour	£2.00	1 hour	£1.00	1 hour	£1.30	1 hour	£1.40	1 hour	£1.35
2 hours	£2.00	2 hours	£3.00	2 hours	£1.00	2 hours	£2.00	2 hours	£2.60	2 hours	£2.70
3 hours	£4.00	3 hours	£4.00	3 hours	£2.00	3 hours	£2.80	3 hours	£3.50	3 hours	£3.45
4 hours	£6.00	4 hours	£5.00	4 hours	£2.00	4 hours	£3.80	4 hours	£4.90	4 hours	£4.60
Weekday	£10.00	Weekday	£10.40	Weekday	£5.00	Weekday	£7.50	Weekday	£6.80	Weekday	
	Mon - Sun		Mon - Sun		Mon - Sat		Mon - Sat		Mon - Sat		Mon - Sat
Bradbourne	08.30-18.30	Crescent Rd	08.00-18.00	Highfield Rd	08.00-18.30	Rathmore Rd	08.00-18.00	Waterloo Rd	08.00-18.00	Lockmeadow	08.00-18.00
1 hour	£1.50	1 hour	£2.00	1 hour	£1.00	1 hour	£1.30	1 hour	£1.40	1 hour	£1.00
2 hours	£2.50	2 hours	£3.00	2 hours	£1.00	2 hours	£2.00	2 hours	£2.60	2 hours	£2.00
3 hours	£3.50	3 hours	£4.00	3 hours	£2.00	3 hours	£2.80	3 hours	£3.50	3 hours	£2.50
4 hours	£4.50	4 hours	£5.00	4 hours	£2.00	4 hours	£3.80	4 hours	£4.90	4 hours	£3.50
Weekday	£8.00	Weekday	£7.00	Weekday	£5.00	Weekday	£7.50	Weekday	£6.80	Weekday	£7.00
	Mon - Sat		Mon - Sat		Mon - Fri		Mon - Sat		Mon - Sat		Mon - Sat
Quebec	08.30-18.30	Yew Tree Rd	08.00-18.00	Town CP	08.00-18.00	Milton Place	08.00-18.00	West Malling HS	08.00-17.30	Union St	08.00-18.00
1 hour	£1.00	1 hour	£0.00	1 hour	£1.00	1 hour	£1.30	1 hour	£1.10	1 hour	£1.15
2 hours	£2.00	2 hours	£0.00	2 hours	£1.00	2 hours	£2.00	2 hours	£1.80	2 hours	£2.30
3 hours	£3.00	3 hours	£1.00	3 hours	£2.00	3 hours	£2.80	3 hours	£2.60	3 hours	£3.45
4 hours	£4.00	4 hours	£1.20	4 hours	£2.00	4 hours	£3.80	4 hours	£3.40	4 hours	£4.60
Weekday	£5.00	Weekday	£5.30	Weekday	£5.00	Weekday	£5.00	Weekday		Weekday	£7.30

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### FIXED PENALTY NOTICES FOR WASTE CRIME

# Cleaner & Greener Advisory Committee - 10 October 2023

Cabinet - 12 October 2023

Report of: Deputy Chief Executive & Chief Officer - Finance & Trading

Status: For Decision

Key Decision: Yes

**Executive Summary:** This report updates members on the changes from a Statutory Instrument issued by the Government to increase on-the-spot fines levels for littering and fly tipping.

This report supports the Key Aim of: a green environment and safer communities

Portfolio Holder: Councillor McArthur

**Contact Officer:** Trevor Kennett, Ext. 7407

Adrian Rowbotham, Ext. 7153

Recommendation to Cleaner & Greener Advisory Committee: That the recommendations as detailed in this report be considered by the Committee, and its views be submitted for consideration by Cabinet.

**Recommendation to Cabinet:** That the recommendations in this report along with any proposals submitted by the Cleaner & Greener Advisory Committee be considered and approved.

**Reason for recommendation:** Sevenoaks District Council has a dedicated investigation and enforcement team for waste crime who use a number of different FPNs to help tackle waste crime including littering and fly-tipping offences. It is therefore important, as a deterrent FPN levels are set to the maximum level.

#### Introduction

- 1. The UK Government have announced that on-the spot fines for litter and flytipping have risen as part of a crackdown on anti-social behaviour.
- To help strengthen councils in their fight against waste crime, government has placed a statutory instrument increasing the upper limits for various fixed penalty notices (FPNs) from 31 July 2023. These changes will come into force 21 days after the laying of the Statutory Instrument, so are active from 21 August 2023.
- 3. FPNs provide a quick, visible and effective way of dealing with low-level straightforward environmental crimes, and an alternative to prosecution. However, non-payment rates are reasonably high, so consideration to the discounted level and ability of communities to pay, to make them effective.
- 4. A fixed penalty is not a fine. Payment of the penalty by the recipient discharges their liability to conviction for the offence for which the FPN issued. It does not constitute an admission of guilt, but removes the possibility of the creation of a record of criminal conviction.
- **5.** Currently, the council has a framework in place to ensure that offenders be prosecuted if they choose not to pay the fine. This gives a powerful message to the community that such crimes will not be tolerated.
- 6. The maximum amount those caught fly tipping could be fined will increase from £400 to £1,000. The maximum amount those who litter fined will increase from £150 to £500.
- 7. In addition to increasing the upper limit on fines, the government has launched a consultation on ring fencing the receipts from FPNs for litter and fly-tipping to fund local authorities' enforcement and clean-up activities, such as spending the money raised from fining criminals on further enforcement officers. This would see the money paid by criminals go directly into repairing the damage from their crimes, or into enforcement efforts to prevent similar incidents from happening again.

# Current FPN levels for Littering & Fly-tipping.

- 8. The Councils current approved level of FPNs for Fly-tipping are set at £400 discounted to £300 if paid within 10 days. The current level for Littering set at £100 with no discount.
- 9. The following table shows how many FPN's have been issued by the Waste Enforcement team in recent years:

Calendar Year	FPN's issued for waste crimes
2021	17
2022	37
2023 (to 31/07/23)	20

### Recommendations

- 10. The FPN levels for the Council to change as follows:
  - Fly tipping increasing the maximum level from £400 to £1,000. Maintaining the current discounted rate, if paid within 10 days at £300.
  - Littering Increasing the level from £100 to £500 with no discount level set.
- 11. Setting the rate at £1,000 for the fly-tipping offence will act as a strong deterrent and the rationale for a 70% discount for early payment is to encourage the offender to accept responsibility for their actions and to pay the fine. Non-payment, the offender will be prosecuted for the original offence of fly tipping.
- 12. Fly tipping is a serious criminal offence which carries a fine of up to £50,000 (unlimited if the case goes to the Crown Court) or an offender can even be sent to prison. Littering offences can lead to a fine of up to £2,500 and a criminal record.

# **Key Implications**

### **Financial**

All options that contain financial implications detailed within this report.

# Legal Implications and Risk Assessment Statement.

The Council are the enforcement authority for offences of waste crime under the Environmental Protection Act 1990.

# **Equality Assessment**

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

# **Net Zero Implications**

Members reminded of the Councils stated ambition to be Net Zero concerning reducing carbon emissions by 2030. The decisions recommended in this paper

# Agenda Item 8

directly impact on this ambition. The impact reviewed and there will be a very slight increase on carbon emissions produced in the district because of this decision, given resources used to remove fly tipped waste.

Background Papers
None
Appendices
None

Adrian Rowbotham

Deputy Chief Executive and Chief Officer - Finance & Trading

# Future Demand for Electric Vehicle Infrastructure in Sevenoaks District

# Cleaner & Greener Advisory Committee – 10th October 2023

**Report of:** Deputy Chief Executive and Chief Officer for Planning and Regulatory

Services

Status: For Consideration & comment

Also considered by:

N/A

Key Decision: no

This report supports the Key Aim of: Green Environment & Healthy Environment

Portfolio Holder: Cllr. McArthur

Contact Officer(s): Nick Chapman, Ext. 7167 & Holly Harris- Ext- 7116

Recommendation to Cleaner & Greener Advisory Committee

To note the contents of the report and associated EV Infrastructure Study

**Reason for recommendation:** This report is for information and has been provided to update Cleaner & Greener Advisory Committee on the EV Infrastructure study undertaken by Environmental Health

# **Introduction and Background**

- The replacement of journeys using traditional Internal Combustion Engine (ICE) vehicles to Battery Electric Vehicles has benefits for local air quality and is also a key element of government strategy to help reduce carbon emissions by 2050.
- 2 Measure 15 of the Sevenoaks District Council's Air Quality Action Plan 2022-2027 commits the district council to improving and developing infrastructure for Electrical Vehicles within the district.
- In September 2022, the District Council commissioned a study into future EV demand within Sevenoaks District. Following a round of competitive procurement, Field Dynamics were appointed. The primary aims for this study were:
  - a. Identification of future EV ownership within Sevenoaks District
  - b. Identification of future residential demand for public charging (with consideration of a property owner/ occupiers ability to install a private EV charger (on their driveway)
  - c. Creation of demand zones- to allow prioritisation of future infrastructure/ funding and resources.
  - d. Modelled impact of public EV chargers (those already installed and those proposed).
- 4 Between October 2022 and January 2023, officers from Environmental Health, Planning Policy and the GIS Team worked with Field Dynamics to refine a bespoke model of our district which was then used to predict future demand for public EV infrastructure (2030 planning horizon). The demand and prioritisation identified in the Study will help inform future provision through the Local Plan and Infrastructure Delivery Plan.
- 5 A report detailing this work is included as Appendix A.

# **Key Implications**

**Financial** 

#### None

Legal Implications and Risk Assessment Statement.

None

Equality Assessment (Compulsory heading - do not delete)

The information in this paper has a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

# Net Zero Implications (compulsory heading – do not delete)

Members are reminded of the Council's stated ambition to be Net Zero with regards to carbon emissions by 2030. The decisions recommended in this paper directly impact on this ambition. The impact has been reviewed and there will be a decrease in carbon emissions produced in the District as a result of this decision.

# **Appendices**

Appendix A - EV Infrastructure Study

# **Richard Morris**

Deputy Chief Executive and Chief Officer - Planning & Regulatory Services





# Future Demand for EV Infrastructure

# Agenda Item 9

# **Contents**

uture Demand for EV Infrastructure	1
1. Introduction	3
1.6. Air Quality Context	3
1.7. Climate Action Context	4
1.8. Current Electric Vehicles within Sevenoaks District	4
1.9. The need for Public EV infrastructure	6
1.10. Current Public EV Infrastructure within Sevenoaks District	7
2. Methodology	7
3. Future Demand (2030)	8
4. Scale of Challenge	9
5. Demand Zoning	11
6. Public EV Charging Site Selection	13
7. Catchment Modeller	15
8. Impact of current public charging infrastructure	16
9. On-Street Charging	17
10. Future Priorities for Public EV Infrastructure in Sevenoaks Distr	ict17
10.5. New Ash Green	18
10.6. South Darenth	19
10.7. Edenbridge	22
10.8. Dunton Green	24
10.9. Hartley	26
10.10. Seal	27
10.11. West Kingsdown	29
10.12. Sevenoaks	30
10.13. Swanley	33
10.14. Westerham	36
11. Other Key Partners	37

# 1. Introduction

- 1.1. Sevenoaks District Council recognises that a significant barrier to the adoption of Battery Electric Vehicles (BEV) is the lack of availability of public Electric Vehicle (EV) infrastructure. However, and at the same time, the installation of public EV infrastructure is not currently commercially viable within all areas as EV adoption by the public (although growing) remains relatively low compared to Internal Combustion Engine (ICE) Vehicles.
- 1.2. Most current public EV infrastructure is only suitable for supplementary charging (at a destination) and therefore it is almost a necessity for an EV driver to install their own private EV charger at home. In turn this effectively requires that EV owners have privately accessible driveways.
- 1.3. Increased Public EV Infrastructure that is suitable to support households without offstreet parking is therefore critical to ensure that all households have the opportunity to transition to an EV.
- 1.4. Whilst the District Council is unable to implement and install all of the required public EV infrastructure itself, we do consider that we have a leadership role in ensuring that partners install charging where it is most needed.
- 1.5. This study seeks to identify the future demand (2030) for EV vehicles within Sevenoaks district. It then utilises bespoke modelling from Field Dynamics to predict the future need for public infrastructure geographically and numerically.

# 1.6. Air Quality Context

- 1.6.1. Sevenoaks District Council currently has 4 Air Quality Management Areas where Nitrogen Dioxide (NO<sub>2</sub>) is predicted/ modelled to exceed national objective levels (40ugm<sup>3</sup> as an annual average). These are
  - AQMA 8- London Road/ High Street, Swanley
  - AQMA 10 Sevenoaks Town Centre
  - AQMA 13 A25- entire length from boundary with Tandridge to Tonbridge and Malling
  - AQMA 14- Junction of Birchwood Road and London Road Swanley
- 1.6.2. In each of these areas, poor air quality is primarily as a result of tail pipe emissions from Internal Combustion Engine (ICE) vehicles. Studies commissioned by the District Council have shown that the sources of pollution are as follows:
  - Diesel private cars- 32.9%
  - Diesel light goods vehicles (LGVs) -19.6%
  - Diesel heavy goods vehicles (HGVs)- 9.9%
  - Petrol cars- 5.1%
  - Bus/Coach -2.0%
  - Motorcycle -0.1%

1.6.3. Measure 15 of the Sevenoaks District Council's Air Quality Action Plan 2022-2027 commits the District Council to improving and developing the EV infrastructure within the District.

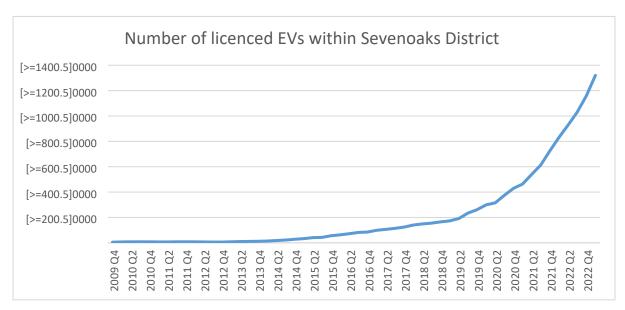
### 1.7. Climate Action Context

- 1.7.1. In 2021 Sevenoaks District Council published its "Low Emission and Electric Vehicle Strategy". As outlined in this document, in 2019, transport was the largest carbon emitting sector in the UK, responsible for 27% of total carbon emissions. In Sevenoaks District, transport accounts for 63% of the District's total emissions.
- 1.7.2. The Council's Movement Strategy, adopted in 2022, sets out the District Council's opportunities and challenges and key priorities for sustainable movement and transport within the District. This identifies the high level of car ownership in the District and the lack of electric vehicle charging infrastructure. A key priority of the strategy is to improve electric vehicle use and infrastructure within the District to facilitate the use of electric vehicles.
- 1.7.3. Whilst the best way to reduce carbon emissions from transport is to reduce the need to travel, it is unrealistic to expect residents and businesses to forsake personal motorised transport entirely. Where such journeys continue to be necessary then it is significantly better for the environment if they are made within low or zero emission vehicles.
- 1.7.4. In March 2021 the Government confirmed 2030 as the phase out date for new petrol and diesel cars and vans, with all vehicles being required to have a "significant zero emissions capability" from 2030 and be 100% zero emissions from 2035.

### 1.8. Current Electric Vehicles within Sevenoaks District

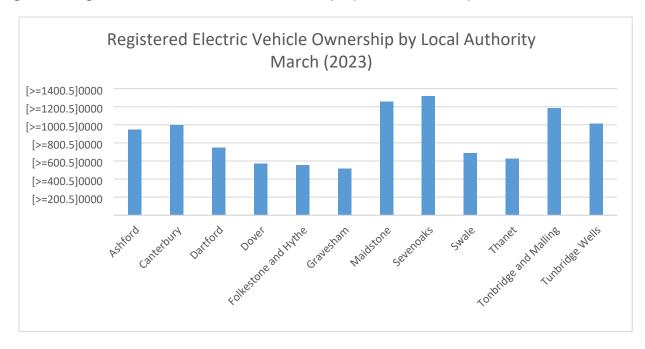
- 1.8.1. The number of electric vehicles sold in the UK continues to grow. In 2015 electric vehicles accounted for just 1.1% of all new cars registered in the UK compared to 14% in Q3 of 2022 (House of Commons Library, 2023). It is a growing sector and electric vehicles, as well as the accompanying charging infrastructure, are crucial to reducing carbon emissions and improving air quality.
- 1.8.2. Within Sevenoaks District the number of registered EVs continues to increase rapidly (over 1300 in Q1 of 2023) as shown in Figure 1 (Gov.uk, 2023).

Figure 1- EV vehicles registered within Sevenoaks District- August 2023



1.8.3. Sevenoaks District continues to have the highest level of electric vehicle ownership in Kent (Figure 2) (Gov.uk, 2023).

Figure 2: Registered Electric Vehicle Ownership by Local Authority- March 2023



### 1.9. The need for Public EV infrastructure

- 1.9.1. It is important to understand that EV ownership requires a different mind-set to that required for traditional ICE vehicle ownership. The average range of a new EV vehicle is estimated to be 211 miles and the majority of EV owners charge their vehicles at home via a slow (3kw) or fast (7kw) chargers. At these charging speeds most vehicles can be fully charged within about 8 hours (often overnight when some electricity tariffs offer favourable rates for EV owners).
- 1.9.2. Most journeys within the UK are relatively short. 61% of car journeys are under 5 miles and the average UK car journey is believed to be around 8.4 miles (Department for Transport, 2022). Therefore in normal circumstances most EV drivers need to charge their vehicles less than once per week.
- 1.9.3. On longer journeys (which exceed the vehicles battery range) or where a resident does not have access to off street parking (where an EV charger can be installed) public charging infrastructure becomes critical to the use of an EV.
- 1.9.4. Currently within the UK, EV chargers are classified as:
  - Slow- usually rated up to 3kW and can include 3-pin plugs (2.3kW). These are often found at domestic premises where the vehicle will be parked for an extended length of time (6-12hrs)
  - Fast- these are typically rated at 7kW (although 22kW charges also fall within this category). Fast chargers tend to be found at destinations where the user is likely to be parked for an hour or more such as car parks, supermarkets, commercial premises or leisure centres. Most home charges installed at domestic properties also fall within this category.
  - Rapid chargers- these operate at 50kW+ and have traditionally been installed at motorway service stations, town centres or close to main transport routes. This type of charger is most commonly used by those needing to charge in order to complete a journey.
  - Ultra Rapid Chargers provide power at 100kW or more and therefore charging times are significantly reduced. This type of charger is becoming increasingly common as it results in an experience closer to that of an ICE vehicle (i.e. significant charge within 20 minutes).
- 1.9.5. Unlike an ICE vehicle where the driver can fill the tank with fuel within a few minutes, EV batteries take time to charge depending on the charger used (see 1.9.4). As a result, EV technology works best when the battery is charged whilst the vehicles driver carries out a secondary activity (i.e. charges whilst undertaking the weekly food shop, is asleep at night, goes to the cinema etc.).
- 1.9.6. It is often believed that it is important to install the fastest possible charger at all locations in order to try and closely replicate the ICE experience of refuelling. In practice however, this is not possible (owing to electricity grid capacity) or necessary.
- 1.9.7. Generally, rapid or ultra-rapid charges have higher unit prices per kW of energy supplied (cost more to use) and most have idle fees which apply after a vehicle remains connected to the charger. Therefore, they are not appropriate for scenarios

- whereby a driver wishes to charge overnight. They also require significant infrastructure to operate and sufficient electricity grid capacity.
- 1.9.8. As outlined in 1.9.4, different charging speeds have different purposes depending on the type of charging necessary, and often it is the availability and maintenance of chargers which is more critical to EV drivers rather than the speed. Whilst a rapid or ultra-rapid charger is best whilst a driver gets a coffee and uses the facilities at a motorway service station (20-30 minute charge), a slow or fast charger is best for an overnight charge (6-8hrs).

### 1.10. Current Public EV Infrastructure within Sevenoaks District

- 1.10.1. Currently there are believed to be 33 publicly available charging devices/ stations within the Sevenoaks District. Of these 14 are rapid chargers or faster (50KW+). This represents 27.3 chargers per 100,000 people and 11.6 rapid chargers per 100,000 people or alternatively 2 chargers for every 100 privately registered plug-in vehicles in this area. (House of Commons Library, 2023)
- 1.10.2. The District Council have committed to installing electric vehicle charging points in Sevenoaks District Council owned car parks. This is included as an action for the Net Zero 2030 work. Currently the Council has installed 10 charging points within Sevenoaks District Council owned car parks. This is detailed in Table 3.

Table 3- Details of Public EV chargers within SDC car parks

Car Park	Location	Capacity	Disabled dual use bays	Single use disabled bays	Other bays	EVCP
Sevenoaks Town car park	Sevenoaks	449	19	4	0	8 (BP Pulse)
Bradbourne car park	Sevenoaks	420 + 20	8	2	0	2 (Charge Master)

1.10.3. In addition, we have installed 8 publicly accessible charges at Argyle Road (Carbon 3).

# 2. Methodology

- 2.1. Sevenoaks District Council engaged Field Dynamics (a leading net zero data analytics consultancy) to help identify future demand for public EV infrastructure within Sevenoaks District via their 'JumpStart project'.
- 2.2. JumpStart is a data driven, structured and proven approach that builds an evidence foundation specific to the needs of their client. Officers from Environmental Health,

# Agenda Item 9

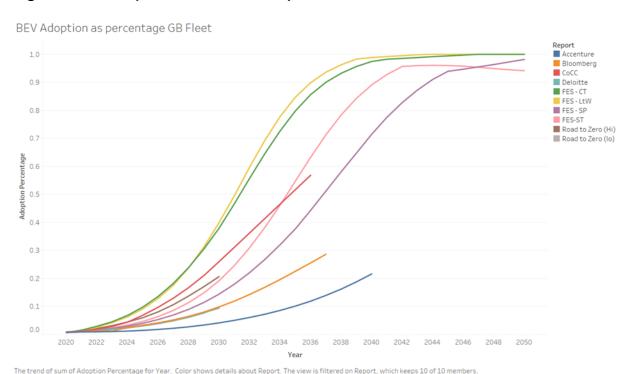
Planning Policy and GIS teams participated in a number of workshops where key national data sets were adapted around the needs of Sevenoaks District Council. The outputs from this data was combined with local factors and provided back to us for future analysis and decision making.

- 2.3. The stages of JumpStart are:
  - Step 1- Planning Horizon- Identify what initial level of adoption to plan for.
  - Step 2- Scale of Challenge- Calculate what scale of service would be required for the initial scenario
  - Step 3- Demand Zoning- Define how services will be allocated to zones with different demand profiles
  - Step 4- Initial Site Location- Selection of ideal Public EV locations within the demand zones

# 3. Future Demand (2030)

3.1. There are a number of publicly available 'potential EV adoption' models which can be used to predict future EV (and therefore EV charger) demand (see figure 4 below).

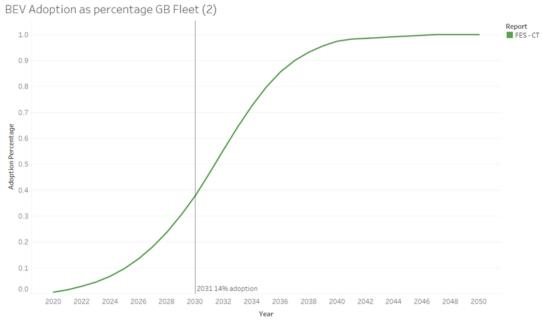
Figure 4 - Battery Electric Vehicle adoption curbs



3.2. Each of these scenarios has built in assumptions which affect the model output. Their accuracy can be significantly affected by future changes to government policy, cost/availability of infrastructure and vehicles, changes to socioeconomic factors or public perception.

3.3. Field Dynamics have considered the relative merits of each of these adoption curves to act as a 'Planning Horizon' for Sevenoaks. With consideration of a number of criteria (including current levels of adoption and local population), it has been determined that the adoption curve published within 'National Grid: Future Energy Scenarios- Consumer Transformation' (available at <a href="https://www.nationalgrideso.com/future-energy/future-energy-scenarios">https://www.nationalgrideso.com/future-energy/future-energy-scenarios</a>) is most appropriate for Sevenoaks District (see Figure 5).

