

Tendring
District Council



2024 Air Quality Annual Status Report (ASR)

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

Date: June 2024

Information	Tendring District Council Details
Local Authority Officer	Rebecca Duff-Cole
Department	Environmental Protection
Address	Council Offices, 88-90 Pier Avenue, Clacton on Sea, Essex, CO15 1TN
Telephone	01255 686767
E-mail	Env.services@tendringdc.gov.uk
Report Reference Number	TDC/ASR/24
Date	June 2024

Executive Summary: Air Quality in Our Area

Within Tendring air quality is generally good and there are no Air Quality Management Areas (AQMAs).

The district of Tendring is a predominantly rural district with Clacton on Sea as its main administrative town. The district contains the coastal towns of Frinton, Walton and Harwich. Most of the non-residential area is used for agricultural activity.

Road traffic emissions and port activities are the most significant source of air pollution within Tendring. The main pollutant of concern is Nitrogen Dioxide (NO₂).

Clacton on Sea is a traditional English seaside resort, which is still very popular with day trippers. Holiday makers visit from far and wide to enjoy its traditional attractions, sea front gardens and award-winning beaches.

Harwich is one of the Haven ports on the North Sea coast and terminus for Continental ferries from the Hook of Holland.

Traffic and congestion can occur during peak times on the main roads leading into Clacton on Sea and Harwich, notably from the A120, A133, St Johns Road and Wellesley Road, causing high levels of air pollution.

Air Quality in Tendring

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year¹.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution².

Table ES 1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO ₂)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO ₂)	Sulphur dioxide (SO ₂) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM ₁₀ and PM _{2.5})	<p>Particulate matter is everything in the air that is not a gas.</p> <p>Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes.</p> <p>PM₁₀ refers to particles under 10 micrometres. Fine particulate matter or PM_{2.5} are particles under 2.5 micrometres.</p>

Within Tendring air quality is generally good and there are no Air Quality Management Areas (AQMA's).

Road traffic emissions and port activities are the most significant source of air pollution within Tendring. The main pollutant of concern is Nitrogen Dioxide (NO₂).

¹ UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022.

² Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

The monitoring data for 2023 found no exceedances of the national air quality objectives.

Except for two monitoring sites, the monitoring data shows concentrations of NO₂ have slightly decreased or remained stable across the majority of Tendring. In previous years concentrations of NO₂ increase steadily across Tendring.

The two monitoring sites, DT48 and DT58 increased slightly in comparison to previous years. DT48 is located at Harwich Quay, the main source of air pollution is from port and industrial emissions, as well as road traffic. DT58 is located at the busy junction and mini roundabout at North Road, Clacton on Sea, it is heavily congested by road traffic throughout the day, and during rush hours. This has been an area of concern within Tendring for the last few years.

High concentrations of NO₂ were noted at several monitoring sites throughout Tendring (DT40, DT48, DT49 and DT58) during 2023.

At Clacton Road, St Osyth (DT40) a high concentration of NO₂, 64.7µg/m³, was recorded in December 2023. DT40 is located at a busy cross junction and the main source of pollution is from the idling road traffic.

DT48 and DT49 are located at Harwich Quay and Harwich International measuring emissions from port activities and road traffic. Both high NO₂ concentrations were recorded in December 2023 (43.5µg/m³ and 51.5µg/m³).

DT58 recorded occasional high concentrations of NO₂ throughout the year (40.2µg/m³, 41.8µg/m³ and 49.2µg/m³) however overall did not exceed the annual air quality objective. DT58 is located at North Road junction in Clacton on Sea, it has been an area of concern over the last few years. Tendring District Council have increased the number of monitoring sites in this area due to the high levels of NO₂ being found and high levels of congestion. The monitoring site is at a busy junction and mini roundabout, with residential properties close by the roadside.

Tendring District Council will continue to prioritise interventions to ensure that air quality levels are maintained below the national air quality objectives.