Figure 5- Selected adoption curve for Sevenoaks



The trend of sum of Adoption Percentage for Year. Color shows details about Report. The view is filtered on Report, which keeps FES - Cl

3.4. Using this adoption curve, Field Dynamics have forecast future EV numbers within Sevenoaks District (Table 6 below)

Table 6- Forecast of EV numbers within Sevenoaks District in 2030

	% of fleet	EV Number	Total Fleet
Current Assumed Adoption	2.20%	1670	63009
Predicted demand in 2030	36%	22683	

# 4. Scale of Challenge

4.1. The next step of JumpStart is to understand the size of the public charging infrastructure required to support the predicted EV fleet. Field Dynamics have modelled EV use based on the personas of 8 different driver profiles as follows:

Table 7 - Modelled EV driver profiles within Sevenoaks District

Profile	Description	Predicted EV adoption	EV Count	Use of Public EV infrastructure (%)
On Street- Business Miles -1	A sales person (or similar) who travels a lot outside of the area but returns home each evening	30%	961	4%
On Street- Business Miles -2	A local trades person with a van/ car who primarily travels within the area	30%		
On Street Personal Miles -1	A driver who primarily makes use of a charger near to their home	34%	6634	26%
On Street Personal Miles -2	A driver who primarily charges at a secondary destination (in town or destination charger)	34%		
Off Street Business Miles- 1	A sales person (or similar) who travels a lot outside of the area but returns home each evening	38%	2362	70%
Off Street Business Miles- 2	A local trades person with a van/ car who primarily travels within the area	38%		
Off Street Personal Miles- 1	An office worker who commutes out of the area, with no work based charging	40%	15149	0%
Off Street Personal Miles- 2	A retiree who goes to different locations or a parent who goes to multiple events	40%		

- 4.2. Each of the profiles outlined above is modelled as using a different mix of private and public charging infrastructure. It is anticipated that where personal and business drivers have off street parking they will install and utilise private charging infrastructure whenever possible and are therefore not reliant on public EV infrastructure except to undertake top-up charges. Those without access to off street parking are more reliant on public EV charging infrastructure. The amount and type of charging required will vary depending on the number of miles travelled and the type of journeys undertaken (i.e. high mileage vehicles undertaking journeys within a vehicles range may only require charging overnight on fast chargers, whereas vehicles travelling significant miles within the District may require destination or top-up charging at rapid chargers).
- 4.3. These modelled profiles were used by Field Dynamics to predict the numbers of EV chargers required by purpose based on the following categorisations:
  - Local- A public EV connector that is within walking distance of the household. These are generally 'fast' (up to 22kW) but may be slower when powered from street furniture (sometimes 3kW). These chargers generally

- require a vehicle to be plugged in for several hours and so lend themselves to overnight charging.
- High Convenience- A public EV connector that is visited for the primary purpose of charging such as those at designated charging hubs or at motorway service stations. Normally these chargers are rapid or ultra-rapid (50kW+). These chargers can fully charge an EV within 20-40 minutes (depending on battery and charger type).
- Destination- A public EV charger that is visited for some other primary purpose (such as shopping in a town centre, or leisure activity) and where charging is the secondary purpose. These charges are usually fast (7-22kW) or rapid (normally up to 50kW) and can charge a vehicle within approximately 1-3 hours. Ideally the speed of charger is matched to the time spent at the primary activity.
- 4.4. Field Dynamics have utilised the 'Modelled EV Driver Profiles' to estimate the quantity of public EV chargers required within the district by type in order to fully support predicted adoption levels in 2030 (Table 8 below)

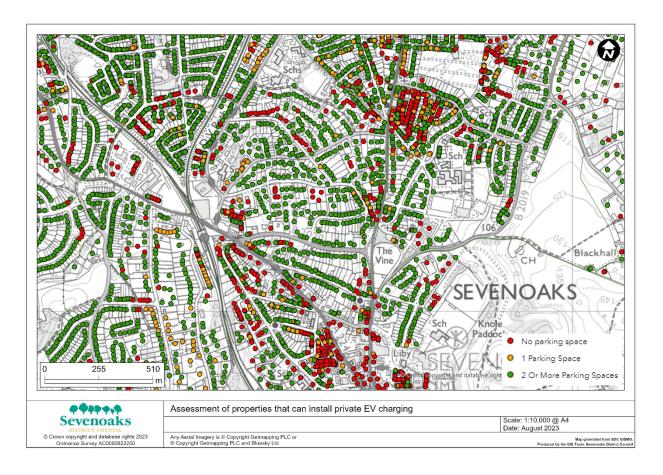
Table 8- Number of Public EV Chargers required to support predicted 2030 adoption.

	Local	High Convenience	Destination
On Street business driver	415	4	19
On-street non-business driver	216	18	155
Off-street business driver	0	3	5
Off street non-business driver	0	8	12
TOTAL	631	33	191

# 5. Demand Zoning

- 5.1. Following the assessment of number of public chargers potentially required by 2030 it is necessary to assess geographically the areas of greatest need in order to help the District Council prioritise where to focus its limited resources. This type of evidence based zoning enables the District Council to prioritise investment based on clear, robust data and evidence decisions made clearly to stakeholders.
- 5.2. Field Dynamics used their proprietary model to assess which properties in Sevenoaks District are likely to be able to install their own charging infrastructure. As outlined in 1.9, it can be assumed that the vast majority of residents with off-street parking will install a home charger. They are therefore likely to be far less reliant on public EV infrastructure than those without off road parking and a lack of public EV infrastructure is unlikely to be a substantial barrier to EV adoption.
- 5.3. Using the Field Dynamics model there are believed to be approximately 16,620 properties within Sevenoaks District that will be reliant on public EV infrastructure (do not have access to off street parking).

Figure 9- Example of output from Field Dynamics model showing which properties can install private EV charging.



- 5.4. Using the output from the initial assessment, Field Dynamics have utilised their modelling software to split the Sevenoaks District into 5 types of zones based on their unique household dataset. These zones are:
  - Public Need These zones have a high level of residents who will be reliant on public charging
  - Off-Street These zones have a high level of residents who will be able to charge at home
  - Commercial Zones where residents will be able to rely on commercially provided chargers
  - Visitor Zones where non-residents will make a up a high level of charging
  - Low Density Zones where there is a minimum need for public charging

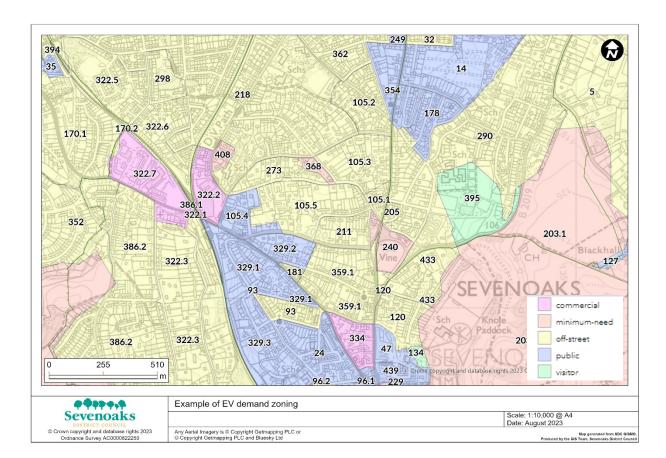


Figure 10- Example of zoning output from Field Dynamics.

5.5. Using this zoning process, Field Dynamic's model split the district into 280 zones. This split is outlined in Table 11 below.

Table 11- Split of zoning output from Field Dynamics

Zone Type	Number of zones	On-Street Households
Public Need	91	8657
Off Street	112	4113
Commercial	19	700
Visitor	4	27
Low Density/ minimum	54	3123
need		
Total	280	16,620

# 6. Public EV Charging Site Selection

6.1. The demand zoning helps the District Council to prioritise where there is greatest need for public EV chargers. Generally these are the areas with the highest number of onstreet households which are not served by existing or planned EV infrastructure.

6.2. Analysis of demand zoning for Sevenoaks has been used to identify the top 25 areas of demand for the installation of public charging infrastructure (Table 12 below).

Table 12- Top 25 Demand Zones identified by Field Dynamics

Zone ID	Area description	Total Households	Total On- Street Households	Percentage On- Street Households
200	New Ash Green (Farm Holt, Olivers Mill, Ayelands)	997	662	66.4%
121	Dunton Green (Former West Kent Coldstore)	646	425	65.8%
62	South Darenth- (Former Paper Mill Site)	467	330	70.7%
136	Swanley- (High Firs Estate)	695	313	45.0%
294	New Ash Green (Capelands, Spring Cross, Lambardes, Redhill Wood, Bowes Wood, Manor Forstal, Westfield)	615	311	50.5
76	Edenbridge (Spitals Cross Estate)	432	306	70.8%
329.1	Sevenoaks (Granville Road)	349	275	78.8%
73	Westerham (Croydon Road, Rysted Lane, The Paddock, Grange Close, New Street, Westbury Terrace, Squerryes Mead, Black Eagle Close, Atterbury Close)	663	254	38.3%
126	Hartley (Billings Estate)	235	219	93.2%
80	Swanley (Sycamore Drive)	292	213	72.9%
251.2	Swanley (Oakleigh Close)	333	202	60.7%
58	Swanley (Bonney Way)	275	201	73.1%
193	New Ash Green (Punch Croft)	365	199	54.5%
96.1	Sevenoaks (Oak Tree Close)	218	176	80.1%
348	Seal (Childsbridge Lane)	462	175	37.9%
46	West Kingsdown (Kaysland Park)	190	167	87.9%
88	South Darenth (Gorringe Avenue)	203	165	81.3%
24	Sevenoaks (Lime Tree Walk)	233	157	67.4%
354	Sevenoaks (St Johns Road)	222	141	63.5%
14	Sevenoaks (Hillingdon Rise)	392	137	34.9%
144	Edenbridge (Residential area bordered by Lingfield Road, Mont St Aignan Way and High Street, Edenbridge)	302	133	44.0%
438	New Ash Green (Ayelands Lane)	237	133	56.1%
401	Dunton Green- (London Road, Lennard Road, Barretts Road, Donnington Road)	343	129	37.6%

Zone	Area description	Total	Total On-	Percentage
ID		Households	Street	On- Street
			Households	Households
413.2	Edenbridge (Residential area north of the Edenbridge Railway Station bounded by Hilders lane and Main Road.)	247	129	52.2%
70.2	Hextable (St Davids Road)	242	125	51.7%

6.3. This information indicates the following areas of priority for the installation of public EV infrastructure:

**Table 13- Priority Locations for EV infrastructure** 

Priority	Location	Number of on-street households
1	New Ash Green	1305
2	Swanley	946
3	Sevenoaks	886
4	South Darenth	495
5	Edenbridge	439
6	Dunton Green	425
7	Westerham	254
8	Hartley	219
9	Seal	175
10	West Kingsdown	167

# 7. Catchment Modeller

- 7.1. Demand zoning information was transferred to 'Field Dynamics' Catchment Modeller Service'.
- 7.2. Catchment Modeller allows the District Council to model the impact (potential on-street household's serviced) of a particular charger type in a particular location. For the purposes of this model chargers are categorised as follows:
  - Nearby (<22kW)- users will walk up to 3 minutes to this charger type</li>
  - Primary (normally 50kW+)- users will drive up to 10 minutes to use this charger type
  - Secondary (normally >22kW to 50kW)- users will normally drive up to 5 minutes to use this charger type.

# 8. Impact of current public charging infrastructure

8.1. Catchment Modeller was used to model the number of off-street households served by Sevenoaks District Council owned public charging infrastructure installed across the District Council Area (Table 13 below).

Table 14- Modelled impact of current SDC installed public chargers

Location	Town	Field Dynamics classification	Charger Type and number	On-street properties served
Bradbourne Road Car Park	Sevenoaks	Nearby	2x 22kW	56
Sevenoaks Town Car Park	Sevenoaks	Nearby	8x 7kW	95
Council Offices- Argyle Road	Sevenoaks	Nearby	8 x 22kW	193
		TOTAL	18	344

- 8.2. The public EV chargers within Bradbourne and Sevenoaks Town car parks have been modelled as 'Nearby' owing to their speed (fast chargers). However, the primary use of these chargers is by EV drivers who are visiting Sevenoaks Town Centre and consequently they are technically classified as secondary use as per 4.3. Users of these EV chargers are required to adhere to relevant terms and conditions of the relevant carpark including the payment of fees and stay conditions.
- 8.3. The public EV chargers at the Council Offices are classified as 'Nearby'. These are sited to allow a vehicle to be charged for several hours (i.e. overnight) and have been made available for local residents to use.
- 8.4. Including the District Council's public EV chargers (Table 13 above), the number of onstreet properties currently served by public charging infrastructure is modelled to be 583 (3.51% coverage of on-street households within Sevenoaks District).
- 8.5. In addition to the currently installed EV infrastructure provided by SDC, there is further agreement to install additional public EV chargers in a number of District Council maintained car-parks. The modelled impact of these is shown in Table 14.

Table 15- Modelled impact of current SDC installed public chargers

Location	Town	Field Dynamics classification	Charger Type and number	On-street properties served
Blighs car park	Sevenoaks	Secondary	Rapid 50 kW - X4	4018
South Park car park	Sevenoaks	Secondary	Rapid 50 kW - x2	
Park Road car park	Swanley	Secondary	Rapid 50 kW - x2	2865

Location	Town	Field Dynamics classification	Charger Type and number	On-street properties served
Station Road car park	Swanley	Secondary	Rapid 50 kW - x2	
Quebec Avenue car park (Outside Village Hall)	Westerham	Secondary	Rapid 50 kW x2	698
		TOTAL	Rapid 50kW x12	7581

8.6. Owing to the type of charger that it is proposed is installed the scheme outlined in 8.5 (above) will increase modelled coverage of on-street households to approximately 46% (7581 on street households).

# 9. On-Street Charging

- 9.1. The District Council recognises that on-street charging (where charging infrastructure is installed along the roadside) has the potential to significantly contribute to/ meet future public EV charging demand. In most cases, this type of charging will be the most convenient for on-street householders as it requires them to make minimal changes to their existing lifestyle choices (simply plugging in when they park).
- 9.2. Whilst this type of charging is critical to facilitate the transition to EV vehicles, this report focusses on the delivery of charging on private/ public land where power constraints may be more easily overcome and where the District Council can help influence partners.
- 9.3. Nevertheless, Sevenoaks District Council is committed to working with Kent County Council (the highways authority) to facilitate the installation of roadside public EV charging points whenever possible.

# 10. Future Priorities for Public EV Infrastructure in Sevenoaks District

- 10.1. The District Council is keen to support the continued expansion and availability of public EV charging facilities across the district.
- 10.2. We recognise that installation of EV charging (particularly Rapid and Ultra Rapid charging) needs to be commercially viable and consequently major suppliers are likely to seek sites with significant vehicle turnover and where returns can be made on infrastructure investment. The District Council considers that this process will occur organically (led by consumer demand) without the need for intervention.
- 10.3. Unfortunately, it is unlikely that public EV charging will be commercially viable in all areas (particularly rural communities and villages). In these areas the District Council will

# Agenda Item 9

- need to be creative in identifying solutions and funding to meet the EV charging needs of residents who do not have access to off-street parking
- 10.4. With consideration to existing and proposed public EV chargers, the following areas have been identified as having the greatest need for focus by the District Council

### 10.5. New Ash Green

- 10.5.1. New Ash Green is a wholly-designed village with an original innovative core of houses and a commercial centre, built in the early 1960's. A large amount of the housing is arranged in clusters around green spaces accessed by public footpaths. Cars are kept separate from pedestrians and householders park their cars either within designated shared car parks or along the edges of roads and then walk to their properties.
- 10.5.2. The Field Dynamics model estimates that there are 1372 on street households in this area (8.3% of on street households within Sevenoaks District) and 4 of the top 25 district wide public EV charging demand zones:

Figure 16- Map showing demand zoning in New Ash Green

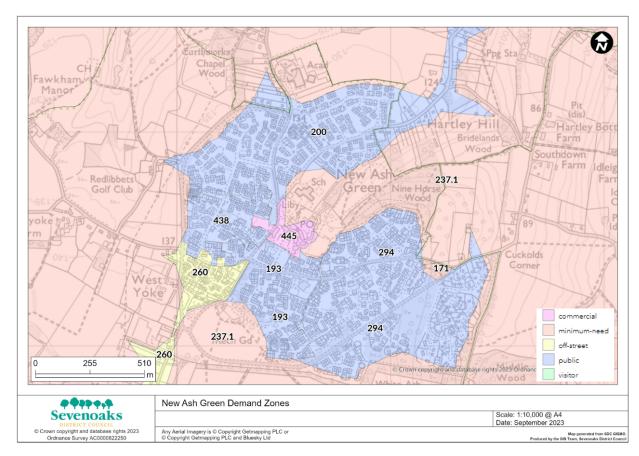


Table 17- Demand Zoning in New Ash Green.

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
193	Public	365	199	54.5
200	Public	997	662	66.4
260	Off-street	155	34	21.9
294	Public	615	311	50.6
438	Public	237	133	56.1
445	Commercial	33	33	100
TOTAL		2262	1372	60.7

- 10.5.3. Many of the residential properties within New Ash Green are served by communal parking areas that are some distance from their associated properties. Consequently, residents are unable to install private EV charging infrastructure.
- 10.5.4. The communal parking areas are understood to be within the ownership of the New Ash Green Village Association and most areas appear to have limited street lighting from which slow charging (3kW) may be possible. It is however unlikely that it would be possible to install 'fast' or 'rapid' charging infrastructure in these areas.
- 10.5.5. The New Ash Green Shopping Centre (zone classification: commercial) has free public car parking and is potentially a suitable location of 'destination' EV charging. However, owing to the geographical size of New Ash Green unless this charger is 'rapid or ultrarapid' it would only provide potential infrastructure for up to 150 on-street households.
- 10.5.6. The installation of Fast/Rapid or Ultra Rapid Charging within New Ash Green would (according to Field Dynamics model) serve the entire village but may not be commercially viable and would require significant alterations to power infrastructure.
- 10.5.7. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 56.96% electricity demand headroom in this location. This suggests that grid capacity would not be a significant limiting factor to the installation of public EV charging.

### 10.6. South Darenth

10.6.1. South Darenth is a village in the parish of Horton Kirby and South Darenth. It is located 4.2 miles east of Swanley & 4.4 miles south of Dartford. The village originally developed around the Horton Kirby Mill (originally built in 1820) which some years later was converted into a paper mill. Accommodation was needed for the workers, so small terraced houses were built close by. The mill ceased operating in February 2003 and has since been redeveloped extensively for housing. A Co-op Food supermarket is located in one of the listed mill buildings.

10.6.2. The Field Dynamics model estimates that there are 495 on street households in this area (3.0% of on street households within Sevenoaks District) and 2 of the top 25 district wide public EV charging demand zones.

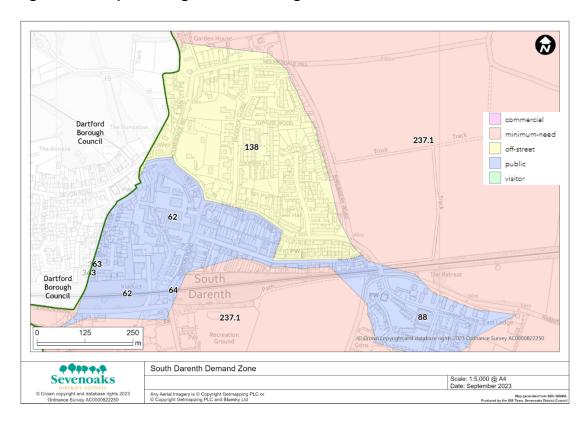


Figure 18- Map showing demand zoning in South Darenth

Table 19- Demand zoning in South Darenth

Zone ID	Zone	Number of	Number of On-	Percentage
	Classification	households	Street	On-Street
			households	Households
62	Public	467	330	70.1
88	Public	203	165	81.3
138	Off Street	417	94	22.5
TOTAL		670	495	73.9

- 10.6.3. There are a very small number of possible locations within South Darenth that would be viable for installing EV chargers. It is likely that the best solution would (subject to power constraints) would be to install a rapid or ultra-rapid charger near to the Co-op supermarket. Installing a rapid charger in this location would have the potential to serve 821 households within its catchment.
- 10.6.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 14.41% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

# 10.7. Edenbridge

- 10.7.1. Edenbridge lies in the west of the District, close to the Surrey border, and located at the bridging point of the River Eden which flows eastwards until it joins the River Medway at Penshurst. Historically the town grew along an older Roman road and it was the centre of the Wealden iron industry in the middle Ages. There are many medieval timber buildings which can still be seen around the town.
- 10.7.2. The Field Dynamics model estimates that there are 1606 on street households in this area (9.7% of on street households within Sevenoaks District) and 3 of the top 25 district wide public EV charging demand zones.

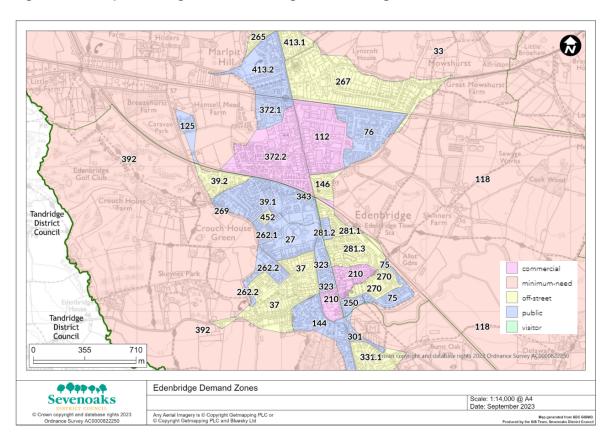


Figure 20- Map showing demand zoning in Edenbridge

Figure 21- Demand zoning in Edenbridge

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On-Street Households
27	Public	108	60	55.6
37	Off Street	332	29	8.7
39.1	Public	344	124	36.0
39.2	Off Street	61	33	54.1
75	Public	117	38	32.5
76	Public	432	306	70.8
112	Commercial	86	50	58.1

Zone ID	Zone Classification	Number of households	Number of On- Street	Percentage On-Street
			households	Households
125	Public	52	45	86.5
144	Public	302	133	44.0
146	Off Street	40	30	7.5
210	Commercial	158	90	57.0
250	Public	27	7	25.9
262.1	Public	55	25	45.5
262.2	Public	74	21	28.4
265	Off Street	79	8	10.1
267	Off Street	237	46	19.4
269	Public	6	5	83.3
270	Off Street	74	3	4.1
281.1	Off Street	47	11	23.4
281.2	Public	56	56	100
281.3	Off Street	157	83	52.8
301	Public	40	12	30.0
331.1	Off Street	128	57	44.5
343	Public	14	5	35.7
372.1	Public	81	57	70.4
372.2	Commercial	345	102	29.6
413.1	Off-Street	159	37	23.3
413.2	Public	247	129	52.2
452	Off Street	31	4	12.9
TOTAL		3889	1606	41.3

- 10.7.3. It is understood that Edenbridge Town Council are intending to install 4 public EV chargers within the Market Car Park for use by visitors to the town. It is assumed that these chargers would provide charging capability for 66 on-street households.
- 10.7.4. Further public EV development opportunities within Edenbridge could be realised by working with existing retailers in the area such as Waitrose, Aldi, or Home Bargains. Destination chargers in these zones could increase the number of on-street households provided for by approximately 244.
- 10.7.5. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 13.64% electricity demand headroom in this location and the existing network is more than 5% overloaded. This suggests that current grid capacity may be a limiting factor to the installation of public EV charging.

### 10.8. Dunton Green

- 10.8.1. Dunton Green is situated in the valley of the river Darent and is a designated part of the Kent Downs (an area of outstanding natural beauty). Historically Dunton Green was a centre for making bricks and tiles. Dunton Green railway station provides good connections into London, running every 30 minutes and is situated within the commuter belt. There are also many bus connections from Dunton Green which connect to the wider Sevenoaks area, such as Knockholt, Halsted and Sevenoaks Weald.
- 10.8.2. The Field Dynamics model estimates that there are 813 on street households in this area (4.9% of on street households within Sevenoaks District) and 2 of the top 25 district wide public EV charging demand zones:

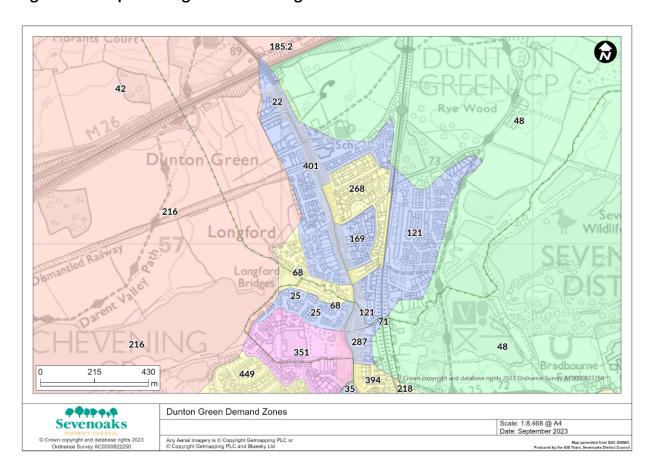


Figure 22- Map showing demand zoning in Dunton Green

**Table 23- Demand zoning in Dunton Green** 

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
22	Public	83	35	42.2
25	Public	123	33	26.8
68	Off Street	39	9	23.1
121	Public	646	425	65.8
169	Public	117	70	59.8

Zone ID	Zone		Number of On-	
	Classification	households	Street	Street
			households	Households
268	Off street	186	29	15.6
287	Public	24	16	66.7
351	Commercial	182	67	36.8
401	Public	343	129	37.6
TOTAL		1743	813	46.6

- 10.8.3. Currently no specific locations have been identified for potential EV charger installations within Dunton Green, however the most likely proposal would be to expand the existing locations available within Tesco or seek expansion of the Tesla station at Donnington Manor Hotel to other makes of EV.
- 10.8.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 49.89% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

# 10.9. Hartley

- 10.9.1. Hartley is a small village located in the North of Sevenoaks District and borders both Dartford and Gravesham Borough Council areas. Historically, the village of Hartley was referred to within the Domesday Book of 1086 and some believe it dates to early Anglo-Saxon times. In 1872 following the development of the Longfield railway station, the village began to evolve from an agricultural hub to a commuter belt community.
- 10.9.2. The Field Dynamics model estimates that there are 1241 on street households in this area (7.5% of on street households within Sevenoaks District) and 2 of the top 25 district wide public EV charging demand zones:

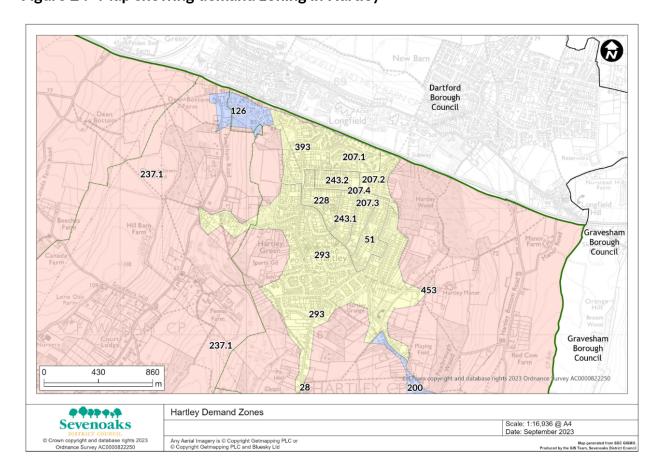


Figure 24- Map showing demand zoning in Hartley

Table 25- Demand zoning in Hartley

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
51	off-street	93	2	2.2
126	public	235	219	93.2
200	public	997	662	66.4
207.1	off-street	323	145	44.9
207.2	off-street	65	6	9.29
207.3	off-street	73	8	10.99

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
207.4	public	0	0	0
228	off-street	104	11	10.6
243.1	off-street	64	1	1.6
243.2	off-street	65	29	44.6
293	off-street	952	103	10.8
393	off-street	261	55	21.1
TOTAL		3232	1241	38.4

- 10.9.3. Development opportunities within Hartley would require cross borough cooperation, as many of the larger amenities within the village lie outside of the Hartley boundary and within Dartford Borough Council's area.
- 10.9.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 56.96% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

### 10.10. Seal

- 10.10.1. Seal is situated along the A25 to the Northeast of Sevenoaks Town.. Historically it is believed Seal dates to Anglo Saxon times and was recorded in the Domesday Book in 1096. The main High street of Seal is located along the A25 and has a small number of amenities. Transport links in Seal are limited to bus links, which connect to other parts of Sevenoaks District and surrounding areas.
- 10.10.2. The Field Dynamics model estimates that there are 224 on street households in this area (1.3% of on street households within Sevenoaks District) and 1 of the top 25 district wide public EV charging demand zones:

Figure 26- Map of demand zones in Seal

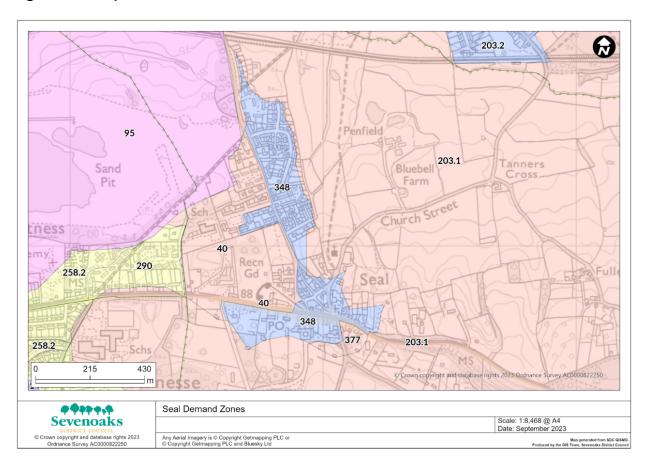


Table 27- Demand zones in Seal

Zone ID	Zone	Number of		
	Classification	households	Street	Street
			households	Households
348	Public	462	175	37.9
40	Minimum need	130	49	37.7
TOTAL		592	224	37.8

- 10.10.3. Due to its small size, EV development opportunities within Seal are limited. The most appropriate location to look at installing chargers is within the Seal Recreation Ground Car Park, which is located west of the Library and Parish Council.
- 10.10.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 49.89% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

# 10.11. West Kingsdown

- 10.11.1. West Kingsdown is located along the A20 and grew significantly in size following the First World War. It is most known for being home to Brands Hatch Racing Circuit, which held its first race in 1926 for cyclists and cross-country runners. In 1947, the BBC televised the first motorcycle event on British TV from Brands Hatch and in 2012 hosted the UK Paralympic Games Road cycling. Historically, West Kingsdown was known as Kingsown, and can be traced back to Anglo Saxon settlements. In the 1950s the Post Office requested the name be changed to avoid confusion with other villages in Kent, where it now became known as West Kingsdown.
- 10.11.2. The Field Dynamics model estimates that there are 482 on street households in this area (2.9% of on street households within Sevenoaks District) and 1 of the top 25 district wide public EV charging demand zones.

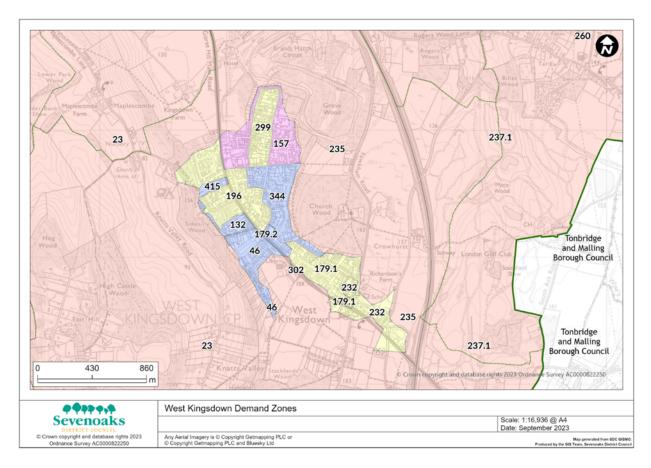


Figure 28- Map of demand zones in West Kingsdown

Table 29- Demand Zones in West Kingsdown

Zone ID	Zone	Number of	Number of On-	Percentage On-
	Classification	households	Street	Street
			households	Households
46	public	190	167	87.9
132	public	68	23	33.8
157	Commercial	294	48	16.3

# Agenda Item 9

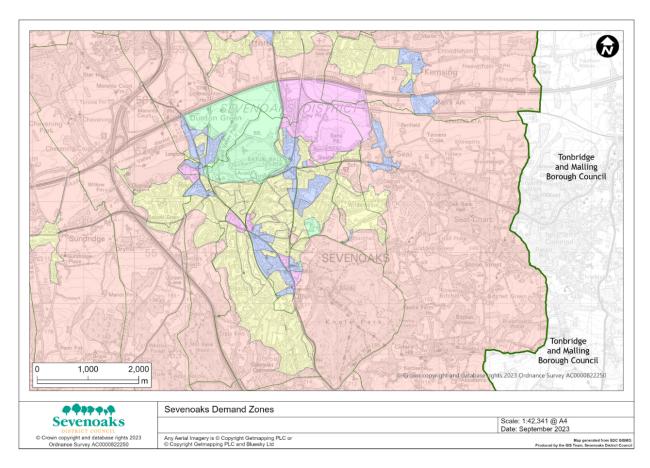
Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
179.1	Off Street	255	33	12.9
179.2	public	36	19	52.8
196	Off street	423	66	15.6
344	public	328	105	32.0
415	public	45	21	46.7
TOTAL		1639	482	29.4

- 10.11.3. The most appropriate locations to look at installing chargers is within the car park west of the Parish Council, the newly developed car park for the co-op off Hever Road/Hever Avenue. It may also be possible to work with a few larger sporting venues within the area such as Brands Hatch and London Golf Club to install rapid/ultra-rapid charging that would provide a facility for a significantly wider area.
- 10.11.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 14.41% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

### 10.12. Sevenoaks

- 10.12.1. Sevenoaks is a built-up area with an approximate population of more than 30,000. Sevenoaks consists of a main high street and a core retail centre at Blighs, which is pedestrianised off the main high street. The average ages of Sevenoaks residents fall between 35-64 years old, with a substantial proportion of its residents owning their own homes and being in full time employment. Sevenoaks has a large commuter population, due to its fast train connections into central London and is a desirable location.
- 10.12.2. The Field Dynamics model estimates that there are 3330 on street households in this area (20.0% of on street households within Sevenoaks District) and 5 of the top 25 district wide public EV charging demand zones.

Figure 30- Map of demand zones in Sevenoaks



**Table 31- Demand zones in Sevenoaks** 

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
5	Off-street	139	20	14.4
10	Commercial	49	15	30.6
12.1	Public	234	105	44.9
12.2	Public	217	69	31.8
14	Public	392	137	34.9
24	Public	233	157	67.4
25	Public	123	33	26.8
32	Off-street	199	9	4.5
35	Public	235	118	50.2
47	Public	14	12	85.7
48	Visitor	43	19	44.2
68	Off-street	39	9	23.1
93	Off-street	40	1	2.5
95	Commercial	31	17	54.8
96.1	Public	218	176	80.7
96.2	Off-Street	151	64	42.4
105.1	Off-street	55	29	52.7

Zone ID	Zone	Number of	Number of On-	_
	Classification	households	Street households	Street Households
105.2	Off-street	176	99	56.2
105.3	Off-street	75	14	18.7
105.4	Public	72	48	66.7
105.5	Off-street	108	30	27.8
120	Off-Street	38	6	15.8
134	Visitor	0	0	0
139	Off-street	59	12	20.3
149	Off-street	70	18	25.7
170.1	Off-street	165	36	21.8
170.2	Off-street	0	0	0
178	Public	199	84	42.2
181	Off-street	11	0	0
205	Off Street	21	7	33.3
211	Off-street	30	0	0
214	Off-steer	1	0	0
218	Off-street	673	66	9.8
229	Commercial	58	40	69.0
240	Minimum need	10	0	0
249	Public	73	36	49.3
258.1	Public	53	33	62.3
258.2	Off-street	262	112	42.7
273	Off-street	31	0	0
287	Public	24	16	66.7
290	Off Street	660	104	15.8
298	Off-street	30	9	30
322.1	Commercial	0	0	0
322.2	Commercial	48	27	56.3
322.3	Off-street	118	9	7.6
322.5	Off-street	126	7	5.6
322.6	Off-Street	114	23	20.2
322.7	Commercial	83	71	85.5
329.1	Public	349	275	78.8
329.2	Public	57	19	33.3
329.3	Public	128	92	71.9
334	Commercial	51	49	96.1
351	Commercial	182	67	36.8
352	Off-street	257	9	3.5
359.1	Off-street	143	66	46.2
362	Off-street	274	68	24.8
368	Minimum need	6	0	0
380	Public	61	8	13.1
386.2	Off Street	1545	386	25.0
394	Off-street	92	16	17.4

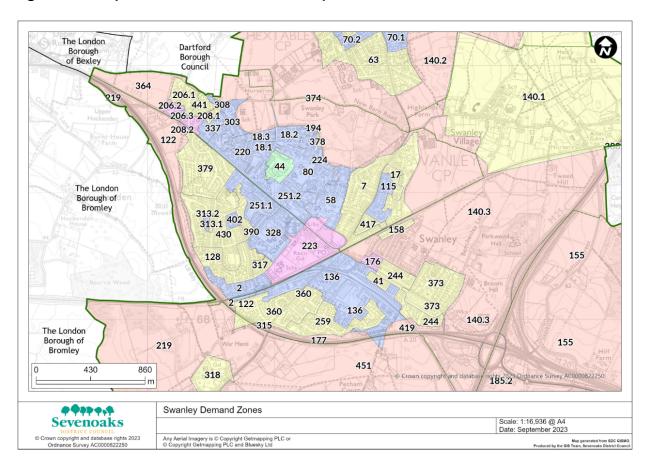
Zone ID	Zone	Number of	Number of On-	Percentage On-
	Classification	households	Street	Street
			households	Households
395	Visitor	0	0	0
396	Off-street	170	14	8.2
400	Off-street	87	12	13.8
408	Minimum need	5	3	60
425	Off-street	314	58	18.5
433	Off street	128	86	67.2
434	Off-street	84	14	16.7
439	Public	86	70	81.4
440	Off-street	14	0	0
434	Off-street	84	14	16.7
449	Off-street	796	107	13.4
TOTAL		10713	3330	31.1

- 10.12.3. As outlined above, the District Council has already installed multiple public EV chargers within Sevenoaks and more are proposed within Sevenoaks District Council owned carparks.
- 10.12.4. Currently no further locations have been identified for potential EV charger installations within Sevenoaks, however there are lots of potential opportunities available.
- 10.12.5. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 27.81% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

# **10.13.** Swanley

- 10.13.1. Swanley is Sevenoaks District's second largest town, after Sevenoaks itself. Swanley borders both the London Borough of Bexley and the London Borough of Bromley. It is a commuter town for London and is situated within the M25. It is believed the name originates from the agricultural past of the town. Swanley has a pedestrianised high street, comprising of several shops and amenities. It also has a newly refurbished leisure centre White Oak and a 60-acre park formally known as New Barn Park. Swanley also has a general market which takes place every Wednesday and Sunday in the town centre.
- 10.13.2. The Field Dynamics model estimates that there are 2036 on street households in this area (12.3% of on street households within Sevenoaks District) and 4 of the top 25 district wide public EV charging demand zones.

Figure 32- Map of demand zones in Swanley



**Table 33- Demand Zoning in Swanley** 

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
2	Public	163	49	30.1
7	Off-street	597	99	16.6
17	Off-street	59	3	5.1
18.1	Public	103	19	18.4
18.2	Public	168	28	16.7
18.3	Public	72	17	23.6
41	Off-street	46	9	19.6
44	Visitor	33	8	24.2
58	Public	275	201	73.1
80	Public	292	213	72.9
115	Public	179	106	59.2
128	Off-street	260	30	11.5
136	Public	695	313	45.0
158	Off-street	36	0	0
176	Commercial	30	0	0
194	Public	13	9	69.2
206.1	Off-street	62	23	37.1

Zone ID	Zone Classification	Number of households	Number of On- Street households	Percentage On- Street Households
206.2	Commercial	6	0	0
206.3	Public	19	19	100
208.1	Off-Street	24	0	0
208.2	Commercial	24	8	33.3
220	Public	96	42	43.8
223	Commercial	86	74	86.0
224	Public	170	104	61.2
244	Off-street	203	30	14.8
251.1	Public	190	57	30
251.2	Public	333	202	60.1
259	Off-street	323	15	4.6
303	public	156	68	43.6
313.1	Off-street	20	0	0
313.2	Public	20	11	55
317	Off-street	46	0	0
328	Public	169	62	36.7
337	Public	127	12	9.4
360	Off-street	450	30	6.7
373	Off-street	368	57	15.5
378	Off-street	9	0	0
379	Off-street	364	28	7.7
390	Off-street	81	5	6.2
402	Public	37	22	59.5
417	Off-street	67	4	6.0
430	Off-street	518	59	11.4
441	Off-street	32	0	0
TOTAL		7021	2036	29.0

- 10.13.3. There is a current 'fast' public EV Charger located at ASDA in Swanley. Further an as outlined above the District Council will be installing additional chargers within its carparks in the near future.
- 10.13.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 26.9% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

### 10.14. Westerham

- 10.14.1. Westerham is situated in the West of Sevenoaks District and shares a boundary with Surrey and Greater London. Evidence suggests that the area around Westerham can date back to 2000BC, and it was also noted in the Domesday Book. Westerham was granted a market charter by King Henry III, which boosted the growth of the town as a major player in buying and selling cattle in Kent, this lasted until 1961 when the last cattle market was held. Westerham is also home to Chartwell, which was home to Winston Churchill and is now part of the National Trust. Westerham has a small high street with a good amenities and good transport links to the M25.
- 10.14.2. The Field Dynamics model estimates that there are 478 on street households in this area (2.9% of on street households within Sevenoaks District) and 1 of the top 25 district wide public EV charging demand zones.

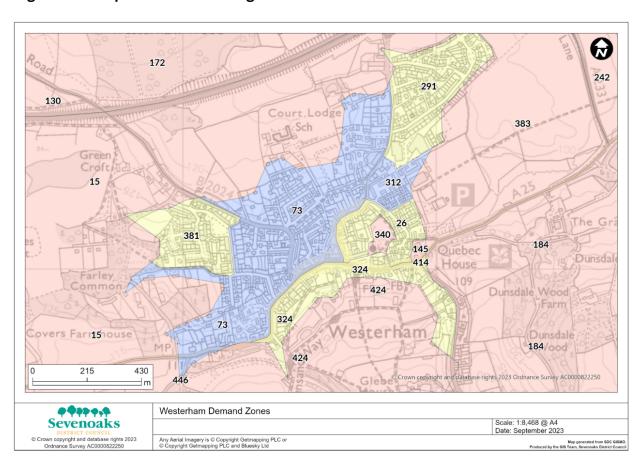


Figure 34- Map of demand zoning in Westerham

Table 35- Demand zoning in Westerham

Zone ID	Zone Classification	Number of households	Number of On-Street households	Percentage On-Street Households
26	Off-street	159	46	28.9
73	Public	663	254	38.3
291	Off-street	319	40	12.5
312	Public	113	74	65.5

Zone ID	Zone	Number of	Number of	Percentage	
	Classification	households	On-Street	On-Street	
			households	Households	
324	Off-street	152	61	40.1	
381	Off-street	102	3	2.9	
414	Off-street	1	0	0	
TOTAL		1509	478	31.7	

- 10.14.3. As outlined in 8.5, the District Council has committed to installing public EV infrastructure within the Quebec Avenue Car-Park. This public charger is estimated to serve 698 on-street households.
- 10.14.4. Analysis of Network Power UK's 'Demand Headroom' data indicates that there is 27.81% electricity demand headroom in this location. This suggests grid capacity would not be a significant limiting factor to the installation of public EV charging.

# 11. Other Key Partners

- 11.1. As more and more drivers transition to EV vehicles, it will become increasingly commercially viable for large existing fuel suppliers to diversify and offer EV charging. This transition has already begun and a number of traditional fuel companies are branching out into providing public EV charging.
- 11.2. Petrol Filling Stations are often located strategically in areas where they can service the largest possible driver population. They may therefore be ideal locations for future EV infrastructure. The table below shows the predicted impact (number of on street households that would be served) from installing rapid/ultra-rapid public EV infrastructure at the existing sites within Sevenoaks district.

Table 36- Potential impact of installing Rapid/ Ultra Rapid charging at petrol stations

Station Name	Location	Number of On- street households served	
Champion Filling Station	Station Road, Edenbridge	1810	
Farningham Filling Station	Dartford Road, Farningham	2586	
Mill Hill Garage	Mill Hill, Edenbridge	1783	
Oakstead Service Station	London Road, Swanley	2614	
Oil Well Service Station,	London Road Swanley	2559	
Sainsburys Petrol Filling Station	Otford	3627	
Seal Road Filling Station	Seal Road, Sevenoaks	4638	
Swanley Service Station	High Street, Swanley	2870	
Tesco Petrol Filling Station	Riverhead	3944	
Tubbs Hill Petrol Filling Station	London Road, Sevenoaks	4312	
Twenty Mile Service Station	London Road, West	1032	
	Kingsdown		
Wolfe Garage	London Road, Westerham	740	

11.3. There is a Tesla Supercharger site located at the Donnington Manor Hotel in Dunton Green. This site has 8 EV chargers available 24hrs a day which can operate up to 250kW. Currently, the majority of Tesla supercharger sites are restricted to Tesla vehicles but in 2022, Tesla began a pilot at selected sites whereby they were opened up for use by owners of other vehicle types. It is understood that the Donnington Manor Supercharger was not part of this pilot scheme but should Tesla open this up to other manufacturers it may provide infrastructure for up to 6234 on street households.

Table 37- Potential impact of Tesla supercharger being made available to other vehicle types

Station Name	Location	Number of On- street households served
Tesla Supercharger	Donnington Manor, Dunton Green	6234

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#### FOOD & SAFETY TEAM- GAIN OR RETAIN A 5.

#### Committee - Cleaner & Greener Advisory Committee- 10th October 2023

Report of: Deputy Chief Executive and Chief Officer Planning and Regulatory

Services

**Status:** For Decision

#### Also considered by:

Cabinet -12<sup>th</sup> October 2023

Key Decision: no

**Executive Summary:** Environmental Health propose to implement a charging scheme for advice provided to food businesses either prior to them opening or between food hygiene inspections. The scheme would provide a number of benefits for both businesses and the District Council and it is hoped will help drive higher compliance with regulations.

The scheme aims to ensure consistency of advice to food businesses and enable SDC to recover the costs of undertaking this work.

This report supports the Key Aim of: Economy- Ensure businesses are able to access suitable business support to develop and grow business support to increase the resilience of businesses, including ecommerce and marketing.

Portfolio Holder: Cllr. Margot McArthur

Contact Officer(s): Nick Chapman, Ext. 7167 and Glenys Shorrick, Ext. 7158

#### Recommendation to Cleaner & Greener Advisory Committee

- a) To note the contents of this report including details of the proposed scheme and suggested fees and charges.
- b) To support the adoption of the Gain or Retain a 5 scheme within Sevenoaks District.

#### Recommendation to Cabinet

- a) To note the contents of the report
- b) To agree the adoption of the Gain or Retain a 5 scheme for Sevenoaks District
- c) To agree the fees and charges scheme set out in paragraph 23 of the report.

#### **Introduction and Background**

- There are currently 1174 food businesses currently operating within the Sevenoaks District. Each of these businesses is subject to periodic inspection (frequency determined by risk).
- In addition to existing food businesses, the District Council receives an average of 140 new businesses registrations each year. The FSA requires than new businesses should be inspected within 28 days from registration
- As part of the inspection process, every food business receives a rating from 0-5.
  - 5- Hygiene standards are very good
  - 4- Hygiene standards are good
  - 3- Hygiene standards at generally satisfactory
  - 2- Some improvement is necessary
  - 1- Major improvement is necessary
  - 0-Urgent improvement is required
- In England, food businesses are not currently required to display their rating however they are published by the Food Standards Agency on their Food Hygiene Rating Scheme website (Search the Sevenoaks area | Food Standards Agency).
- A food hygiene score of 0-2 indicates that at time of inspection, the food business was failing to comply with minimum legal standards. In these circumstances, the Environmental Health Team will need to take additional actions to address hygiene concerns (often through re-visit or legal action).
- 6 Currently 3% of food businesses in Sevenoaks are rated 0-2 (26).
- A low food hygiene score can have a detrimental impact upon the reputation and profitability of a food business. Many of the food delivery platforms (Apps) require businesses to have achieve a minimum food hygiene rating before they are accepted onto the platform (Just Eat –3, Deliveroo –2, Uber Eats-2) and local newspapers regularly report businesses with 0-2 ratings within the area (<a href="https://www.kentlive.news/news/kent-news/every-sevenoaks-tonbridge-tunbridge-wells-6667051">https://www.kentlive.news/news/kent-news/every-sevenoaks-tonbridge-tunbridge-wells-6667051</a>).
- A food business, can appeal their awarded rating within 21 days to the Environmental Health Manager. Where an appeal is received, the officer inspection report, photographs and notes taken by the inspecting officer are reviewed and then based upon this evidence the food hygiene score is either confirmed or altered.
- 9 Following the introduction of electronic inspections (which are more accurate, understandable and show photographs of contraventions), the number of

- appeals received by Sevenoaks District Council has substantially reduced (1 appeal received since 2020).
- The rating awarded to a food business is fixed until the next full inspection (i.e. is not changed by a re-visit to check on required improvements identified during an unannounced visit). Businesses can however request a 'food hygiene rescore visit'. This is a chargeable service and once paid for a new full inspection will be undertaken without notice (within a 3 month period). The District Council currently charge £205 for a rescore visit.
- A 'rescore visit' is a fresh inspection and the businesses food hygiene score can therefore go up, stay the same or reduce depending on what is seen by the inspecting officer.