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 Plan³ sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter (PM_{2.5}), the pollutant of most harmful to human health. The Air Quality Strategy⁴ provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero⁵ details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel, and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

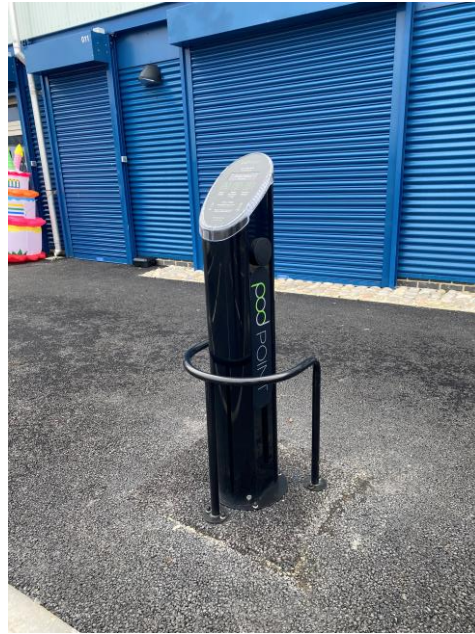
Tendring District Council's core actions to target sources of air pollution within the district include:

- Promote, educate and provide high quality information and guidance on Air Quality
- Promote walking and cycling initiatives, and public transport
- Promote green waste services and discourage use of bonfires
- Promote Defra's Burn Better, Breathe Better
- Encourage the use of electric vehicles
- Tendring District Council's Environmental Protection team provide advice to the Planning Team regarding proposed development in an attempt to minimise air pollution impacts and maintain good levels of air quality in Tendring
- Regulation of Part B and Part 2(A) Environmental Permits

³ Defra. Environmental Improvement Plan 2023, January 2023

⁴ Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

⁵ DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018



During 2023, several new electric charging points were installed within Tendring District Council carparks.

A new covered market and business centre opened in Jaywick Sands. The £5.3m site in Lotus Way, Jaywick Sands, named Sunspot contains shop units, a cafe, public toilets, a community garden and space for events. The site has four new electric charging points. This project forms part of a larger Council plan to regenerate one of the most deprived areas in England.



Tendring District Council transformed a derelict site into a new public space with 51-space car park, public toilets and events space. The site has four new electric charging points. It is part of a £1.9million redevelopment project by the Council, using the site of the former Starlings garage and Queens Head Hotel, which burned down several years ago.



More than 700 trees were planted around Tendring in 2023 thanks to a biodiversity grant scheme. Eleven different species were planted by Tendring District Council staff and community volunteers at three locations. This is thanks to Essex County Council's Urban Tree Fund. The grant includes almost £103,000 for the trees and planting materials and over £67,000 to cover maintenance costs for three years.

Burrs Road Cemetery, Clacton on Sea had 200 Callery Pear, 150 Rowan and 250 Cherry trees planted. Jubilee Field, Parkeston had 44 London Plains, 10 Liquid Ambers and 10 Ginkgos. 20 each of Bald Cypress, Black Alder, Sycamore, Scots Pine and Swedish Whitebeam have been planted in Lotus Way, Jaywick Sands on the approach to the new Sunspot development.



Tendring District Council are continuing to promote walking and cycling initiatives.

Following a successful pilot in Clacton on Sea, Essex Pedal Power has now become a county-wide programme and will distribute over 600 children and adult bikes in Harwich and Dovercourt over the next two years.

The initiative aims to make cycling more accessible in local communities as well as increase physical activity levels, encourage active travel and provide access to employment, education and training opportunities further afield.

Essex Pedal Power held a family fun day event in Parkeston in June 2023 to distribute the first 21 free bikes to eligible residents in Harwich.

Conclusions and Priorities

In conclusion, there have been no exceedances in the national air quality objectives for concentrations of NO₂ within Tendring during 2023. Air quality within Tendring remains relatively good and there are no AQMAs. In previous years concentrations of NO₂ have increased steadily across the district.

Except for two monitoring sites, the monitoring data found concentrations of NO₂ have slightly decreased or remained stable across the majority of Tendring.

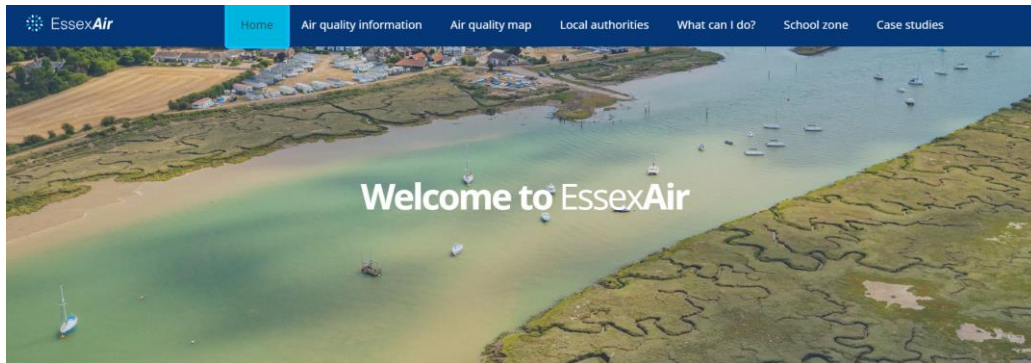
There have been no significant pollution sources identified from proposed residential or industrial developments within Tendring in 2023.