#### Structure of the Food & Safety Team

- The current Food & Safety Team comprises 5 officers and a Team Leader equating to 3.8 FTE. This team are extremely busy and in addition to undertaking food hygiene inspections are also responsible for:
  - Responding to Food & Safety enquiries and service requests
  - Investigation of infectious disease outbreaks
  - Investigation of Health and Safety incidents
  - Authorisation of Skin Piercing/ Tattooists etc
  - Food Sampling
  - Authorisation of some specialist food businesses
- The Food & Safety Team at Sevenoaks have always provided advice to food businesses operators on a discretionary basis. The scale and nature of this advice varies on a case-by-case basis but often includes; written advice, telephone advice, site visit, assessment of proposed layout, explanation of legal requirements etc.
- Some customers are particularly demanding in the information they want from the Council in advance of opening or re-inspection and this can take a significant amount of officer time. Time spent by officers providing discretionary advice takes them away from delivering the statutory elements of the service.

#### Gain or Retain a 5 Scheme

- The Environmental Health team propose to introduce a new chargeable scheme for the delivery of comprehensive advice to food business operators. The proposal is to offer a set amount of advice and information within one chargeable fee that provides a Food Business Operator (FBO) with the best chance of obtaining a 5 rating at time of inspection.
- 16 Whilst details of the scheme need to be finalised it is considered that the following activities would form part of this:

- Visit/ informal inspection undertaken by a qualified and experienced Food Safety Officer who will provide practical advice appropriate to your business (up to 2 hours).
- Provision of advice relevant and tailored to the business on how to achieve the highest possible standards
- An electronic report (sent by email) containing simple and easy to understand advice relevant to the business and highlighting any issues or areas for improvement seen during our visit.
- An up to date Safer Food Better Business pack and diary. We will take
  you through what the pack contains, how to use it to improve food
  safety and how to complete it.
- An opportunity to ask for advice specific to the business.
- For new businesses at the planning stage:
  - We will provide guidance on the layout and design of a premises to avoid the risk of cross contamination and to adhere to structural requirements,
  - ii. advice on the suitability of proposed extract plant/ equipment
  - iii. advice on methods and mechanisms to minimise noise disturbances from your business
- 17 The scheme would not guarantee that a business would achieve a 5 food hygiene rating and this would be determined by the unannounced inspection and based upon food hygiene practices seen at that time.
- The 'gain or retain a 5 scheme' would have the following benefits for businesses;
  - It would save a business time by providing a one-stop-shop for advice relating to food hygiene and other environmental health matters tailored to the individual business.
  - Help a business save money by providing advice on appropriate procedures and equipment needed (proportionate to the level of your business, avoiding over-spending on compliance).
  - Enhance a food businesses chance of receiving or retaining a high FHRS rating that you can then be used in marketing. This gives a business a competitive edge and can help reduce the risk of reputational damage.
  - Give a business reassurance from a compliance perspective
  - Enable a business to put in place steps and measures to grow sustainably
- 19 The scheme would bring the following benefits for the District Council/ Environmental Health;

- It would provide some remuneration to the Environmental Health Team for work which is currently undertaken/ provided free of charge.
- Businesses may take advice provided more seriously than they do at present (greater perceived value of paid for advice).
- It may displace some non-statutory work that currently takes place- i.e. some businesses may decide not to approach Environmental Health in advance of opening, creating additional capacity within the team.
- It would provide a structure for advice that will be provided to businesses by Environmental Health including setting appropriate limits on officer time allocated to this task.

#### Advice outside of the Gain or Retain a 5 scheme.

- When a Food Business Operator registers with Sevenoaks District Council, we contact them to acknowledge receipt of their registration. As part of this initial communication we provide web links to relevant information to help the FBO set up their business (i.e. links to relevant sections on the Food Standards Agency Website). We will continue to do this.
- The Food Standards Agency website contains an excellent step by step guide to setting up a food business <a href="https://www.food.gov.uk/business-guidance/getting-ready-to-start-your-food-business">https://www.food.gov.uk/business-guidance/getting-ready-to-start-your-food-business</a>. As a result a business is able to find all relevant information without contacting SDC should they wish to do so.
- If a business wishes to obtain more specific information or advice regarding their business we will only do so where they have paid for and agreed to relevant terms and conditions associated with the proposed scheme.

#### **Proposed Charges**

The Environmental Health Team are only entitled to achieve cost recovery from fees and charges. Table X below outlines the proposed fees that would be associated with the 'Gain or retain a 5 scheme'.

	TASK	Unit Cost	Time (hrs)	Cost of task
Administration	Gain or Retain Request Form	17.71	0.1	£1.77
	Review of form- TL	33.41	0.5	£16.71

	TASK	Unit Cost	Time (hrs)	Cost of task
	Processing of charge- CS	17.71	0.1	£1.77
	Notification of charge	17.71	0.1	£1.77
	Creation of SR	17.71	0.2	£3.54
	Allocation of SR	17.71	0.2	£3.54
	Officer Training			£0.85
Task	Inspection	29.23	3	£87.69
	Travel	29.23	1	£29.23
	Writing up of report	29.23	1.5	£43.85
	Administration of report	29.23	0.2	£5.85
	Entry on System	29.23	0.2	£5.85
Management	Oversight by TL	33.41	0.25	£8.35
	TOTAL		7.35	£210.76

These fees are broadly aligned with those currently charged for a re-score visit.

#### Timescale for implementation

- 25 Prior to implementing the scheme, the Environmental Health Team will need to draw up some terms and conditions which will apply to users of the service. This work will need to be conducted with the assistance of our legal team.
- We will need to work with the Customer Solutions Team and Project Team to ensure that appropriate payments can be taken for the Gain or Retain a 5 scheme.

With consideration to the above factors, we would intend to implement the scheme in April 2024.

#### **Financial**

It is anticipated that the "Gain or Retain a 5 scheme" as outlined above will generate a small income for Environmental Health.

Legal Implications and Risk Assessment Statement.

None

#### **Equality Assessment**

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

#### **Net Zero Implications**

The decisions recommended through this paper have a remote or low relevance to the council's ambition to be Net Zero by 2030. There is no perceived impact regarding either an increase or decrease in carbon emissions in the district, or supporting the resilience of the natural environment.

Background Papers	
None	
Appendices	
None	

#### **Richard Morris**

Deputy Chief Executive and Chief Officer - Planning and Regulatory Services



#### **AIR QUALITY- ANNUAL STATUS REPORT & UPDATE**

Cleaner & Greener Advisory Committee - 10th October 2023

Report of: Deputy Chief Executive and Chief Officer Planning and Regulatory

Services

**Status:** For Consideration

Also considered by: N/A

**Key Decision:** No:

This report supports the Key Aim of: Green Environment & Healthy

Environment

Portfolio Holder: Cllr. McArthur

Contact Officer(s):

Nick Chapman, Ext. 7167,

Colin Alden, Ext. 7186

Recommendation to Cleaner & Greener Advisory Committee

To note the contents of the 2023 Annual Status Report

**Reason for recommendation:** This report is for information and has been provided to update Cleaner & Greener Advisory Committee on Air Quality results

and actions being taken by the District Council.

#### **Introduction and Background**

- The District Council is required by DEFRA to produce an Annual Status Report (ASR) in June every year. This report summarises the results of Air Quality Monitoring in the previous calendar year (i.e. 2022).
- We are pleased to confirm that DEFRA have accepted Sevenoaks District Council's ASR and are satisfied with the monitoring that was undertaken and our conclusions.
- In 2022, no diffusion tube showed an exceedance of the National Objective Level (40ug/m³) for Nitrogen Dioxide (NO₂).
- The maximum reported concentration was  $35.2\mu g/m^3$  at DT42, located at the London Road, Riverhead. This site is located at a in a position of relevant exposure (i.e. air quality is equivalent to that which residents are exposed). The second highest concentration (34.2  $\mu g/m^3$ ) was reported at DT87 in Bradbourne Vale Road South, Sevenoaks. This site is not considered to be relevant exposure.
- In general, across the Sevenoaks District, concentrations have decreased slightly from what were reported in 2021. This continues the overall trend of decreasing annual mean  $NO_2$  concentrations over the past 5 years within the district.
- There were no breaches of the NO<sub>2</sub> hourly, PM<sub>10</sub> annual, or PM<sub>10</sub> daily AQS objectives.
- As our data has shown continuous trends of reducing emissions within each of our Air Quality Management Areas, the District Council is now in a position to consider revoking those that remain (subject to risk assessment). Should we determine that it is appropriate to revoke an AQMA it will be necessary for officers to bring a further report to agree this decision in due course.
- In April 2022 Sevenoaks District Council adopted a new Air Quality Action Plan (AQAP). The measures included within this action plan are detailed within the Annual Status Report.
- 9 The Annual Status Report 2023 is Appendix A.

#### Progress towards measures within the Air Quality Action Plan

10 Within the first year of publishing the AQAP in 2022, there has been continuous progress towards a number of measures.

#### Key completed or ongoing measures are:

- Measure 11- Reduction in vehicle idling through the promotion of health impacts at primary and secondary school.
- Measure 12- Educational Campaigns for schools- including attendance at assembly and delivery of key messages.

- Measure 21- Implementation of flexible/ hybrid working arrangements for District Council staff.
- Measure 23- Complete a detailed modelling assessment of the Swanley Area to quantify the local air quality.
- 15 Measure 24- Hire an Air Quality Promotions Officer.

#### Measures that should be completed over the course of the next reporting year:

- Measure 1- Development of Local Plan Policy and guidance to ensure developers take account of onsite and offsite air quality.
- 17 Measure 8- Development of new walking and cycle routes
- 18 Measure 15- Improving and developing the EV infrastructure within the district including the completion of a study identifying future EV infrastructure demand within the District.
- 19 Measure 16- Installing EV charging points within all Council owned carparks.

#### Conclusion

- 20 Monitoring data demonstrates that air quality in Sevenoaks District continues to improve year on year and in 2022 all areas met national objective levels for measured pollutants.
- Although Air Quality within Sevenoaks District is improving, there is no safe level of exposure to air pollution. It is therefore in the interests of our residents that we continue to work to reduce exposure to air pollution as far as possible.
- Our new Air Quality Action Plan (2022-2027) provides the framework of measures we intend to implement to improve air quality. We have already made significant progress towards several measures and hope to report more on these in future updates.

#### **Key Implications**

Financial

None

Legal Implications and Risk Assessment Statement.

No legal implications have been identified.

#### **Equality Assessment**

The information in this paper has a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

#### **Net Zero Implications**

Whilst the District Council's Air Quality work aligns and supports our NetZero ambitions. The decisions recommended through this paper have a remote or low relevance to the council's ambition to be Net Zero by 2030. There is no perceived impact regarding either an increase or decrease in carbon emissions in the district, or supporting the resilience of the natural environment

#### **Appendices**

Appendix A - Air Quality Status Report 2023

#### **Richard Morris**

Deputy Chief Executive and Chief Officer - Planning & Regulatory Services



# Sevenoaks District Council Air Quality Annual Status Report

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

June 2023



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# **Executive Summary: Air Quality in Our Area**

## Air Quality in Sevenoaks District Council

Air pollution is associated with a number of adverse health impacts. 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, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas<sup>1,2</sup>.

The mortality burden of air pollution within the UK is equivalent to 29,000 to 43,000 deaths at typical ages<sup>3</sup>, with a total estimated healthcare cost to the NHS and social care of £157 million in 2017<sup>4</sup>.

The primary source of air pollution within the Sevenoaks district is from Nitrogen Dioxide  $(NO_2)$  and Particulate Matter  $(PM_{10} \& PM_{2.5})$ , predominantly stemming from road traffic. The district has three major motorways running through it, the M25, M26 and M20. These major roads connect London and the north of the UK to the port at Dover and the Channel Tunnel, and as such has a continual flow of continental HGVs. Additionally commuter traffic either directly into, or connecting to, London and local journeys such as school runs contribute significantly to a number of 'hot spots' in Sevenoaks, Swanley, and a number of small towns located along the A25.

At all monitoring locations in 2022, annual mean  $NO_2$  concentrations were reported to be below the annual mean Air Quality Strategy (AQS) objective of  $40\mu g/m3$ . The maximum reported concentration was  $35.2\mu g/m^3$  at DT42, located at the London Road, Riverhead. This site is located at a site of relevant exposure. The second highest concentration (34.2)

<sup>&</sup>lt;sup>1</sup> Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

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

<sup>&</sup>lt;sup>3</sup> Defra. Air quality appraisal: damage cost guidance, January 2023

<sup>&</sup>lt;sup>4</sup> Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

 $\mu g/m^3$ ) was reported at DT87 in Bradbourne Vale Road South, Sevenoaks. As this site is not located as a site of relevant exposure and as the result does not exceed 36.0 $\mu g/m^3$  it is not required to be distance corrected. In general, across the Sevenoaks District, concentrations have decreased slightly from what was reported in 2021. This continues the overall trend of decreasing annual mean NO<sub>2</sub> concentrations over the past 5 years within the district.

All diffusion tubes within AQMA's 8 and 14 showed an annual decline in average concentrations. AQMA 13, one of the twenty six tubes present (DT36) showed an increase in annual average, with no clear identifiable cause for the increase could be identified. AQMA 10 showed the highest increase in tube averages, with four of the nine tubes increasing. These were DT28, DT51, DT81 and DT90, it should be noted these are located on Sevenoaks High Street, however there is no clear cause identified for the increases. Of the twelve tubes located outside of the AQMA's, only one showed an increase.

In addition, no breaches of the  $NO_2$  hourly,  $PM_{10}$  annual, or  $PM_{10}$  daily AQS objectives were reported at any of the relevant monitoring locations within the district.

In April 2022 Sevenoaks District Council adopted a new Air Quality Action Plan (AQAP). The measures included within this action plan are detailed within this report.

# **Actions to Improve Air Quality**

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution.

The Environmental Improvement Plan<sup>5</sup> sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term PM<sub>2.5</sub> targets. The National Air Quality Strategy, due to be published in 2023, will provide more information on local authorities' responsibilities to work towards these new targets and

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<sup>&</sup>lt;sup>5</sup> Defra. Environmental Improvement Plan 2023, January 2023

reduce PM<sub>2.5</sub> in their areas. The Road to Zero<sup>6</sup> details the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

As detailed within the Sevenoaks District Council Air Quality Action Plan 2022 the key planned measures include:

- Improvements to the road and junction at Bat & Ball, Sevenoaks High Street, Seal, Riverhead and Brasted. Implementation of measures to encourage active travel including the development of new walking and cycling routes, introducing bike rental schemes and the advertisement of active travel schemes.
- Introducing various behavioural campaigns to reduce single use occupancy car journeys and vehicle idling.
- Exchanging the council's fleet, and the local bus fleet, to low emission and ultra-low emission vehicles.
- Developing and upgrading the districts electric vehicle infrastructure.
- Education of the public to discourage the use of bonfires as a method of waste disposal.
- Assisting businesses with identifying ways in which they can reduce their emissions and convert to low emission vehicles within their fleets.
- Reducing emissions from activities with Environmental Permits
- Working alongside Highways England to reduce the requirement for LGV & HGV vehicles to use the A25.

Due to the nature of the emission sources (a notable amount of HGV through traffic on the major road network and a large proportion of commuter traffic) it is difficult to target specific 'hot spot' areas within the district so the council is looking to carry out a number of measures that will target road user behaviours. And although these will not be entirely focused on specific areas it is the belief that these will help to significantly improve pollution throughout the district to ensure that residents are not exposed to high pollution

<sup>&</sup>lt;sup>6</sup> DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

levels. In addition to these, further measures which are detailed within the Air Quality Action Plan will also target and encourage the reduction of emissions of  $PM_{10}$  &  $PM_{2.5}$ .

The Air Quality Promotions Officer has facilitated the ongoing implementation of the actions and measures set out within the AQAP and has been involved in an electric vehicle study as well as working alongside schools within the county to publish a number of resources involving tackling air pollution, reduction of vehicle idling and walk to school incentives.

#### **Conclusions and Priorities**

The following conclusions can be made from this year's ASR:

- Annual mean NO<sub>2</sub> concentrations at all monitoring sites are below the AQS objective of 40ug/m<sup>3</sup>. This is also the case for NO<sub>2</sub> hourly, PM<sub>10</sub> and PM<sub>10</sub> daily AQS objectives.
- There continues to be an overall downward trend in annual mean NO<sub>2</sub>
  concentrations across all monitoring sites, with the exception of 4 tubes within
  AQMA 10.
- There are 4 tubes (DT28, DT51, DT81 and DT90) in AQMA 10, located within Sevenoaks which have increased however the overall trend shows a light increase in NO<sub>2</sub> concentrations over the previous year from 21.5 to 21.8 ug/m<sup>3</sup>. Although there is no clear reason as to why NO<sub>2</sub> may be increasing in these particular areas, Sevenoaks District Council will continue to monitor these locations closely.
- There has been a rebound in annual mean NO<sub>2</sub> concentrations following the end of Covid-19 pandemic restrictions, however whilst emissions are higher than those witnessed during the monitoring years impacted by imposed lockdowns, they are broadly in line with the overall downwards 5-10 year trend.
- The highest monitored concentration within the district was measured at DT42, which is located at London Road, Riverhead along the A25. This maximum concentration (35.2ug/m³) was still below the national objective level.

The District Council has revoked the following AQMAs in 2022:

- AQMA 1 Declared for NO<sub>2</sub> Junction 3 of the M25 to the district boundary with Tonbridge and Malling Borough Council including part of the A20 at Farningham.
- AQMA 2 Declared for NO<sub>2</sub> County border with Surrey to district border with Dartford, including Junctions 3, 4 and 5 and the extension of Junction 5 to connect with the A25 at Bessel's Green.
- AQMA 3 Declared for NO<sub>2</sub> M26 from Junction 5 of the M25 to the district boundary with Tonbridge and Malling Borough Council.
- AQMA 4 Declared for NO<sub>2</sub> Swanley Bypass from Junction 3 of the M25 to the district boundary with the London Borough of Bromley.
- AQMA 6 Declared for PM<sub>10</sub> Junction 5 to Kent / Surrey border.

Sevenoaks District Council has the following priorities for the coming year:

- Continue to promote the AQAP and deliver measures identified.
- Investigate and report on the future demand for EV infrastructure within
   Sevenoaks District and work towards meeting the needs of residents without access to off-road parking.
- Continue to develop the Local Cycling and Walking Infrastructure Plan
   (LCWIP) for Sevenoaks urban area and develop an LCWIP for Swanley.
- Develop a protocol with our Development Management Team for the implementation of Air Quality mitigation measures on developments within/adjacent to an AQMA.
- To undertake a best value review of our existing Air Quality Stations and air quality monitoring.
- To develop projects to address emissions of PM<sub>2.5</sub>, particularly those that are associated with domestic burning.

# Local Engagement and How to get Involved

Members of the public can help to improve air quality by making small changes to their everyday lives.

- Finding alternative methods to making car journeys, such as walking or cycling, will help to reduce local traffic, improve congestion and reduce vehicle emissions.
- When vehicles are stationary; such as if you are in a traffic jam, are waiting at traffic lights or at level crossings do not allow car engines to idle. Instead turn off your vehicle to reduce emissions which will also save fuel.
- By anticipating the flow of traffic, remaining in a higher gear and maintaining a continuous speed at low revs per minute (RPM), this helps to reduce pollution from your vehicle whilst also saving on fuel consumption.
- Research alternative vehicle types such as electric, hybrid or ULEZ compliant cars which produce lower emissions and help to improve local air quality.
- Ensure that vehicles are regularly maintained, making sure that filters and oil are
  inspected and replaced regularly to support optimum performance. If sooty exhaust
  emissions are coming from your vehicle, take it to a garage for servicing as this will
  be significantly be contributing to poor air quality. Regular tyre maintenance and
  pressure checks are important to achieve your vehicles optimum fuel consumption,
  consequently also saving you money.
- Avoid making short journeys by car as to work effectively engines need to reach a
  high temperature to work at optimal performance. Walking, cycling or use of public
  transport will produce much lower emissions, if any, than using a car for short trips
  and will usually be the cheaper option.
- For shorter journeys, walking cycling or using public transport can often be a cheaper and more environmentally conscious option.
- Find alternatives to using wood burners, burning solid fuels and having garden bonfires as they produce harmful toxins, and contribute a significant amount to particulate pollution.

Further details on air quality monitoring carried out by Sevenoaks District Council can be found on the <u>London Air Quality Network website.</u>

Sevenoaks District Council has one Smoke Control Order in place under the Clean Air Act 1993. To check if their property is subject to a Smoke Control Order residents can visit the Council's <u>website</u>.

Within a Smoke Controlled Area only authorised fuels, or any of the below 'smokeless' fuels can be burnt, unless an exempt appliance is used.

- Gas
- Low volatile steam coal
- Anthracite
- Semi-anthracite

If your property does not fall within a Smoke Control Area, you should still be aware that appliances that burn solid fuel will contribute to local air pollution, evidence shows that these contributions are increasing due to gaining popularity for occasional heating requirements, particularly during the winter months. The council have noted a rise in complaints concerning smoke emissions from domestic properties, as burning solid fuels can generate significant levels of particulate pollution. Non-compliance with the smoke control legislation can result in a fine of up to £1,000.

The Department for Environmental Food and Rural Affairs have produced guidance should residents still wish to use solid fuels or solid fuel appliances.

# **Local Responsibilities and Commitment**

This ASR was prepared by the Environmental Health Department of Sevenoaks District Council with the support and agreement of the following officers and departments:

- Nick Chapman, Environmental Health Manager
- Colin Alden, Environmental Protection Team Leader
- Holly Harris, Air Quality Promotions Officer
- Sian May, Environmental Protection Officer
- Sevenoaks District Councils Development Management
- Sevenoaks District Councils Licencing
- Sevenoaks District Councils Direct Services

This ASR has been approved by:

Colin Alden Environmental Protection Team Leader

This ASR has not been signed off by a Director of Public Health.

If you have any comments on this ASR please send them to Sian May at:

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# **Table of Contents**

Executive Summary: Air Quality in Our Area	i
Air Quality in Sevenoaks District Council	i
Actions to Improve Air Quality	ii
Conclusions and Priorities	iv
Local Engagement and How to get Involved	V
Local Responsibilities and Commitment	vii
Table of Contents	ix
1 Local Air Quality Management	1
2 Actions to Improve Air Quality	2
2.1 Air Quality Management Areas	2
2.2 Progress and Impact of Measures to address Air Quality in Sevenoaks District Council	4
2.3 Progress and Impact of Measures to address Air Quality in Sevenoaks District Council	15
3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National	
Compliance	17
3.1 Summary of Monitoring Undertaken	17
3.2 Individual Pollutants	18
Appendix A: Monitoring Results	21
Appendix B: Full Monthly Diffusion Tube Results for 2022	40
Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC	43
Appendix D: Maps of Monitoring Locations and AQMA	48
Appendix E: Summary of Air Quality Objectives in England	53
Glossary of Terms	54
Defenses	F /

# **List of Tables**

Table 2.1 - Declared Air Quality Management Areas	3
Table 2.2 - Progress on Measures to Improve Air Quality	8
Table A.1 - Details of Automatic Monitoring Sites	21
Table A.2 - Details of Non-Automatic Monitoring Sites	22
Table A.3 – Annual Mean NO2 Monitoring Results: Automatic Monitoring (μg/m3)	27
Table A.4 – Annual Mean NO2 Monitoring Results: Non-Automatic Monitoring ( $\mu g/m3$ )	28
Table A.5 – 1-Hour Mean NO2 Monitoring Results, Number of 1-Hour Means > $200\mu g/m3$	35
Table A.6 – Annual Mean PM10 Monitoring Results (µg/m3)	36
Table A.7 – 24-Hour Mean PM10 Monitoring Results, Number of PM10 24-Hour Means >	
50μg/m3	38
Table B.1 – NO2 2022 Diffusion Tube Results (μg/m3)	40
Table C.2 - Bias Adjustment Factor	46
Table E.1 – Air Quality Objectives in England	53
List of Figures	
Figure A.1 - Trends in Annual Mean NO2 Concentrations: AQMA No. 8	31
Figure A.2 - Trends in Annual Mean NO2 Concentrations: AQMA No. 10	32
Figure A.3 - Trends in Annual Mean NO2 Concentrations: AQMA No. 13	33
Figure A.4 - Trends in Annual Mean NO2 Concentrations: AQMA No. 14	34
Figure A.5 – Trends in Annual Mean PM10 Concentrations	37
Figure A.6 – Trends in Number of 24-Hour Mean PM10 Results > 50µg/m3	39
Figure C.1 - National Diffusion Tube Bias Adjustment Factor Spreadsheet - Partial Image	45
Figure D.1 - Map of AQMA's within Sevenoaks Di	48
Figure D.2 - Map of Monitoring Locations and AQMAs near Swanley	49
Figure D.3 -Map of Monitoring Locations and AQMAs near Sevenoaks	50
Figure D.4 -Map of Monitoring Locations and AQMAs near Seal	51
Figure D.5 -Map of Monitoring Locations and AQMAs near Riverhead and Bat & Ball	52

# 1 Local Air Quality Management

This report provides an overview of air quality in Sevenoaks District Council during 2022. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), 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 order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Sevenoaks District Council to improve air quality and any progress s that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

# 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 should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained, and provide dates by which measures will be carried out.

A summary of AQMAs declared by Sevenoaks District Council can be found in Table 2.1. The table presents a description of the 4 AQMAs that are currently designated within Sevenoaks District Council. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. Additional information on the AQMAs can be found on <u>Defra's UK-Air</u>. The air quality objectives pertinent to the current AQMA designations are as follows:

NO<sub>2</sub> annual mean

As detailed in the 2022 ASR Sevenoaks District Council has revoked the following AQMAs:

- AQMA 1 Declared for NO<sub>2</sub> Junction 3 of the M25 to the district boundary with Tonbridge and Malling Borough Council including part of the A20 at Farningham.
- AQMA 2 Declared for NO<sub>2</sub> County border with Surrey to district border with Dartford, including Junctions 3, 4 and 5 and the extension of Junction 5 to connect with the A25 at Bessel's Green.
- AQMA 3 Declared for NO<sub>2</sub> M26 From Junction 5 of the M25 to the district boundary with Tonbridge and Malling Borough Council.
- AQMA 4 Declared for NO<sub>2</sub> Swanley Bypass From Junction 3 of the M25 to the district boundary with the London Borough of Bromley.
- AQMA 6 Declared for PM<sub>10</sub> Junction 5 to Kent/Surrey border.

**Table 2.1 - Declared Air Quality Management Areas** 

	AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
	AQMA 8	01/09/2006	NO <sub>2</sub> Annual Mean	Swanley - London Road (East); High Street; Bartholomew Way and parts of Central town area	NO	56.7μg/m3	Not Applicable	4	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022
	AQMA 10	10/01/2008	NO <sub>2</sub> Annual Mean	Swanley - London Road (East); High Street; Bartholomew Way and parts of Central town area	NO	46.5μg/m3	Not Applicable	3	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022
101	AQMA 13	14/01/2014	NO <sub>2</sub> Annual Mean	The entire length of the A25 from the border with Tonbridge and Malling in the east to the border with Tandridge in the west.	NO	55.3μg/m3	Not Applicable	3	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022
	AQMA 14	14/01/2014	NO <sub>2</sub> Annual Mean	The junction of London Road and Birchwood Road, Swanley.	NO	48.8μg/m3	Not Applicable	3	Sevenoaks Air Quality Action Plan 2022	Sevenoaks Air Quality Action Plan 2022

**<sup>⊠</sup>** Sevenoaks District Council confirm the information on UK-Air regarding their AQMA(s) is up to date.

**<sup>☒</sup>** Sevenoaks District Council confirm that all current AQAPs have been submitted to Defra.

# 2.2 Progress and Impact of Measures to address Air Quality in Sevenoaks District Council

Defra's appraisal of last year's ASR concluded that the report was detailed and well presented with clear and consistent figures and labels. Defra also noted that it was clear from the report that Sevenoaks District Council is committed to ensuring good air quality within the district. The following comments are designed to help inform future reports.

- 1.1 Figures are clear and consistent, with all AQMAs and monitoring sites labelled clearly. A scale has also been included for completeness. The colours chosen to distinguish between automatic and passive monitoring sites are quite similar, and it can therefore be difficult to determine whether a site is automatic or passive. A different colour choice may be beneficial for the reader.
- 2.1 QA/QC measures have been discussed, along with details of how the diffusion tubes are analysed in the laboratory. Good reasoning for the chosen bias adjustment factor has been given, and calculations for appropriate local bias and adjustment factor and distance calculations have been provided. For completeness, the Council could include an image of the appropriate national bias adjustment factor spreadsheet in future reports.
- 3.1 Only 12 of the 51 monitoring locations, including one co-location, are located outside of AQMAs. The Council could expand this monitoring to ensure that any new areas of concern are highlighted, particularly as revocation of current AQMAs is undertaken.
- 4.1 Measures to address PM<sub>2.5</sub> concentrations have been provided. The Council have also included the fraction of mortality attributable to particulate matter and have compared this to local and national statistics. The Council should continue these discussions in future reports.
- 5.1 The Council have discussed the trends in the monitoring data over the past five years and have included detailed and well-presented graphs to support this. It is clear that the Council is committed to ensuring good air quality within the District, and should continue the good work in future years.

Sevenoaks District Council welcomes these comments to help improve future reports and will continue to include detailed supporting graphs and discussions surrounding the Fraction of Mortality Attributable to Particulate Air Pollution. It was noted that the colours chosen to distinguish between the automatic and passive monitoring sites were similar, so clearer distinguishing colours have been chosen going forwards for reader convenience. Following a clear discussion of the QA/QC measures, additional information has been provided on the analysis methods used as well as a detailed explanations for the chosen bias adjustment factor, calculations for the local bias adjustment factor and distance calculations, including an image of the national bias adjustment factor spreadsheet.

Sevenoaks District Council continues to regularly review the locations and positions of the air quality monitoring devices, and where traffic congestion or development (existing or proposed) is identified as a potential area of concern, additional monitoring will be installed.

Sevenoaks District Council has taken forward a number of direct measures during the current reporting year of 2022 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 32 measures are included within Table 2.2, with the type of measure and the progress Sevenoaks District Council have made during the reporting year of 2022 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in the respective Action Plan, the <u>Net Zero</u> Action Plan 2022/23, the Movement Strategy, <u>Low Emission and Electric Vehicle Strategy</u>, and the <u>Local Walking and Cycling Infrastructure Plan</u>.

#### Key completed measures are:

- Measure 11- Reduction in vehicle idling through the promotion of health impacts at primary and secondary schools
- Measure 12- Educational Campaigns for schools- including attendance at assembly and delivery of key messages
- Measure 21- Implementation of flexible/ hybrid working arrangements for District Council staff
- Measure 23- Complete a detailed modelling assessment of the Swanley Area to quantify the local air quality

• Measure 24- Hire an Air Quality Promotions Officer

Sevenoaks District Council expects the following measures to be completed over the course of the next reporting year:

- Measure 1- Development of Local Plan Policy and guidance to ensure developers take account of onsite and offsite air quality.
- Measure 8- Development of new walking and cycle routes
- Measure 15- Improving and developing the EV infrastructure within the district including the completion of a study identifying future EV infrastructure demand within the District.
- Measure 16- Installing EV charging points within all Council owned carparks

Sevenoaks District Council's priorities for the coming year are:

- To progress actions within the 2022 AQAP
- Align air quality work with the District Council's Climate Change Strategy whenever possible
- Identify additional resource for promotion of measures to reduce emissions of PM2.5 including targeted actions regarding domestic combustion and burning.

Sevenoaks District Council worked to implement these measures in partnership with the following stakeholders during 2022:

- Neighbouring local authorities
- Highways England
- Local businesses and fleet operators

The principal challenges and barriers to implementation that Sevenoaks District Council anticipates facing are constraints on funding available to execute some of the proposed measures. Some of these measures set out may not be viable at this time, however due to the amount of measures set out it is hoped that some of these may become more viable in due course.

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

Measure 2 - Junction improvements at Bat & Ball Junction (A25/ A225 Junction) Progress on this measure is dependent on funding associated with a proposed

- nearby local development and delivery is subject to appropriate consents being granted.
- Measure 6 Bike rental schemes The Council continues to undertake feasibility studies but at present such a scheme appears not to be commercially viable within the Sevenoaks District.
- Measure 14 Transitioning the Council's fleet to low emission vehicles- Substantial progress has been made but transition is subject to financial constraints and procurement difficulties (i.e. replacement of the animal welfare vehicle with an EV alternative has taken 8 months).

Sevenoaks District Council anticipates that the measures stated above and in Table 2.2 will help maintain compliance in all AQMAs across the district.

	Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
	4	Road/ Junction improvements along A225 Sevenoaks High Street	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	SDC/ KCC/ STC	CIL / KCC / S106 Funding	NO	Not Funded	Medium to high	Planning	NO <sub>2</sub> , To be confirmed by further assessment once appropriate scheme is determined by partners.	Reduction in NO <sub>2</sub> concentrations (amount to be determined by scenario testing once suitable scheme is identified)/ Reduced congestion and journey times.	A Sevenoaks Town wide 20mph speed limit is proposed. A revised scheme was put before Sevenoaks Joint Transport Board in March 2023. It was recommended to KCC that the scheme proceed to an informal consultation with due consideration to the emerging LCWIP for the revised 20mph speed limit area in Sevenoaks Town and pedestrian crossing on the A225.	There is no KCC funding currently identified to progress these proposals. Full funding is required to cover further detailed design work and eventual construction.
Page 107	5	Road improvements along the A25 in Seal, and the A25 in Brasted	Traffic Management	UTC, Congestion management, traffic reduction	2022	2030	SDC/ KCC/ STC/ SPC/ WTC/ BPC	CIL / KCC / S106 Funding	NO	Not Funded	Medium to high	Planning	NO <sub>2</sub> , To be confirmed by further assessment once appropriate scheme is determined by partners.	Reduction in NO <sub>2</sub> concentrations (amount to be determined by scenario testing once suitable scheme is identified)/ Reduced congestion and journey times.	An Initial Baseline Transport Assessment was completed in August 2022. It aims to understand the baseline data and identify potential transport challenges and opportunities that could help inform future decision making.	The Local Plan will consider the impact of development on these junctions and potential improvements. Evidence base documents are being updated to support the Local Plan. Cost of works likely to be significant and to cause significant disruption during implementation phase. Funding not secured.
	6	Bike rental schemes	Promoting Travel Alternatives	Promotion of cycling	2022	Ongoing	SDC	CIL / Grant/ Commercial Income	NO	Not Funded	Medium	Planning	NO <sub>2</sub> , Small impact upon NO <sub>2</sub> concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Number of bikes available and rentals.	Draft feasibility for e- bikes hire for Sevenoaks Urban Area.	Cycling infrastructure identified as significant barrier to bike hire schemes.
	7	Promotion of active travel schemes	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2022	Ongoing	SDC/ KCC	Internal/ Existing	NO	Funded	Low	Implementation	NO <sub>2</sub> , Measure is more an awareness raising tool to encourage uptake and use of existing schemes.	Movement Strategy to be adopted Spring 2022. Recruitment of an Air Quality Promotions Officer.	Movement strategy adopted in April 2022.	Promotion of measures to wider audience using dedicated AQPO Resource. Focus on replacing private vehicle movements (38.1% NO2 Emissions) with sustainable alternatives.

Page 108

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
12	Educational campaigns for schools	Public Information	Other	2022	2027	SDC	Internal/ Existing	YES	Funded	Low	Implementation	NO <sub>2</sub> . Measure to increase public awareness.	Number of campaigns.	Schools have engaged with presentations and resources offered so far.  Idling campaign was started in 2022. Children across district designed posters for idling banners. Currently finalising designs of posters/banners internally and will shortly be sending these out to schools.	School engagement has been difficult to establish. Phase one of design has been implemented. Phase two will begin Summer 2023 for idling project
13	Collaboration with bus operators to introduce ultra-low emission vehicles into the fleets	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	2022	2027	SDC/ KCC/ Private Operators	Internal/ Existing + CIL/ Grant as necessary	NO	Partially Funded	High	Planning	NO <sub>2</sub> . Value to be confirmed by scenario testing.	Fleet Composition (% using LEV).	Initial discussions with KCC following the national bus strategy. Proposal for scenario testing being developed.	Working with KCC to consider how we can work together to bring forward low Emission schemes. Cost likely to be significant for bus operators. SDC unlikely to be able to fund initiatives without CIL/ developer contributions or Grants. AQPO to promote benefits to bus operators of sustainable Technologies. Reduce emissions of Busses 4.7% within AQMAs
14	Transitioning the Council's fleet to low emission vehicles	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2021	2030	SDC	Internal	NO	Funded	High	Implementation	NO <sub>2</sub> . Scenario Testing to be undertaken to assess the impact of the measure on NO <sub>2</sub> depending on fleet composition.	Change in fleet composition to less polluting vehicles.	Fleet composition considered by SDC Low Emission and Electric Vehicle Strategy.	A 5 year Vehicle Replacement Plan was approved by members on 10th November 2022, Cabinet Minute 57. Reduce of HGVs 4.9% within AQMAs.
15	Improving and developing the EV infrastructure within the district	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2030	SDC/ KCC	Internal/ Existing to initiate study of probable EV Charging Locations. External funding to be identified for installation/ working with district partners.	NO	Partially Funded	Medium / Very High	Implementation	NO <sub>2</sub> . Small impact upon NO <sub>2</sub> concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Undertake a study to identify suitable locations (demand and infrastructure) for the installation of EV Charging Points. Number of EV charging points.	EV Technical Study began in 2022 and funded from appropriate s106 money (Already held by SDC). Due to be completed Autumn 2023.	Part of the recently published Low Emission and Electric Vehicle Strategy. Reduce % NO2 emissions from private vehicles (38%).
16	Installing EV charging points within all Council owned carparks	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2027	SDC/ KCC	Internal	NO	Funded	High	Completed	NO <sub>2</sub> . Small impact upon NO <sub>2</sub> concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Number of EV charging points within District Area.	Operational.	UKPN and grid reinforcement.
17	Improving public transport infrastructure	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	2022	2027	SDC/ KCC	External	NO	Not Funded	Very High	Planning	NO <sub>2</sub> . Small impact upon NO <sub>2</sub> concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Increased use of Public transport. Additional routes public transport facilities.	Movement Strategy adopted April 2022. Draft policies in the Regulation 18 Local Plan encourage strengthening transport interchanges.	Additional routes for public transport are unlikely to be viable unless commercially sustainable. Numerous bus route services, particularly school routes, have been withdrawn Summer/Autumn 2022.

110

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
25	To provide information and education in respect of personal emissions and how they may be reduced	Public Information	Other	2022	2027	SDC	Integral/ Existing Budgets	NO	Funded	Low	Implementation	NO <sub>2</sub> & PM <sub>2.5</sub>	Number of educational campaigns.	Two articles within district wide magazine on air quality, reducing emissions and vehicle idling. Publicising events such as clean air day and Kent air week. Eco fairs attended in the district, to promote how to improve emissions.	Action to form part of the AQPO duties And role. Initiatives may include reducing emissions from home heating etc.
26	To work with businesses to identify ways to reduce emissions from their activities	Public Information	Other	2022	2027	SDC	Integral/ Existing Budgets	NO	Funded	Low	Planning	N/A	Number of educational campaigns.	Discussions held with businesses as part of business forums run by NetZero Team.	Action to form part of the AQPO duties And role. Part of the Net Zero 2030 work. Promote Laccase funding and training to businesses in SDC which will enable businesses in SDC to move to lower carbon and low pollution activities.
27	To discourage the use of bonfires as a means of waste disposal.	Public Information	Other	2022	Ongoing	SDC	Integral/ Existing Budgets	NO	Funded	Low	Implementation	PM <sub>10</sub> & PM <sub>2.5</sub>	Number of interventions to provide advice and information to residents. Total number of enforcement actions undertaken.	Forms part of current statutory duties. Advice provided via social media.	Environmental Health have an enforcement role for bonfires that constitute a statutory nuisance And offences under s2 Clean Air Act.
28	To reduce emissions from activities with Environmental Permits	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	2022	Ongoing	SDC	Integral/ Existing Budgets	NO	Funded	Low	Implementation	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	Increased compliance with Environmental Permitting Regulations. Number of premises identified as 'low risk; (%).	All relevant activities hold relevant permits. Worked to permit a number of businesses identified as not holding correct permits.	EH regulate activities that pollute to air. Risk based regime.
29	To work with Highways England to identify measures which will reduce the need for HGV and LGV vehicles to use the A25	Traffic Management	UTC, Congestion management, traffic reduction	2024	Ongoing	SDC/ KCC/ Highways England	External	NO	Funded	Very High	Planning	NO <sub>2</sub> ,PM <sub>10</sub> , PM <sub>2.5</sub>	Identification of schemes that may have AQ benefit along the A25 (AQMA 13).	Previous discussions held.	Focus on reducing emissions from LGV/ HGV along A25.
30	To review the effectiveness of introducing 20mph zones within areas where AQS objective levels are highest (Sevenoaks High Street, A25 Seal, Bat & Ball Junction, Riverhead, Westerham)	Traffic Management	Reduction of speed limits, 20mph zones	2023	2025	SDC/ KCC	Internal	NO	Funded	Low	Planning	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	Undertake scenario testing to assess impact of measure.	Parish and Town Councils independently Seeking 20mph zones.	Focus on reducing emissions of all sources within AQMAs.
31	To work with business operators to increase the % composition of LEV within private fleets	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2027	SDC/ KCC	Internal	NO	Funded	Low	Planning	NO <sub>2</sub>	Number of businesses approached by AQPO. Update of LEVs by businesses	Work aligns with EV Infrastructure study which forms an evidence base	Reduction of emissions from HGV and LGV within AQMA 13. Promotion of the Kent REVs scheme and the buying of the Kent REVs electric vehicles.

Measure No.	Measure	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
32	To increase the number of Taxi operators using LEV and EV vehicles	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2027	SDC	Internal/ External	NO	Not Funded	Low	Planning	$NO_2$	Number of vehicles within the taxi fleet changing to LEV/EV alternatives.	Report being taken to next Licensing Committee for agreement to consult on extension of EV and hybrid vehicles to 15 year licence rather than 10 as possible incentive.	Kent wide survey carried out directed to all licensed drivers for response on moving over to EV's. Survey highlighted barriers: High cost of vehicles Lack of infrastructure Unable to fit home charger as no drive Faulty public chargepoints Public charging takes too long Cost of insurance Cannot do long impromptu trips Need to take time out working day to recharge.

### 2.3 Progress and Impact of Measures to address Air Quality in Sevenoaks District Council

As detailed in Policy Guidance LAQM.PG22 (Chapter 8), local authorities are expected to work towards reducing emissions and/or concentrations of  $PM_{2.5}$  (particulate matter with an aerodynamic diameter of  $2.5\mu m$  or less). There is clear evidence that  $PM_{2.5}$  has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

No monitoring of  $PM_{2.5}$  is currently conducted within the Sevenoaks District, however the two automatic monitoring site located at Greatness and Bat & Ball monitor  $PM_{10}$  concentrations.

In addition to this, the current Defra 2022 <u>background maps</u> (based on 2018 monitored concentrations) for Sevenoaks District Council estimates that all background concentrations of PM<sub>2.5</sub> are well below the indicative annual mean limit value for PM<sub>2.5</sub>.

The <u>Public Health Outcomes Framework</u> data tool compiled by Public Health England and The Department of Health has a number of public health indicators that are used to focus public health action, identify areas of health inequality and concern and monitor the differences in health impacts across regions in the UK. This framework includes an indicator "D01- Fraction of Mortality Attributable to Particulate Air Pollution" which is calculated using background annual average PM<sub>2.5</sub> concentrations, modelled at a 1km<sup>2</sup> resolution based on measured concentrations from the AURN. As such, this quantifies the mortality burden of PM<sub>2.5</sub> within England on a county and local authority scale. The 2021 fraction of mortality attributable to PM<sub>2.5</sub> pollution across England is 5.5%, and the fraction within the South East region is lower than this at 5.4%. The fraction reported within Sevenoaks specifically is lower than the national and regional average, at 5.2%.

Measures to improve air quality often have shared wins with other public health indicators, a good example being the encouragement of active travel and commuting leading to increased physical activity and increased wellbeing. A number of the measures set out in the new AQAP aim to reduce vehicular travel frequency and time via means such as encouraging active travel and reducing single occupancy journeys. In addition, some of the measures are specifically targeted at reducing PM<sub>2.5</sub> concentrations, such as controlling the use of bonfires as a means of waste disposal and reducing emissions from activities with

#### Agenda Item 11

environmental permits. These are all expected to have a positive impact on reducing  $PM_{2.5}$  concentrations.

Sevenoaks District Council currently has a <u>smoke control area</u> that encompasses the Swanley urban area and land to the west of Crockenhill. Within this area, emissions of smoke from a chimney are forbidden unless authorised fuels or exempt appliances are being used.

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

This section sets out the monitoring undertaken within 2022 by Sevenoaks District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2018 and 2022 to allow monitoring trends to be identified and discussed.

#### 3.1 Summary of Monitoring Undertaken

#### 3.1.1 Automatic Monitoring Sites

Sevenoaks District Council undertook automatic (continuous) monitoring at 2 sites during 2022. Table A.1 in Appendix A shows the details of the automatic monitoring sites. The <a href="LAQN website">LAQN website</a> presents automatic monitoring results for Sevenoaks District Council with automatic monitoring results also available through the <a href="UK-Air website">UK-Air website</a>.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

#### 3.1.2 Non-Automatic Monitoring Sites

Sevenoaks District Council undertook non- automatic (i.e. passive) monitoring of  $NO_2$  at 53 sites during 2022, including two triplicate co-locations. Table A.2 in Appendix A presents the details of the non-automatic sites. There has been no changes to the non-automatic monitoring network in 2022.

Maps showing the location of the monitoring sites are provided in Appendix D. 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 C.

#### 3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

#### 3.2.1 Nitrogen Dioxide (NO2)

Table A.3 and Table A.4 in Appendix a compare the ratified and adjusted monitored  $NO_2$  annual mean concentrations for the past five years with the air quality objective of  $40\mu g/m^3$ . Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2022 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Table A.5 in Appendix A compares the ratified continuous monitored  $NO_2$  hourly mean concentrations for the past five years with the air quality objective of  $200\mu g/m^3$ , not to be exceeded more than 18 times per year.

No exceedances of the annual mean NO<sub>2</sub> Air Quality Strategy (AQS) objective ( $40\mu g/m^3$ ) have been reported at any monitoring location operated by Sevenoaks District Council in 2022. The maximum reported concentration is  $35.2\mu g/m^3$ , within 10% of the AQS objective ( $36\mu g/m^3$ ), reported at DT42 located on London Road, Riverhead next to the A25 and A224 which is not located at a site of relevant exposure. No other site reported an annual mean concentration > $36\mu g/m^3$ .

Annual mean  $NO_2$  concentrations have shown a trending decrease at the majority of monitoring locations from 2021 to 2022.

Annual mean NO<sub>2</sub> concentrations at all monitoring sites are below the AQS objective of 40 ug/m<sup>3</sup>. This is also the case for NO<sub>2</sub> hourly, PM<sub>10</sub> and PM<sub>10</sub> daily AQS objectives. There continues to be an overall downward trend in annual mean NO<sub>2</sub> concentrations across all monitoring sites, with the exception of 4 tubes within AQMA 10. There are 4 tubes (DT28, DT51, DT81 and DT90) in AQMA 10, located within Sevenoaks which have increased however the overall trend shows a light increase in NO<sub>2</sub> concentrations over the previous year from 21.5 to 21.8 up/m<sup>3</sup>. Although there is no clear reason as to why NO<sub>2</sub> may be

increasing in these particular areas, Sevenoaks District Council will continue to monitor these locations closely. There has been a rebound in annual mean NO<sub>2</sub> concentrations following the end of Covid-19 pandemic restrictions, however whilst emissions are higher than those witnessed during the monitoring years impacted by imposed lockdowns, they are broadly in line with the overall downwards 5-10 year trend. The highest monitored concentration within the district was measured at DT42, which is located at London Road, Riverhead along the A25. This maximum concentration (35.2ug/m³) was still below the national objective level.

In 2021 the annual mean NO<sub>2</sub> concentrations reported for monitoring locations DT25 and DT42 was at the greatest it had been at these locations over the past 5 years (2017-2021) with a  $14.0 \mu g/m^3$  increase reported at site DT42. In 2022 these sites have both shown a decrease, although they are still higher than the results between 2017 and 2020 but still remain below the AQS objective.

#### 3.2.2 Particulate Matter (PM10)

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored  $PM_{10}$  annual mean concentrations for the past five years with the air quality objective of  $40\mu g/m^3$ .

Table A.7 in Appendix A compares the ratified continuous monitored  $PM_{10}$  daily mean concentrations for the past five years with the air quality objective of  $50\mu g/m^3$ , not to be exceeded more than 35 times per year.

Both continuous monitoring locations reported annual mean  $PM_{10}$  concentrations below the annual mean objective of  $40\mu g/m^3$ . Greatness (CM1) reported a concentration of  $16.0\mu g/m^3$ , whereas Bat & Ball (CM2) reported a concentration of  $18.0\mu g/m^3$ . There is little change to what was reported in 2021 (- $0.2\mu g/m^3$  at CM2), and longer term trends the concentrations at both sites appear to be relatively stable.

With respect to the 24-hour objective, where there should be no more than 35 24-hour averages which exceed  $50\mu g/m^3$ , CM1 reported1 period and CM2 reported 3 periods where this was the case. The maximum number reported over the past 5 years was 9 at CM1 in 2019.

#### Agenda Item 11

#### 3.2.3 O-zone (O3)

The continuous monitor CM1 also monitors and reports concentrations of ozone. The AQS objective for this is that the 8-hour running mean should not exceed  $100\mu g/m^3$  more than 10 times a year. CM1 reported 32 hour mean periods where this is the case. It should be noted that ozone is a difficult pollutant to control, due to its natural formation in absence of  $NO_x$  within the atmosphere.

## Page 119

# Agenda Item 11

#### **Appendix A: Monitoring Results**

#### **Table A.1 - Details of Automatic Monitoring Sites**

	Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
<u>.</u>	CM1	Greatness	Urban Background	553603	156774	NOx, NO, NO <sub>2</sub> , PM <sub>10</sub> , O <sub>3</sub>	NO	Chemiluminescent / Teom	Υ	46m	1.8
	CM2	Bat & Ball	Roadside	553044	156690	NOx, NO, NO <sub>2</sub> , PM <sub>10</sub>	YES AQMA13	Chemiluminescent / Teom	N - (30m)	8m	1.8

#### Notes:

- (1) Om if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).
- (2) N/A if not applicable

**Table A.2 – Details of Non-Automatic Monitoring Sites** 

	Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which 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?	Tube Height (m)
	DT02	Sevenoaks, High St South 1	Roadside	553157	154416	NO2	Y - AQMA No.10	0.0	2.0	No	2.0
_	DT03	Sevenoaks, Garvock Drive	Urban Background	552465	154165	NO2	N	0.0	2.0	No	2.0
2	DT05	Riverhead, Riverhead 2	Roadside	551414	156196	NO2	Y - AQMA No.13	0.0	2.5	No	2.5
200	DT06	Riverhead, Riverhead 3	Kerbside	551442	156159	NO2	Y - AQMA No.13	2.0	2.5	No	2.5
)	DT07	Seal, High St East 1	Roadside	555096	156692	NO2	Y - AQMA No.13	3.0	2.5	No	2.5
	DT08	Seal, High St West 1	Roadside	554991	156728	NO2	Y - AQMA No.13	0.0	2.0	No	2.0
	DT12	Brasted, Station Rd	Roadside	546813	155850	NO2	Y - AQMA No.2	0.0	2.0	No	2.0
	DT13	Swanley, London Rd /Wested Lane	Kerbside	552510	167704	NO2	Y - AQMA No.2	3.0	2.5	No	2.5
	DT14	Swanley, Wadard Terrace (Button St)	Roadside	553107	167868	NO2	Y - AQMA No.2	6.0	2.5	No	2.5
	DT23	Sevenoaks, Bat & Ball 1	Roadside	553050	156625	NO2	Y - AQMA No.13	4.0	2.5	No	2.5
	DT24	Westerham, High St	Roadside	544418	153918	NO2	Y - AQMA No.13	10.0	2.5	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which 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?	Tube Height (m)
DT25	Westerham, Vicarage Hill	Roadside	544638	154041	NO2	Y - AQMA No.13	20.0	2.5	No	2.5
DT26	Farningham, Farningham Hill	Roadside	554218	167252	NO2	N	4.0	2.5	No	2.5
DT27	Sevenoaks, High St South 2	Roadside	553138	154260	NO2	Y - AQMA No.10	0.0	2.5	No	2.5
DT28	Sevenoaks, High St North 2	Roadside	553044	154889	NO2	Y - AQMA No.10	7.0	2.5	No	2.5
DT29	Sevenoaks, High St North 3	Roadside	553073	155030	NO2	Y - AQMA No.10	1.5	2.5	No	2.5
DT30	Sevenoaks, Bat & Ball 2	Roadside	553019	156692	NO2	Y - AQMA No.13	0.0	2.5	No	2.5
DT31	Sevenoaks, Bat & Ball 3	Kerbside	553165	156686	NO2	Y - AQMA No.13	1.5	2.5	No	2.5
DT32	Sevenoaks, Bat & Ball 4	Roadside	553147	156563	NO2	Y - AQMA No.13	6.0	2.5	No	2.5
DT33	Seal, High St East 2	Roadside	555069	156709	NO2	Y - AQMA No.13	2.0	2.5	No	2.5
DT34	16 Main Road, Sundridge Dunbrik	Roadside	544802	154895	NO2	Y - AQMA No.2	36.0	2.5	No	2.5
DT35	Sevenoaks, Seal Hollow Rd	Roadside	554092	156797	NO2	Y - AQMA No.13	0.0	2.5	No	2.5
DT36	Westerham, Market Sq	Roadside	544598	154021	NO2	Y - AQMA No.13	3.0	2.5	No	2.5

	Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
	DT39	Swanley, Bartholomew Way2, opposite ASDA delivery	Roadside	551492	168695	NO2	Y - AQMA No.8	0.0	2.0	No	2.0
	DT40	Swanley, London Rd 1	Roadside	551579	168507	NO2	Y - AQMA No.8	0.0	0.0	No	2.5
	DT41	Swanley, London Rd 2	Roadside	552175	168162	NO2	Y - AQMA No.8	18.0	2.5	No	2.5
Pa	DT42	Riverhead, London Rd	Roadside	551383	156064	NO2	Y - AQMA No.13	2.5	2.5	No	2.5
Page 122	DT43	Dunton Green, London Rd	Roadside	551315	156381	NO2	Y - AQMA No.13	8.0	2.5	No	2.5
22	DT48	Sevenoaks, 73 London Rd	Roadside	552867	154858	NO2	Y - AQMA No.10	8.0	2.5	No	2.5
	DT49	Sevenoaks, 20 London Rd	Roadside	553018	154655	NO2	Y - AQMA No.10	0.0	2.0	No	2.0
	DT51	Sevenoaks, 130 London Rd	Roadside	552761	155050	NO2	Y - AQMA No.10	1.5	2.5	No	2.5
	DT52	Sevenoaks, 142 London Rd	Roadside	552504	155271	NO2	N	42.0	2.0	No	2.0
	DT54	Dunton Green, 57 London Rd	Roadside	551224	156975	NO2	Y - AQMA No.13	0.0	2.5	No	2.5
	DT71	Sundridge, 204 Main Rd	Roadside	548239	155355	NO2	Y - AQMA No.13	0.0	2.5	No	2.5

	Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which 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?	Tube Height (m)
	DT74	Bessels Green, (A25) Westerham Rd	Roadside	550768	155584	NO2	Y - AQMA No.13	3.0	2.5	No	2.5
	DT76	Worships Hill, Witches Lane	Roadside	551019	155714	NO2	Y - AQMA No.13	3.0	2.5	No	2.5
	DT77	Sevenoaks, London Rd/Montreal Av	Kerbside	551528	155967	NO2	Y - AQMA No.13	3.0	2.5	No	2.5
ָּד <sup>ַ</sup>	DT81	Swanley, Farningham Hill Rd	Urban Background	553419	167614	NO2	Y - AQMA No.1	14.0	2.5	No	2.5
	DT83	Swanley,Birchwood Rd, Jessamine Terrace	Roadside	550298	169627	NO2	Y - AQMA No.14	15.0	2.5	No	2.5
)	DT84	Brasted, West End	Roadside	546803	154999	NO2	Y - AQMA No.13	13.0	2.5	No	2.5
	DT85	Brasted, Chart Lane	Kerbside	547094	155099	NO2	Y - AQMA No.13	2.0	2.5	No	2.5
	DT86	Bessels Green,(A25) 59 Westerham Rd	Roadside	550306	155595	NO2	Y - AQMA No.13	6.0	2.5	No	2.5
	DT87	Sevenoaks, Bradbourne Vale Rd South	Roadside	551639	156334	NO2	Y - AQMA No.13	17.0	2.5	No	2.5
	DT88	Sevenoaks, Bradbourne Vale Rd North	Roadside	552950	156578	NO2	Y - AQMA No.13	0.5	2.5	No	2.5

	Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which 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?	Tube Height (m)
	DT90	Sevenoaks St Johns, A4 St Johns Hill	Roadside	553053	154708	NO2	Y - AQMA No.10	10.0	2.5	No	2.5
	DT93	Swanley, Birchwood Rd, end of Pucknells Close	Roadside	550284	169743	NO2	Ν	10.0	2.0	No	2.0
•	DT94	Swanley, Birchwood Rd, Beefeater Restaurant	Roadside	550249	169573	NO2	Y - AQMA No.14	20.0	2.5	No	2.5
	DT95	Swanley, Birchwood Rd, London Rd opposite Malvern	Roadside	550351	169490	NO2	Y - AQMA No.14	0.0	2.0	No	2.0
	DT96	Sevenoaks STN 1	Roadside	552371	155346	NO2	Ν	1.8	2.5	No	2.5
•	DT97	Ellis Close	Urban Background	550555	168253	NO2	Y - AQMA No.4	35.0	14.0	No	2.5
	DT98	Dunton Green M26	Roadside	550962	157662	NO2	Y - AQMA No.3	16.0	2.0	No	2.5
•	BC01, BC02, BC03	Sevenoaks, Greatness 3	Urban Background	553607	156776	NO2	N	39.0	2.0	Yes	1.8
	BC04, BC05, BC06	Sevenoaks, Bat & Ball AQ Station	Roadside	553045	156690	NO2	Y - AQMA No.13	30.0	2.0	Yes	1.8

- (1) Om if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).
- (2) N/A if not applicable.

Table A.3 – Annual Mean NO2 Monitoring Results: Automatic Monitoring (μg/m3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%)	2018	2019	2020	2021	2022
CM1	553603	156774	Urban Background	99%	99%	15.00	14.00	12.00	11.60	12.00
CM2	553044	156690	Roadside	77%	77%	25.00	23.00	18.00	20.10	20.00

**☒** Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.

Reported concentrations are those at the location of the monitoring site (annualised, as required), i.e. prior to any fall-off with distance correction.

#### Notes:

The annual mean concentrations are presented as  $\mu g/m^3$ .

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

All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

- (1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
- (2) 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%).

Table A.4 – Annual Mean NO2 Monitoring Results: Non-Automatic Monitoring (μg/m3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022 (%) <sup>(2)</sup>	2018	2019	2020	2021	2022
DT02	553157	154416	Roadside	91.7	91.7	49.9	40.4	29.6	31.8	30.9
DT03	552465	154165	Urban Background	83.3	83.3	11.8	9.9	8.0	8.0	8.4
DT05	551414	156196	Roadside	83.3	83.3	39.3	34.4	30.3	30.6	29.8
DT06	551442	156159	Kerbside	91.7	91.7	41.7	34.8	27.3	30.0	29.2
DT07	555096	156692	Roadside	100	100	41.3	36.6	26.2	29.3	28.6
DT08	554991	156728	Roadside	100	100	28.3	23.7	19.2	20.3	18.4
DT12	546813	155850	Roadside	91.7	91.7	39.8	33.2	26.6	25.5	24.2
DT13	552510	167704	Kerbside	100	100	32.9	27.7	21.7	23.1	19.5
DT14	553107	167868	Roadside	100	100	27.6	25.2	20.9	20.7	18.7
DT23	553050	156625	Roadside	100	100	39.2	33.0	26.6	28.9	26.0
DT24	544418	153918	Roadside	100	100	35.8	28.2	23.0	24.9	22.3
DT25	544638	154041	Roadside	91.7	91.7	26.1	23.5	18.4	30.6	27.6
DT26	554218	167252	Roadside	100	100	42.7	34.8	29.6	28.9	28.3
DT27	553138	154260	Roadside	83.3	83.3	37.7	33.2	21.6	24.3	23.0
DT28	553044	154889	Roadside	91.7	91.7	36.8	31.5	23.5	23.6	25.2
DT29	553073	155030	Roadside	91.7	91.7	28.2	23.7	17.6	19.9	19.0
DT30	553019	156692	Roadside	100	100	35.1	30.8	24.2	25.4	24.3
DT31	553165	156686	Kerbside	100	100	51.1	43.6	35.0	36.3	32.6
DT32	553147	156563	Roadside	100	100	51.9	40.7	32.5	34.1	30.6
DT33	555069	156709	Roadside	91.7	91.7	40.5	34.6	26.3	29.8	26.8
DT34	544802	154895	Roadside	100	100	26.1	23.5	18.3	18.6	18.3
DT35	554092	156797	Roadside	83.3	83.3	33.7	30.0	24.3	26.5	24.5
DT36	544598	154021	Roadside	91.7	91.7	40.1	33.5	28.2	28.1	30.0
DT39	551492	168695	Roadside	100	100	36.4	34.8	28.1	29.4	26.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022 (%) <sup>(2)</sup>	2018	2019	2020	2021	2022
DT40	551579	168507	Roadside	91.7	91.7	45.6	37.5	28.4	34.1	32.4
DT41	552175	168162	Roadside	91.7	91.7	38.6	32.6	27.2	29.5	27.2
DT42	551383	156064	Roadside	100	100	34.5	27.4	23.6	37.5	35.2
DT43	551315	156381	Roadside	100	100	28.5	26.5	19.3	24.9	22.2
DT48	552867	154858	Roadside	91.7	91.7	23.9	20.0	13.6	15.9	14.7
DT49	553018	154655	Roadside	100	100	29.1	25.1	17.2	18.6	18.1
DT51	552761	155050	Roadside	100	100	39.0	30.2	22.3	18.1	20.7
DT52	552504	155271	Roadside	83.3	83.3	34.0	29.5	21.8	21.8	20.8
DT54	551224	156975	Roadside	91.7	91.7	32.7	28.8	24.8	24.1	23.5
DT71	548239	155355	Roadside	91.7	91.7	31.3	25.6	22.5	23.6	22.8
DT74	550768	155584	Roadside	100	100	35.9	30.7	22.2	25.5	21.9
DT76	551019	155714	Roadside	100	100	37.9	33.3	27.4	29.0	26.3
DT77	551528	155967	Kerbside	100	100	38.7	31.6	25.0	26.5	26.4
DT81	553419	167614	Urban Background	75	75	28.6	25.7	20.7	19.6	21.4
DT83	550298	169627	Roadside	91.7	91.7	46.7	42.4	33.3	33.1	31.7
DT84	546803	154999	Roadside	83.3	83.3	32.5	26.5	23.0	25.1	21.8
DT85	547094	155099	Kerbside	100	100	43.7	35.7	31.5	30.1	28.0
DT86	550306	155595	Roadside	91.7	91.7	34.7	30.7	21.1	24.3	23.3
DT87	551639	156334	Roadside	100	100	47.0	42.3	35.7	37.5	34.2
DT88	552950	156578	Roadside	100	100	30.3	28.1	20.7	21.5	20.2
DT90	553053	154708	Roadside	91.7	91.7	34.5	29.5	21.1	21.4	23.0
DT93	550284	169743	Roadside	100	100	28.8	25.9	19.5	20.2	17.4
DT94	550249	169573	Roadside	91.7	91.7	33.8	28.6	22.8	22.7	21.4
DT95	550351	169490	Roadside	100	100	33.0	30.2	25.0	25.3	23.3
DT96	552371	155346	Roadside	100	100	34.5	30.5	21.2	22.4	22.4
DT97	550555	168253	Urban Background	100	100			17.7	16.9	15.1
DT98	550962	157662	Roadside	83.3	83.3			22.8	24.7	21.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022 (%) <sup>(2)</sup>	2018	2019	2020	2021	2022
BC01			Urban Background	100	100	13.9	13.0	10.8	11.0	9.8
BC02			Roadside	100	100	26.9	24.9	19.6	20.3	19.6

- ☑ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.
- ☑ Diffusion tube data has been bias adjusted.
- Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.

The annual mean concentrations are presented as  $\mu g/m^3$ .

Exceedances of the  $NO_2$  annual mean objective of  $40\mu g/m^3$  are shown in **bold**.

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

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

- (1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
- (2) 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%).

Figure A.1 - Trends in Annual Mean NO2 Concentrations: AQMA No. 8

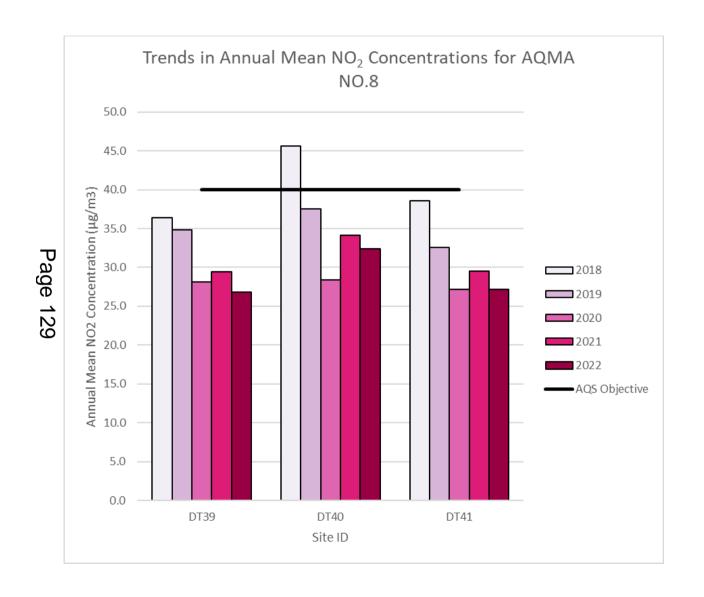


Figure A.2 - Trends in Annual Mean NO2 Concentrations: AQMA No. 10

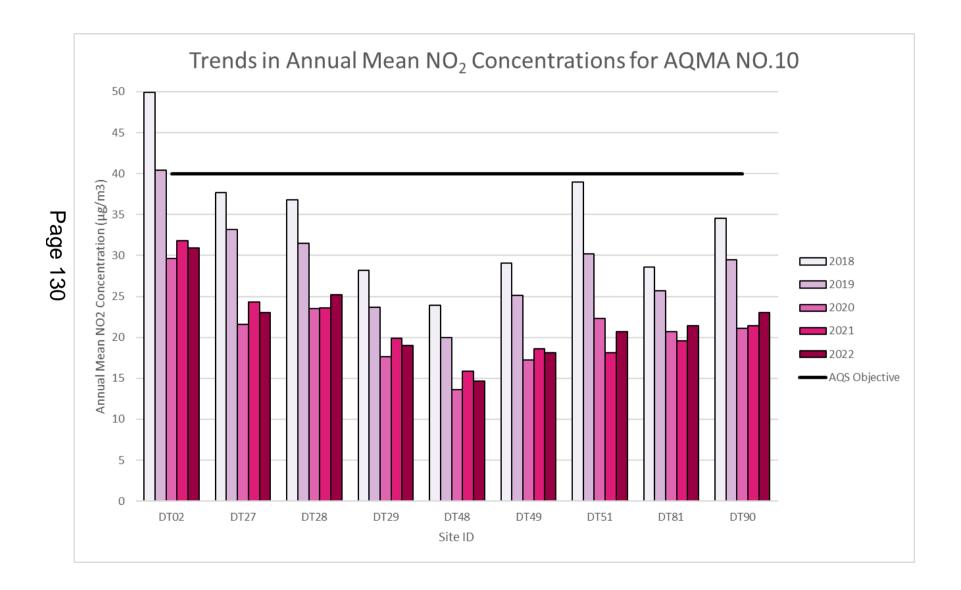


Figure A.3 - Trends in Annual Mean NO2 Concentrations: AQMA No. 13

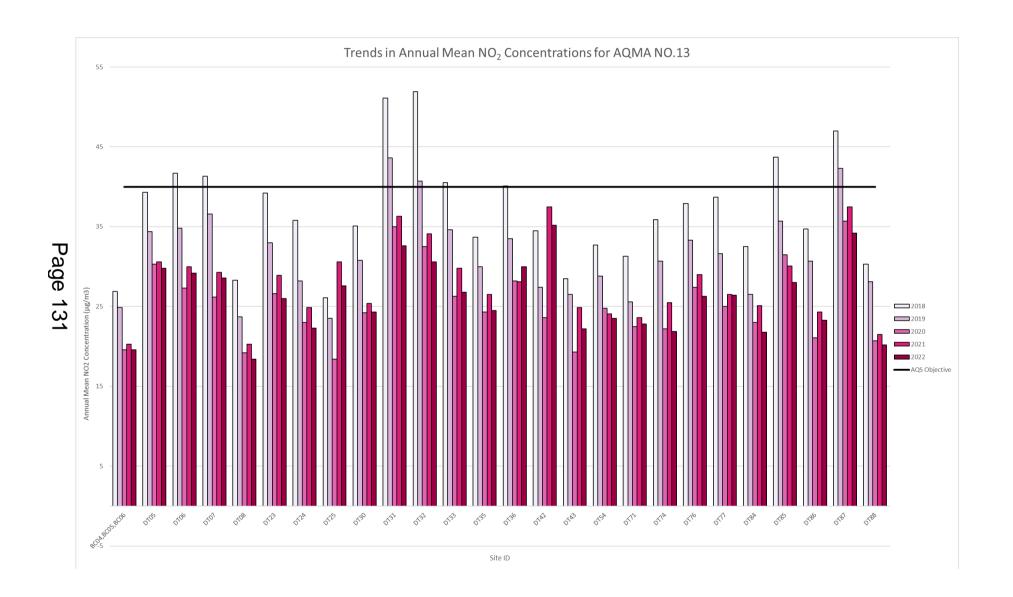


Figure A.4 - Trends in Annual Mean NO2 Concentrations: AQMA No. 14

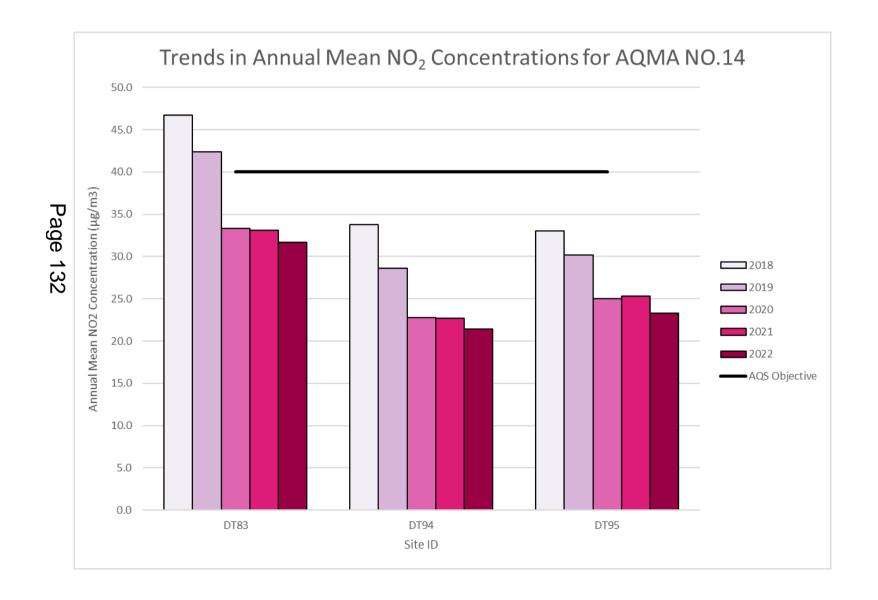


Table A.5 – 1-Hour Mean NO2 Monitoring Results, Number of 1-Hour Means > 200μg/m3

Site ID	Ref	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2018	2019	2020	2021	2022
CM1	553603	156774	Urban Background	99%	99%	0	0	0	0	0
CM2	553044	156690	Roadside	77%	77%	0	0	0	0	0

Results are presented as the number of 1-hour periods where concentrations greater than  $200 \mu g/m^3$  have been recorded.

Exceedances of the  $NO_2$  1-hour mean objective (200 $\mu$ g/m<sup>3</sup> not to be exceeded more than 18 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

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

(2) 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%).

#### Table A.6 - Annual Mean PM10 Monitoring Results (μg/m3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022 (%) <sup>(2)</sup>	2018	2019	2020	2021	2022
CM1	553603	156774	Urban Background	89%	89%	19.00	20.00	17.00	17.00	17.00
CM2	553044	156690	Roadside	86%	86%	21.00	20.00	18.00	18.20	18.00

☑ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.

#### Notes:

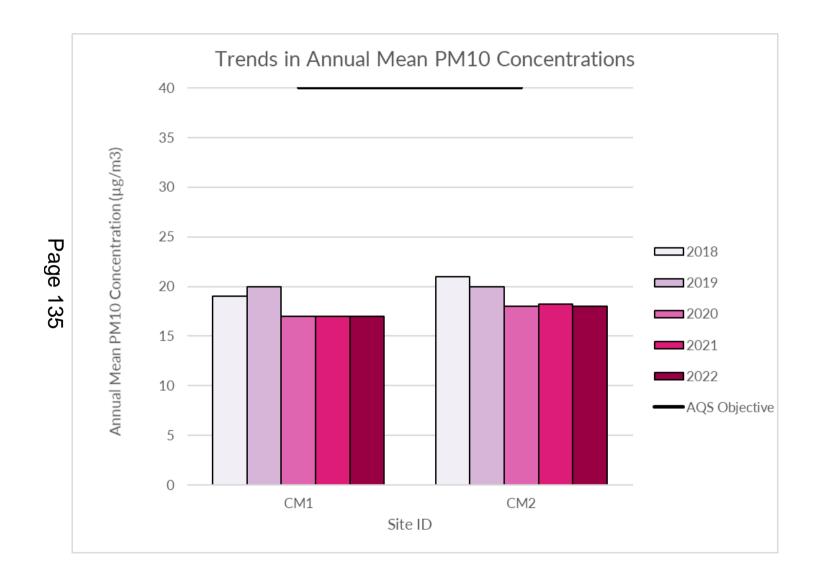
The annual mean concentrations are presented as  $\mu g/m^3$ .

Exceedances of the PM<sub>10</sub> annual mean objective of  $40\mu g/m^3$  are shown in **bold**.

All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

- (1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
- (2) 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%).

Figure A.5 - Trends in Annual Mean PM10 Concentrations



#### Table A.7 – 24-Hour Mean PM10 Monitoring Results, Number of PM10 24-Hour Means > 50μg/m3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2022 (%) <sup>(2)</sup>	2018	2019	2020	2021	2022
CM1	553603	156774	Urban Background	89%	89%	1	9	3	2	2
CM2	553044	156690	Roadside	86%	86%	8	8	4	2	3

#### Notes:

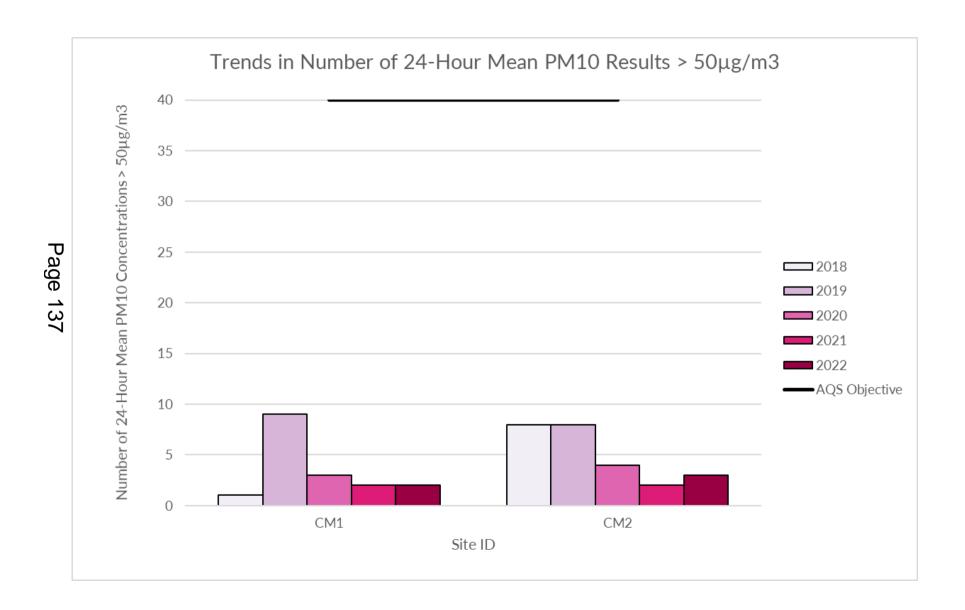
Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m³ have been recorded.

Exceedances of the PM $_{10}$  24-hour mean objective (50 $\mu$ g/m $^3$  not to be exceeded more than 35 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets.

- (1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
- (2) 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%).

Figure A.6 – Trends in Number of 24-Hour Mean PM10 Results > 50μg/m3



#### **Appendix B: Full Monthly Diffusion Tube Results for 2022**

Table B.1 – NO2 2022 Diffusion Tube Results (μg/m3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT02	553157	154416	63.3	37.4	51.6	34.3	33.2	-	34.5	25.0	36.1	39.9	43.7	47.7	40.6	30.9	-	
DT03	552465	154165	17.0	-	12.9	9.7	7.3	6.0	7.4	5.2	21.5	-	9.3	14.5	11.1	8.4	-	
DT05	551414	156196	53.6	-	45.4	38.0	-	35.9	37.1	34.5	32.9	37.2	35.9	41.6	39.2	29.8	-	
DT06	551442	156159	40.9	-	53.5	42.7	33.6	34.7	41.2	25.7	36.6	35.9	37.7	40.8	38.5	29.2	-	
DT07	555096	156692	52.8	37.8	46.2	36.3	34.0	32.6	36.0	23.0	33.8	38.5	41.6	38.6	37.6	28.6	-	
DT08	554991	156728	35.0	25.5	29.3	23.8	20.6	17.1	23.0	19.8	23.8	20.5	24.6	27.9	24.2	18.4	-	
DT12	546813	155850	40.5	32.9	34.7	37.3	32.0	22.5	27.8	28.7	30.2	-	27.8	36.0	31.9	24.2	-	
DT13	552510	167704	42.4	2.9	38.3	28.9	21.2	19.7	25.3	20.9	27.5	24.9	22.1	33.7	25.7	19.5	-	
DT14	553107	167868	38.6	29.2	26.9	18.9	20.8	18.5	18.8	18.5	21.8	28.0	30.3	25.2	24.6	18.7	-	
DT23	553050	156625	50.7	33.0	44.0	34.9	30.6	26.5	33.0	23.9	32.7	30.6	32.9	37.5	34.2	26.0	-	
DT24	544418	153918	40.0	28.0	42.1	34.1	25.5	21.8	29.9	13.6	28.0	27.8	27.9	33.7	29.4	22.3	-	
DT25	544638	154041	52.2	33.2	53.7	-	30.4	29.2	36.0	28.7	33.8	34.4	33.0	34.8	36.3	27.6	-	
DT26	554218	167252	51.7	34.4	45.7	40.8	32.7	30.0	34.4	29.1	36.4	37.9	35.5	38.3	37.2	28.3	-	
DT27	553138	154260	45.6	-	31.0	27.5	26.2	-	26.8	23.2	29.4	27.5	29.7	35.3	30.2	23.0	-	
DT28	553044	154889	47.7	31.7	35.2	28.6	29.0	-	33.7	23.6	34.0	28.5	30.5	42.3	33.2	25.2	-	
DT29	553073	155030	36.5	-	32.4	21.4	21.0	19.6	21.6	16.4	24.6	23.3	25.2	33.7	25.1	19.0	-	
DT30	553019	156692	39.0	32.2	39.7	30.9	28.1	27.5	30.7	27.9	30.3	30.1	30.3	36.2	31.9	24.3	-	
DT31	553165	156686	47.8	43.2	46.2	40.0	42.0	32.1	44.0	36.3	44.0	43.7	44.0	50.7	42.8	32.6	33.4	
DT32	553147	156563	51.5	36.4	54.7	43.5	35.0	28.2	40.8	34.9	39.9	39.4	42.8	35.7	40.2	30.6	-	
DT33	555069	156709	46.7	-	41.3	40.3	29.7	29.9	34.0	27.5	36.8	31.0	33.3	37.2	35.2	26.8	-	
DT34	544802	154895	36.3	22.2	31.2	26.6	19.2	18.2	23.2	17.8	22.9	19.9	22.3	28.9	24.1	18.3	-	
DT35	554092	156797	26.5	31.7	35.8	-	-	31.7	35.5	26.7	32.3	36.1	31.3	34.9	32.3	24.5	-	
DT36	544598	154021	53.5	45.4	40.7	35.6	40.0	37.2	38.5	27.8	34.5	-	44.2	36.5	39.4	30.0	-	
DT39	551492	168695	52.7	34.6	43.6	33.6	30.6	27.9	33.3	29.6	34.0	33.2	35.2	35.2	35.3	26.8	-	
DT40	551579	168507	54.9	35.7	62.2	47.1	34.8	33.1	-	36.7	45.1	39.3	37.1	43.2	42.7	32.4	-	
DT41	552175	168162	55.2	-	37.2	33.6	28.7	27.5	30.8	25.2	33.6	39.8	38.6	42.9	35.7	27.2	-	

	DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
	DT42	551383	156064	62.9	26.4	49.9	43.2	47.5	44.8	51.3	40.8	42.8	45.3	49.2	52.0	46.3	35.2	33.1	
	DT43	551315	156381	36.3	34.5	35.1	26.3	26.7	24.3	28.6	21.8	26.6	30.6	35.1	25.0	29.2	22.2	-	
	DT48	552867	154858	32.5	-	24.9	17.6	15.2	14.9	16.8	12.7	16.4	14.1	20.0	27.3	19.3	14.7	-	
	DT49	553018	154655	37.0	19.4	34.7	23.9	18.7	17.4	21.4	15.4	25.5	20.6	21.8	30.1	23.8	18.1	-	
	DT51	552761	155050	41.4	20.3	34.4	23.7	15.0	15.8	20.5	16.3	59.4	20.0	26.4	34.3	27.3	20.7	-	
	DT52	552504	155271	43.3	-	38.3	23.6	23.5	23.1	26.9	17.1	26.3	-	21.3	30.0	27.3	20.8	-	
	DT54	551224	156975	45.3	33.4	35.8	25.8	25.3	23.9	-	21.2	25.8	32.4	32.7	39.0	31.0	23.5	-	
	DT71	548239	155355	41.5	30.9	33.1	25.1	22.5	21.1	24.7	20.7	50.6	-	28.9	31.4	30.0	22.8	-	
	DT74	550768	155584	43.9	29.5	34.8	24.4	23.3	23.5	28.2	23.5	26.3	25.2	30.0	32.8	28.8	21.9	-	
	DT76	551019	155714	51.7	33.1	36.4	35.9	33.2	28.3	33.3	31.0	33.2	28.5	33.1	36.8	34.5	26.3	-	
	DT77	551528	155967	45.5	31.0	45.8	39.0	32.7	28.7	34.0	25.5	35.4	34.6	34.0	30.4	34.7	26.4	-	
	DT81	553419	167614	43.3	28.0	31.1	21.5	20.5	18.8	-	-	22.4	29.3	38.1	-	28.1	21.4	-	
_	DT83	550298	169627	<u>67.5</u>	44.4	37.0	-	38.2	35.6	37.5	36.1	35.2	45.1	41.0	41.7	41.8	31.7	-	
Page	DT84	546803	154999	36.8	27.8	33.7	-	24.0	25.4	-	23.5	24.7	28.3	28.5	33.6	28.6	21.8	-	
e ,	DT85	547094	155099	56.3	38.7	41.2	35.7	33.6	30.3	34.8	27.7	34.2	33.2	36.2	40.6	36.9	28.0	-	
139	DT86	550306	155595	50.7	-	37.9	27.7	24.6	23.2	27.0	20.9	27.5	29.2	32.1	36.0	30.6	23.3	-	
	DT87	551639	156334	59.4	46.0	46.0	40.4	43.0	41.0	43.8	38.0	47.0	41.9	48.8	44.1	45.0	34.2	-	
	DT88	552950	156578	36.7	26.5	34.8	26.6	22.8	22.3	25.3	19.7	24.6	24.4	26.1	28.5	26.5	20.2	24.5	
	DT90	553053	154708	43.0	25.5	46.4	29.6	22.1	20.8	30.1	21.5	31.5	28.5	-	34.2	30.3	23.0	-	
	DT93	550284	169743	38.6	20.9	33.4	24.0	16.9	16.8	19.3	18.0	23.5	19.3	21.3	22.3	22.9	17.4	-	
	DT94	550249	169573	41.3	-	38.9	27.3	22.2	21.5	22.8	17.8	25.7	30.7	29.1	32.9	28.2	21.4	-	
	DT95	550351	169490	46.5	29.6	38.9	31.4	26.4	23.6	26.2	20.9	28.3	30.4	29.1	37.2	30.7	23.3	-	
	DT96	552371	155346	36.8	31.6	36.0	23.9	25.3	26.7	29.1	16.7	27.7	31.3	33.2	35.1	29.5	22.4	-	
	DT97	550555	168253	29.6	17.0	27.1	16.6	17.1	15.8	14.6	13.7	17.3	22.0	25.0	23.0	19.9	15.1	-	
	DT98	550962	157662	44.8	29.6	-	28.9	25.4	21.0	24.2	22.8	25.5	29.9	-	36.5	28.9	21.9	-	
	BC01	553607	156776	23.8	5.2	16.5	11.5	9.8	7.7	9.7	8.2	12.6	12.6	14.7	18.7	12.6	9.6	-	Triplicate site with BC01, BC02 and BC03
	BC02	553045	156690	25.8	10.0	16.1	12.0	9.9	8.2	9.6	7.6	13.2	12.0	14.5	19.6	13.2	10.0	-	Triplicate site with BC01, BC02 and BC03
	BC03	553157	154416	25.1	6.9	15.8	11.7	9.2	8.5	9.8	8.3	12.9	11.8	14.7	20.3	12.9	9.8	-	Triplicate site with BC01, BC02 and BC03
	BC04	552465	154165	36.2	29.5	28.1	23.1	23.1	21.5	22.8	16.5	21.4	26.8	25.6	30.3	25.4	19.3	-	Triplicate site with BC04, BC05 and BC06

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing )	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted	Annual Mean: Distance Corrected to Nearest Exposure	Comment
BC05	551414	156196	39.3	28.3	28.8	21.9	24.7	20.2	24.2	18.9	22.8	27.8	24.8	29.9	26.0	19.7	-	Triplicate site with BC04, BC05 and BC06
BC06	551442	156159	38.2	28.9	28.5	22.2	22.5	22.2	23.0	17.5	21.2	26.0	30.5	30.6	25.9	19.7	_	Triplicate site with BC04, BC05 and BC06

- ☑ All erroneous data has been removed from the NO<sub>2</sub> diffusion tube dataset presented in Table B.1.
- ☑ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.
- ☐ Local bias adjustment factor used.
- ☑ National bias adjustment factor used.
- **◯** Where applicable, data has been distance corrected for relevant exposure in the final column.
- **IX** Sevenoaks District Council confirms that all 2022 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Exceedances of the NO<sub>2</sub> annual mean objective of 40μg/m³ are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60μg/m³, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

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

#### New or Changed Sources Identified Within Sevenoaks District Council During 2022

Sevenoaks District Council have identified five proposed developments as potentially having an impact on air quality within the district. These are:

- Development of Sevenoaks Quarry; including 950 residential dwellings, 200
  residential institutional units, business, retail, leisure and sports uses, as well as a
  new primary school.
- Development of a Lidl store including a new roundabout at the Broomhill site in Swanley.
- Development of a new roundabout at Bat & Ball, which will include replacing existing junction and requiring the removal of the automatic monitoring station.
- A proposed residential development at Bevan Place, Swanley, located at an area identified as a street canyon.
- A proposed development of social housing flats at the Bat & Ball junction, near Seal.

#### Additional Air Quality Works Undertaken Sevenoaks District Council During 2022

Sevenoaks District Council has not completed any additional works within the reporting year of 2022.

#### QA/QC of Diffusion Tube Monitoring

Sevenoaks District Council's diffusion tubes were supplied and analysed by SOCOTEC Didcot during 2022, using the 50% Triethanolamine (TEA) in acetone preparation method. SOCOTEC's laboratory is UKAS accredited, participating in the AIR-PT Scheme (a continuation of the Workplace Analysis Scheme for Proficiency (WASP)) for NO<sub>2</sub> tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO<sub>2</sub> concentrations

#### Agenda Item 11

reported are of a high calibre. The lab follows the procedures set out in the Harmonisation Practical Guidance.

In the latest available AIR-PT results, AIR PT AR042 (January – March 2021), SOCOTEC scored 100%. Currently no additional results have been published for 2022. The percentage score reflects the results deemed to be satisfactory based upon the z-score of < ± 2. 20 of the 23 local authority co-location studies which use tubes supplied by SOCOTEC

Didcot with the 50% TEA in acetone preparation method in 2021 were rated as 'good', with 3 being rated as 'poor', as shown by the precision summary results. This precision reflects the laboratory's performance and consistency in preparing and analysing the tubes, as well as the subsequent handling of the tubes in the field. Tubes are considered to have a "good" precision where the coefficient of variation of duplicate or triplicate diffusion tubes for eight or more monitoring periods during a year is less than 20%.

Monitoring in 2022 had been largely completed in adherence with the 2022 Diffusion Tube Monitoring Calendar, whereby most changeovers were completed within ±2 days of the specified date.

#### **Diffusion Tube Annualisation**

All diffusion tube monitoring locations within Sevenoaks District Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

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

The diffusion tube data presented within the 2022 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO<sub>x</sub>/NO<sub>2</sub> continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Sevenoaks District Council have applied a National bias adjustment factor of 0.76 to the 2022 monitoring data (from the National Diffusion Tube Bias Adjustment Factor Spreadsheet, version 03/23). A summary of bias adjustment factors used by Sevenoaks District Council over the past five years is presented in Table C.2. Sevenoaks District Council operates two continuous monitoring co-location sites at Greatness Park and Bat & Ball, part of the London Air Quality Network. In previous years a combined local bias adjustment factor has been utilised however in 2022, due to a system malfunction at the Bat & Ball site, it was decided that due to the potential unreliability of these results that a co-location combined factor would not be used. The overall data capture at Bat & Ball was 77% and the overall data capture at Greatness Park was 99%.

Figure C.1 - National Diffusion Tube Bias Adjustment Factor Spreadsheet - Partial Image

National Diffusion Tube	Bias Adjust	ment Fa	acto	r Spreadsheet			Spreads	heel Ver	ion Numbe	er: 03/23
ollow the steps below in the contest order to Data only apply to tubes exposed monthly and a Whenever presenting adjusted data, you should this somewhale will be updated every few monthly some and the second of t	ee not suitable for con state the adjustment	recting individu factor used an	al shor d the v	f-ferm monitoring periods ersion of the spreadsheet	-			This so	eachtreat w	il fel update n= 2023
The LAOM Helpdeak is operated on behalf of Defis a LECOM and the National Physical Laboratory.	the state of the s	The second second second second second			Spreadahe	el maintained by y Air Quality Con		ysical La	constory. On	ginal
Step 1:	Step 2:	Step 3:			1	Step 4:			7	
Select the Lance story that Analyses Your Tutes. from the Dros-Down Lini	Select a Pressure of the Description of the Descrip	goo. Select a Yast. Where there is only one study for a chosen combination, you should use the esti- more than one study, use the overall factor' shown in blue.  Open Lag.  The part in h			al the foot of th	e final col	urren.			
I A MANAGEMENT AND AND AND AND AND AND ADDRESS OF THE ADDRESS OF T	for this medical at the	power on town in  If you have your own co-location study them see floatings. If unanded what to did then centers the Local Air Quality Management H  LAGNITHED DESCRIPTION  LAGNITUM  LAGNITHED DESCRIPTION  LAGNITHED DESCRIPTION  LAGNITUM  LAGNITHED DESCRIPTION  LAGNITUM  LAGNITHED DESCRIPTION  LAGNITUM  LAGNITUM								
Analysed By <sup>1</sup>	Method To calls and selection or com-	Year	Sila Typa	Local Authority	Langilli of Shudy (months)	Diffusion Tube Mean Conc. (Om) (up/m²)	Automatic Monitor Mean Come. (Cm) (ug/m²)	Sias (8)	Tube Precision	Blas Adjustra Factor (A (Cm/Dm)
Socgres Didott	10% TEA is posture	2022		Sartaen County Borough Council	13	13.	10	33.4%	G	0.75
Gradio	50% TEA IL ACRISING	2022		Adv District Council	10	30	21	42.0%	- 6	0.70
Cradio Sociale Didosi	20% TEA in water 50% TEA in approve	2022		Blackburn W/N Danven Bc Bridgered Council	12	37	27	40.0%	0	0.71
Social Discot	50% TEA It Acetime	2022		Cantiff Council / Sharest Regulatory Services	11	47	33	27,2%	G	0.78
Secure Drawn	30% TEA in Acetore	2022	R	Daccourt-Borough Council	12	24	18	30.8%	.0	0.7%
Gradio	50% TEA It Acresine	2022		Fakin Council	12	32	- 29	22.7%	G.	0.81
Gradia	50% TEA in Acatone	2972		Fakri Courci	9	15	13	18.4%	0	98.6
Gradio	20% TEA in water	2022		Geding Bartugh Council	12	22	29 16	19.6%	0	0.83
Socoleo Diducel Socialeo Diducel	50% TEA in Acetone 50% TEA in Acetone	2022		Gravesham Borough Council Gravesham Borough Council	1 11	26	22	17.0%	G	0.85
Sociales Diduct	50% TEA in adetime	2022	R	Kingston Upon Hull City Council	12	.00	23	27.9%	G	0.78
Secotes Didnot	50% TEA Haceture	2022	UB	Kingston Open Mult City Council	12	24	18	35.0%	G	0.74
Draftii	50% TEA In Adetone	2022	H	Lt-Neutum	12	30	23	29.1%	0	0.77
Oradin	50% TEA is acessee	2022	50	Redcar & Cleverand Borough Council	12	14	10	44.9%	G	0.69
Gradin	50% TEA in Acetore	2022	R	Worthing Borough Council	12	15	23	4.3%	9	0.69
Aberdeen Scientific Services Aberdeen Scientific Services	20% TEA in under	2022	UB.	Aberdeen City Council  Aberdeen City Council	12	21	19	34.4%	9	0.74
Aberteen Scientific Services	20% FEA in water	2022	14	Aberdeen City Council	11	19	14	35.9%	- 0	0.76
Aberben Scientific Services	20% TEA in water	2022	R.	Abendeen City Council	- 11	23	22	46.0%	G	0.68
Abenteen Scientific Germans	20% TEA in water	3022	R	Aberdeen City Council	12	39	26	32.8%	- 0	0.75
Aberdoen Scientific Services	20% TEA in water	2022	- 8	Abertieen City Council	12.	34	24	40.8%	G	9.71
Gradio	20% TEA in water	2022	н	Ands And North Down Borough Council	12	33	22	49.4%	G G	0.67
Gradio	20% TEA to water 20% TEA to water	2022	R	Bath & North East Somerast Diretrighem City Council	12	32	29	19.0%	G	0.73
Socialisa SOCIATEC Didoot	50% TEA in adelpine	2022	UB	City Of York Council	12	16	13	31.6%	9	0.75
SULUINE LABOR	NO TEAH women	3022	R	City Of Yush Counsil	12	75	19	28.7%	0	8.79
SOCOTEC Didxet	50% TEA III acutions	2922	. R.	City Of York Council	- 11.	53	17	37.2%	G	0.73
SOCOTEC Debot	50% TEA III accrons	2022	R	Cay Of York Council	- 11	33	21	37.6%	G	0.73
Gradio	20% TEA in water	2012	UB	East Davis District Cource	12	8	1	23.6%	- 6	0.81
SOCOTEC Distoit	50% ITA is acetave	2022	R	East Suffeit Council	11	22	23	38.6%	6	0.72
Grades Grades	20% TEA is water 20% TEA to water	2072	R	Gateshead Council Gateshead Council	12	23	20	12.7%	9	0.88
Gradio	20% TEA in maker	2022	R	Guteshead Council	12	25	23	10.1%	G	6.91
Gradin	20% TEA is water	2022	R	Galeshead Council	. 11	30	23	29.0%	- G	0.77
Gradio	20% TEA ry mater	2022	Ř	Gateshead Council	9	31	36	-14,0%	- 0	1,16
Gasgre Scientific Services	20% TEA to Water	2022	R	Glasgow City Couriel	12	30	27	11.9%	0	0.00
Danger Scientific Services	20% (EA is Water	2022	11	Gasgow City Council	11	14	19	-213%	G	1,32
Gasgini Scientific Services	20% TEA in Water 20% TEA in Water	2022	R	Glasgow City Council Glasgow City Council	12	10	29	-35.1%	P	1,33
Glasgoe Scientific Services Glasgoe Scientific Services	20% TEA to Water	3922	98	Gasgos Cty Council	12	14	17	-158%	μ	1,19
SOCOTEC Discut	10% TEAH acetine	2022	R	beuich Barough Council	11	12	28	50.4%	0	0.66
Cradus	20% TEA w Water	2022	R.	Leibure & Cariberingh City Countil	12	24	19	23.7%	- 6	0.81
Staffortules Scientific Services	20% IEA number	2022	HS	Manuferder City Council	12	49	13	13.0%	- 6	0.86
Stafforbates Scientific Services	20% TEA to matter	3022	UC	Manchester City Council	12	29	29	0.4%	G	1.00
Staffurchive Scientific Services	20% TEA in mater	2022	R	Manchester City Council Montesuffering Council	12	25	10	12.1% 23.8%	G	0.81
Grieden Abendeen Scientific Services	20% TEA in Water 20% TEA in eather	2072	R KS	Marysdone Road Inscorpation	112	36	- 8	31.9%	9	0.76
Carburgh Scientific Services	30% TEA in acustonic	5055	KS	Maryletone Road Heromparison	12	52	42	22.9%	6.	8.81
Gangini Scientific Services	20% TEA in water	2922	ICS	Marylebone Road Heroonparlson	12	55	42	28.0%	G	6,76
(reto	20% (EA in mater	2022	KS	Marylebone Road Intercompurisors	12	52	42	22.8%	- 0	0.81
Oradio	50% TEA rt acctore	2922	KS	Maryletione Road Intercongunitions	12	9	42	330%	G	0.81
Lantarth Scientific Services	50% TEA in acressing	2022	RS	Maryetione Road Intercomparison	12	53	42	25.4%	G	0.00
Mikin Keynes Council	20% TEA vi water	2322	RCS.	Marylebone Road Interconguirous	- 11	55	43	28.4%	6	0.76
SOCOTEC Owner	20% TEA to water	2922	KS	Marylebone Road Intercongration	12	99	42	38.9%	G	9.72

**Table C.2 - Bias Adjustment Factor** 

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2022	National	03/23	0.76
2021	National	03/22	0.78
2020	Local	-	0.78
2019	National	06/20	0.75
2018	Local	-	0.80

#### NO2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO<sub>2</sub> concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO<sub>2</sub> fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO<sub>2</sub> concentrations corrected for distance are presented in Table B.1. No diffusion tube NO<sub>2</sub> monitoring locations within Sevenoaks District Council required distance correction during 2022.

#### **QA/QC** of Automatic Monitoring

Data management and local site operator (LSO) duties for both the automatic monitoring locations within Sevenoaks are carried out by the Environmental Research Group at Imperial College London. As part of this, routine calibrations of instruments are carried out every two weeks.

The data presented within the ASR for the 2022 monitoring year is fully ratified, and both live and historic data is available through the <u>LAQN website</u>.

#### PM10 and PM2.5 Monitoring Adjustment

The TEOM PM<sub>10</sub> analysers utilised at both Greatness Park and Bat & Ball have been converted to reference equivalence using the volatile correction method. This is carried out by the data managers prior to being presented on the LAQN website.

#### **Automatic Monitoring Annualisation**

All automatic monitoring locations within Sevenoaks District Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

#### NO2 Fall-off with distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the  $NO_2$  concentration at the nearest location relevant for exposure has been estimated using the  $NO_2$  fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean  $NO_2$  concentrations corrected for distance are presented in Table B.1.

No automatic NO<sub>2</sub> monitoring locations within Sevenoaks District Council required distance correction during 2022.

## Appendix D: Maps of Monitoring Locations and AQMA

Figure D.1 - Map of AQMA's within Sevenoaks District

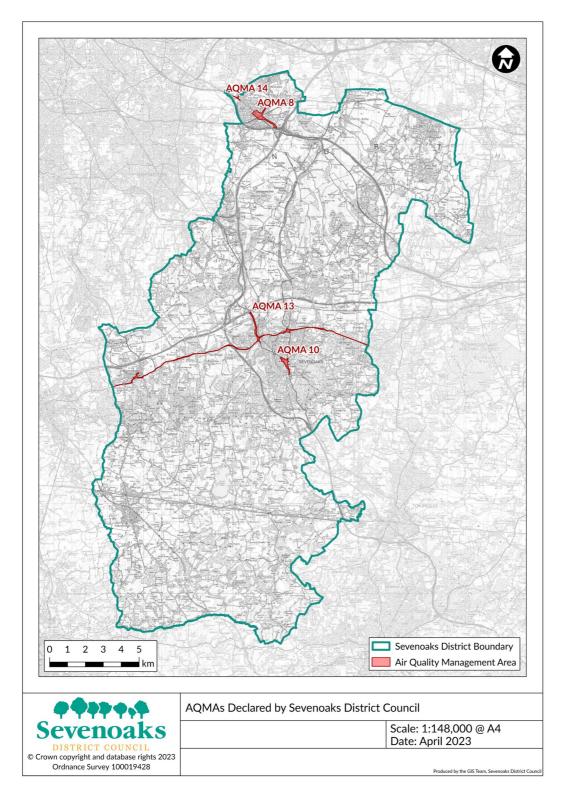


Figure D.2 - Map of Monitoring Locations and AQMAs near Swanley

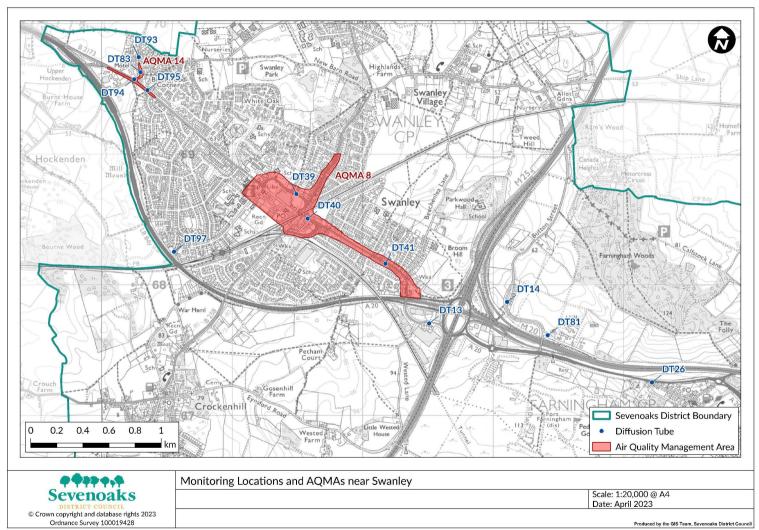


Figure D.3 - Map of Monitoring Locations and AQMAs near Sevenoaks

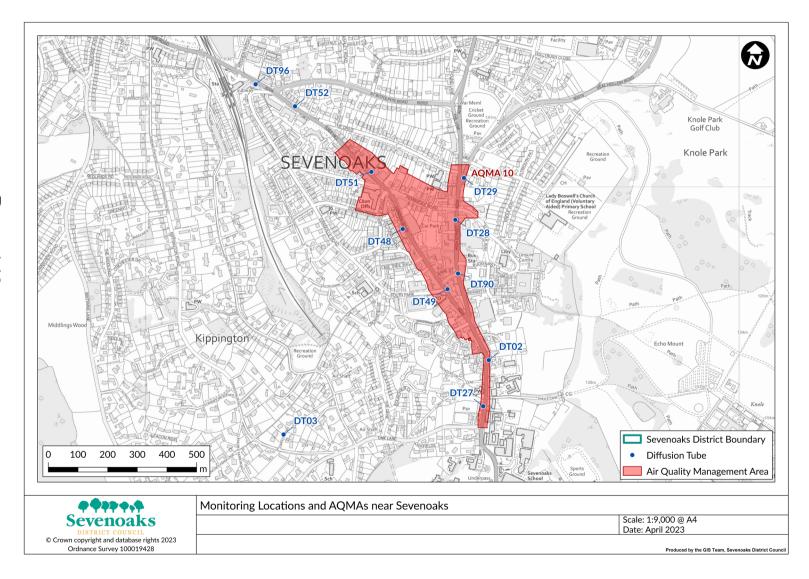


Figure D.4 - Map of Monitoring Locations and AQMAs near Seal

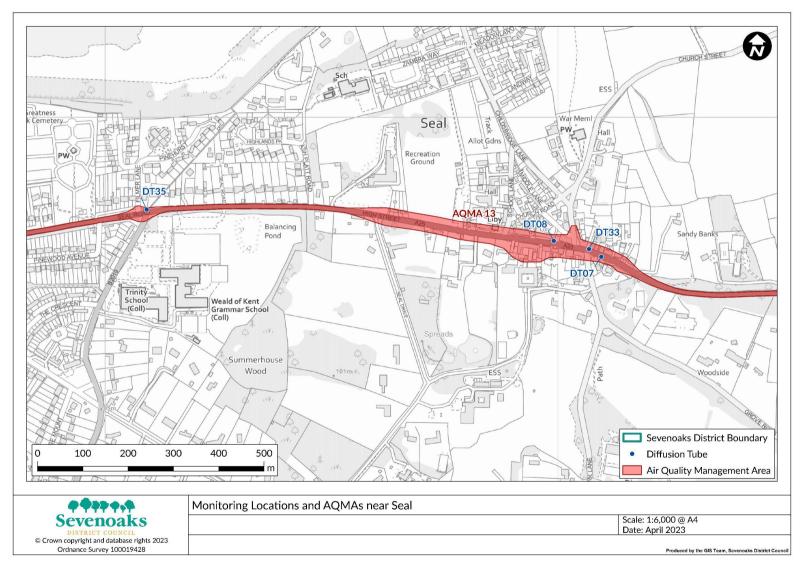
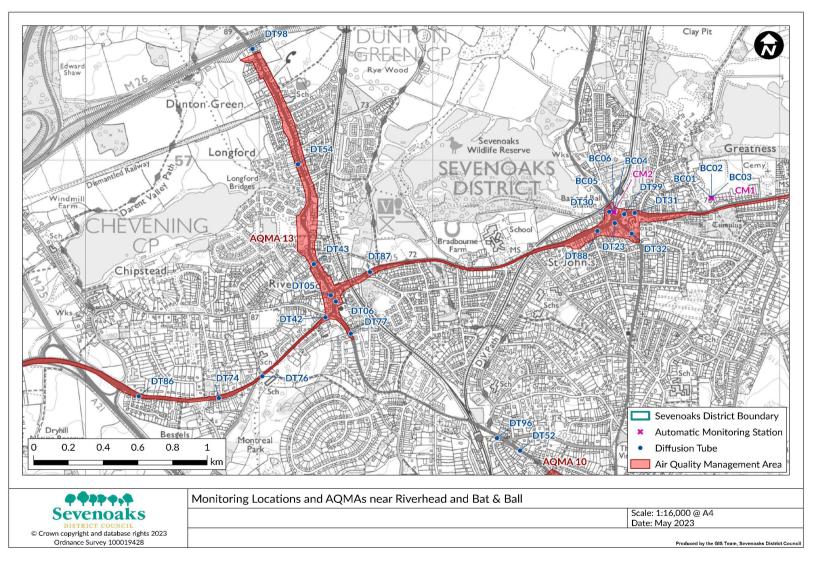


Figure D.5 - Map of Monitoring Locations and AQMAs near Riverhead and Bat & Ball



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

Table E.1 – Air Quality Objectives in England<sup>7</sup>

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	200μg/m³ not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO <sub>2</sub> )	40μg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>10</sub> )	50μg/m³, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM <sub>10</sub> )	40μg/m <sup>3</sup>	Annual mean
Sulphur Dioxide (SO <sub>2</sub> )	350μg/m³, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO <sub>2</sub> )	125μg/m³, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO <sub>2</sub> )	266μg/m³, 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 ( $\mu g/m^{3}$ ).

## **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	Annual Status Report		
BAT	Best Available Techniques		
BPC	Brasted Parish Council		
CO <sub>2</sub>	Carbon Dioxide		
Defra	Department for Environment, Food and Rural Affairs		
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways		
EU	European Union		
EV	Electric Vehicle		
FDMS	Filter Dynamics Measurement System		
HGV	Heavy Goods Vehicle		
IPPC	Integrated Pollution Prevention and Control		
КСС	Kent County Council		
LAQM	Local Air Quality Management		
LEV	Low Emission Vehicle		
LGV	Light Goods Vehicle		
NO <sub>2</sub>	Nitrogen Dioxide		
NO <sub>x</sub>	Nitrogen Oxides		
O <sub>3</sub>	Ozone		
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10μm or less		

## Agenda Item 11

Abbreviation	Description
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5μm or less
QA/QC	Quality Assurance and Quality Control
SO <sub>2</sub>	Sulphur Dioxide
SDC	Sevenoaks District Council
SPC	Seal Parish Council
STC	Sevenoaks Town Council
TEOM	Tapered Element Oscillating Microbalance
UTC	Urban Traffic Control
WTC	Westerham Town Council

### References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022.
   Published by Defra in partnership with the Scottish Government, Welsh Assembly
   Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG22. August 2022.
   Published by Defra in partnership with the Scottish Government, Welsh Assembly
   Government and Department of the Environment Northern Ireland.
- Sevenoaks District Council AQAP 2022
- Sevenoaks District Council 2022 Annual Status Report

# To find out more, please contact us:

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- w sevenoaks.gov.uk/airquality

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## THE FUTURE OF AIR QUALITY MONITORING WITHIN SEVENOAKS DISTRICT Cleaner & Greener Advisory Committee- 10<sup>th</sup> October 2023

**Report of:** Deputy Chief Executive and Chief Officer for Planning and Regulatory Services

Status: For Decision

#### Also considered by:

Cabinet – 12<sup>th</sup> October 2023

Key Decision: yes:

1. Result in the District Council incurring expenditure, or making savings, which exceed £50,000 in value

**Executive Summary:** This report proposes to change the way the District Council monitors air quality within Sevenoaks District. The current Bat & Ball and Greatness Air Quality Stations (AQS) are approaching the end of their serviceable lifespans and are expected (within the next 5 years) to become uneconomical to repair. This report proposes that unless alternate funding can be identified by April 2024, that both AQS are closed. In their place the District Council will invest in a network of portable AQS to be strategically sited within Air Quality Management Areas. These portable AQS will allow members of the public to view current up to date air quality data from key locations whilst generating a small in year budget saving as well as removing the need for significant unbudgeted investment in the replacement of existing analysers, equipment and enclosures.

This report supports the Key Aim of: (insert information from Community Plan or Best Value Performance Plan or delete if unnecessary or irrelevant

Portfolio Holder: Cllr. Margot McArthur

Contact Officer(s): Nick Chapman Ext. 7167 & Colin Alden Ext. 7186

#### Recommendation to Cleaner & Greener Advisory Committee

That the contents of the report be noted and that C&GAC support and recommend the proposed changes to Air Quality Monitoring (as outlined in this report) to Cabinet

**Reason for recommendation:** The proposed changes will generate an ongoing budget saving whilst increasing the visibility and accessibility of air quality monitoring data within Sevenoaks District.

#### Recommendation to Cabinet

That Cabinet agree the proposed changes to Air Quality Monitoring (as outlined in this report.

**Reason for recommendation:** The proposed changes will generate an ongoing budget saving whilst increasing the visibility and accessibility of air quality monitoring data within Sevenoaks District.

#### **Introduction and Background**

- Sevenoaks District Council currently has 4 Air Quality Management Areas where Nitrogen Dioxide (NO<sub>2</sub>) is predicted/ modelled to exceed national objective levels (40ugm<sup>3</sup> as an annual average). These are:
  - a. AQMA 8- London Road/ High Street, Swanley
  - b. AQMA 10 Sevenoaks Town Centre
  - c. AQMA 13 A25- entire length from boundary with Tandridge to Tonbridge and Malling
  - d. AQMA 14- Junction of Birchwood Road and London Road Swanley
- The District Council is required to monitor air quality within these areas and does so through a network of 58 passive diffusion tubes and 2 real time air quality stations.
- Diffusion tubes are generally located on street furniture close to the sources of pollution. They are relatively cheap to deploy but the monthly results they produce must be annualised and ratified before use. Consequently, the data collected for the previous year is published in June within the Air Quality Annual Status Report (i.e. 2022 data is published in June 2023 etc).
- The Air Quality Stations produce data across a number of pollutants on a minute by minute basis:
  - a. Bat & Ball Air Quality Station- Nitrogen Dioxide (NO<sub>2</sub>) and Small Particulates (PM<sub>10</sub>)

- b. Greatness Park Air Quality Station- Nitrogen Dioxide (NO<sub>2</sub>), Small Particulates (PM<sub>10</sub>) and Ozone (O<sub>3</sub>)
- The data from the Air Quality Station is published 'live' on the London Air Network at: London Air Quality Network :: Welcome to the London Air Quality Network » Statistics Maps
- The Air Quality Stations are expensive to maintain and operate. These costs have been increasing rapidly over the past two years linked to inflationary pressures including cost of electronics, specialist gasses, contractors and electricity.
- The Bat and Ball Air Quality Station was installed in August 2005 and the Greatness Air Quality Station in January 1998. Both are therefore approaching the end of their reasonably anticipated operational lives. In particular, the structure at Greatness Air Quality Station (a steel shipping container) is rapidly deteriorating and at both AQS, analysers are reaching the point when they are no longer economical to repair.
- 8 This report outlines the options available for the continuation of air quality monitoring moving forward over the next few years and suggests potential options for the delivery and enhancement of air quality monitoring.

#### Outside the scope of this review

9 No changes are proposed for the existing diffusion tube network (i.e. maintain the existing number and location).

#### Cost associated with the Air Quality Stations

Table X below shows the annual costs associated with maintenance and operation of the two air quality stations:

Task	Bat & Ball AQS	Greatness AQS	TOTAL
Data Management Costs	£6,035	£6,035	£12,070
Engineering Costs	£3,125	£3,125	£6,250
Local Site Operator Duties	£4,995	£4,996	£9,991
Electricity Costs	£7,853	£7,854	£15,707
Calibration Gas Purchase + Rental	£749	£749	£1,498
Total	£22,757	22,780	£45,516

In addition to these annual costs, there are a number of periodic, "one off" costs which may be incurred. These include replacement analysers, air conditioning plant and structural maintenance. The table below provides indicative costs for these items.

Item	Typical Cost (estimate)
Air Quality Analyser	£15,000-£30,000 (depending on pollutant measured)
Air Conditioning Plant	£3,000 to £5,000
Replacement Air Quality Station Enclosure including installation	£35,000 to £70,000 depending on number of analysers installed

- 12 At the Greatness Air Quality Station we currently have 3 analysers. One of these (the NOx Analyser) was replaced with a  $2^{nd}$  hand unit in 2021. The Ozone and TEOM ( $PM_{10}$ ) analysers are believed to have been installed in 1998 and so are approximately 25 years old and therefore are likely to require replacement in the next 2 years. The current air conditioning plant was installed May 2020 and is anticipated to need replacing in 2025. The enclosure at Greatness Park is rapidly deteriorating and we have had recent problems with water ingress through the steel structure (shipping container type). Whilst temporary repairs have been affected, we may need to replace the enclosure in the near future.
- At the Bat and Ball Air Quality Station, we currently have 2 analysers. Unfortunately, one of these analysers requires immediate replacement (NOx Analyser). The BAM ( $PM_{10}$ ) is believed to date from 2005 and therefore may need replacement within the next 5 years. The current air conditioning plant was installed in August 2022 and is anticipated that it will need replacing in 2025.
- Based on the above information it is anticipated that the District Council will need to spend between £328,580 and £384,580 over the next 5 years in order to maintain our existing monitoring capability.
- 15 Of this anticipated spend, £227,580 is currently budgeted for.

#### Historical Significance/ Public Health Value of the Air Quality Stations

- The Sevenoaks Annual Status Report 2023 shows that in 2022 all monitoring locations across the district were within the National Objective level for Nitrogen Dioxide (NO<sub>2</sub>). This data is in accordance with local and national trends over the past 10 years.
- 17 For more than 10 consecutive years we have not measured a breach of any relevant air quality objective/ standard at either of our AQS.

- The Bat & Ball AQS is located on the north-eastern edge of the Bat and Ball Junction and was situated in this location in order to measure roadside emissions. However, owing to constraints at time of construction it is located approximately 9m from the carriageway (pollution source) and so is not fully representative of exposure. As a result, data obtained is slightly compromised.
- Junction improvements, including the potential installation of a roundabout, are being considered for the Bat & Ball junction as part of proposed nearby development. It is anticipated that this work will require the re-siting of the Bat & Ball AQS. Owing to the significant variations in air quality depending on geographical location, where an AQS is re-sited data previously collected can no longer be used to establish trends/ or assess changes.
- The Greatness AQS is located on the southern edge of Greatness Park. This AQS measures background air quality.
- The data collected by the Greatness AQS is considered strategically important for Kent and London. The background NO<sub>2</sub> levels measured at this station help inform localised concentrations of roadside NO<sub>2</sub> in London. Further, the Greatness AQS is one of the few in the South East that measures Ozone (O<sub>3</sub>), a pollutant that is considered critical to public health as it has a multiplying effect on NO<sub>2</sub>. Local Authorities are however not legally required to measure Ozone concentrations and so whilst this information is of national scientific interest it does not help the District Council meet its air quality monitoring obligations.

#### Alternative monitoring methods

- In the last 20 years there have been significant technical advancements in air quality monitoring technologies. There are now multiple providers of low cost portable air quality monitors that can be affixed to roadside lampposts.
- Whilst these monitors do not conform with 'reference standards' they can be deployed near to sources of pollution and are able to report real time data (every 5 minutes) via a web portal. Some sensors are able to report on a wider range of pollutants than is currently possible from our current AQS.
- Costs of portable air quality monitors vary but we have received indicative costs of £2000 per year per unit per year. In addition, there is a need for the District Council to seek permission from KCC to install units on their lampposts. The indicative cost for the engineering assessments and permits is likely to be a one of cost of approximately £2000 plus an annual permit fee of around £150 per site.

#### **Proposed Solution**

As outlined above, significant investment (budgeted and unbudgeted) is required to maintain the existing Air Quality Stations at Greatness and Bat & Ball over the next 5 years.

- As outlined in 18, the Bat & Ball Air Quality Station is poorly sited and does not measure worst-case air quality at the junction. Future proposed development may also necessitate that this AQS is removed/ or moved as part of highway works.
- 27 Notwithstanding the above issues, the data collected by the AQS (particularly Greatness Park) has value to the wider scientific community. Officers will therefore hold discussions with interested stakeholders to try and identify funding streams (outside of SDC budgets) to secure ongoing monitoring at the current AQS.
- Should additional finding not be identified, it is proposed that both AQS are closed by April 2024 generating an ongoing budget saving of approximately £45,000 per year and negating the need for further operational investment (replacement of analysers and structural maintenance) of approximately £100,000 over the next 5 years.
- Instead, of replacing the existing AQS it is proposed that SDC implement a network of portable air quality monitors in the following areas (subject to technical constraints and available budgets):
  - a. Bat & Ball Junction
  - b. Swanley High Street
  - c. Sevenoaks Town Centre
  - d. Westerham.
- The proposed solution would provide SDC with better data to assess the impacts of traffic flows on our AQMAs and would allow residents and councillors the ability to see real time air quality data within the areas of greatest Air Quality concern.
- 31 The proposed network could be amended or added to as additional funding became available or as new areas of concern arose.
- 32 It is believed that the total costs of the installations as outlined above can be met within the existing Environmental Health budget and generate an annual budget saving on existing costs.

#### Other options Considered and/or rejected

To maintain existing Air Quality Stations through renewal and replacement of equipment and structures. As advised above, the costs of maintaining the existing Air Quality Stations would require significant, unbudgeted investment from the District Council. Both Air Quality Stations report continuous compliance with air quality objectives and whilst they have scientific merit to the wider scientific community, they currently add little to our understanding of air quality in Sevenoaks. The costs of maintaining our current air quality monitoring in the same form will cost approximately £330k over the next 5

years and this spend is not considered appropriate with consideration to local government finances.

**To close the Bat & Ball AQS but renew/ replace the Greatness AQS-** As per section 18 above, it is considered that the Bat & Ball Air Quality Station may be sited inappropriately and as a result the data it collects does not significantly inform the District Council's understanding of Air Quality in Sevenoaks.

Currently it is proposed that the Bat and Ball Junction will be replaced with a roundabout as part of a major development nearby and it is considered highly likely that this work will require the relocation of current AQS. Once the AQS is moved, historic data is no longer relevant. It is therefore considered that there is limited benefit to maintaining the AQS at this location in the interim.

Closure of the Bat and Ball Air Quality Station but maintaining the Greatness AQS could save the District Council approximately £43,785 over a 5 year period.

Significant and unbudgeted investment will still be needed in the short term at the Greatness AQS.

To close the Bat & Ball/ Greatness AQS without additional/ supplementary air monitoring capacity. Whilst Air Quality has improved considerably within the District over the past 10 years, officers recognise that it remains an area of significant public concern. We do not consider that it would be desirable to remove our capability to report real time air quality data without identifying an alternate capability.

#### **Key Implications**

#### Financial

The proposals within this report will generate a modest budget saving.

Legal Implications and Risk Assessment Statement.

As part of the annual ratification of passive diffusion tube data it is necessary to bias adjust tube results. Bias adjustment factors can be derived locally (from diffusion tubes collocated with an AQS) or via nationally published bias adjustment factors. Removal of the Bat & Ball and Greatness AQS would require officers to use nationally derived bias adjustment factors in future Annual Status Reports.

Sevenoaks District has 4 declared Air Quality Management Areas (for predicted or monitored exceedances of the annual  $NO_2$  air quality objective levels). Within these AQMAs we are required to monitor levels of  $NO_2$ . We can continue to do this through our network of diffusion tubes and we have no legal duty to maintain our current air quality stations.

#### **Equality Assessment**

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act.

#### **Net Zero Implications**

The decisions recommended through this paper have a remote or low relevance to the council's ambition to be Net Zero by 2030. There is no perceived impact regarding either an increase or decrease in carbon emissions in the district, or supporting the resilience of the natural

Appendices	
None	
Background Papers	
None	

#### **Richard Morris**

Deputy Chief Executive and Chief Officer - Planning and Regulatory Services



## Cleaner and Greener Advisory Committee - 10 October 2023 - Work Plan

#### 23 November 2023

- Budget 2024/25: Review of Service Dashboards and Service Change Impact Assessments (SCIAs)
- Food Safety Plan
- Animal Welfare- Review of Fees and Charges
- Pest Control Service Review
- Cess Pool Service Review

#### 22 February 2024

• Update on Car Idling Campaign