Tendring District Council will prioritise interventions to ensure that air quality is maintained at levels below the national air quality objectives.

Tendring District Council will also prioritise producing and implementing an Air Quality Strategy to prevent and reduce polluting activities. Currently Tendring District Council are working together with Essex County Council to produce and potentially adopt a joint Essex Air Quality Strategy.

Local Engagement and How to get Involved

Together with local authorities across Essex, as part of the Essex Air Quality Consortium and Essex Highways, the Essex Air website was updated and relaunched. The new website was funded through The Department for Environment, Food and Rural Affairs (Defra) Air Quality Grant Scheme. The new website includes a dedicated school zone, interactive air pollution map and tips for how residents can help reduce their emissions and exposure to air pollution, as well as a local authority area for each Council in Essex.



The Essex Air Quality Consortium is on a mission to improve air quality in Essex, working together to make changes across the county that will help to make the air we breathe cleaner and healthier. As part of our mission, we're helping the people of Essex understand what air quality is and how they can play a part in making it better.

Tendring District Council are continuing to promote and raise awareness of local air quality. This includes promoting Clean Air Day 2023 on the Council's social media pages.



Members of the public and actions groups are increasingly recognising the impacts of poor air quality. The public can help improve air quality within Tendring by:

- Reduce your number of car journeys, try walking or cycling instead
- Combine your trips. If going further away, consider public transport such as bus or train
- If possible, switching to an electric vehicle
- Give car-sharing a go
- Consider switching energy suppliers to companies who use renewable energy sources
- Instead of burning garden waste recycle it using TDC's kerbside garden waste collection service
- Avoid burning at home, open fires and wood-burning stoves have a significant impact on air pollution
- Plant more trees, plants can help clean the air around them by consuming CO₂

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Protection team of Tendring District Council with the support and agreement of the following officers and departments:

- Rebecca Duff-Cole, Technical Officer, Environmental Protection
- Katie Wesley-Smith, Environmental Protection Manager
- Grant Fenton-Jones, Environmental Health Manager

This ASR has been approved by:

- John Fox, Head of Health & Community
- Tim Clarke, Assistant Director Housing & Environment

This ASR has been sent to the Director of Public Health at Essex County Council.

If you have any comments on this ASR please send them to the Environmental Protection team at:

Address: Tendring District Council, Council Offices, 88-90 Pier Avenue, Clacton on Sea, Essex, CO15 1TN

Telephone: 01255 686767

Email: Env.services@tendringdc.gov.uk

Table of Contents

Executive Summary: Air Quality in Our Area	i
Air Quality in Tendring	ii
Actions to Improve Air Quality	iv
Conclusions and Priorities	vii
Local Engagement and How to get Involved.....	viii
Local Responsibilities and Commitment	x
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 Tendring	3
2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations	8
3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance	11
3.1 Summary of Monitoring Undertaken	11
3.1.1 Automatic Monitoring Sites	11
3.1.2 Non-Automatic Monitoring Sites	12
3.2 Individual Pollutants	13
3.2.1 Nitrogen Dioxide (NO ₂)	13
3.2.2 Particulate Matter (PM ₁₀)	14
3.2.3 Particulate Matter (PM _{2.5})	14
Appendix A: Monitoring Results	16
Appendix B: Full Monthly Diffusion Tube Results for 2023	37
Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC	39
New or Changed Sources Identified Within Tendring During 2023	39
Additional Air Quality Works Undertaken by Tendring District Council During 2023.....	39
QA/QC of Diffusion Tube Monitoring	39
Diffusion Tube Annualisation	40
Diffusion Tube Bias Adjustment Factors	40
NO ₂ Fall-off with Distance from the Road.....	41
QA/QC of Automatic Monitoring	41
Automatic Monitoring Annualisation	41
NO ₂ Fall-off with Distance from the Road.....	41
Appendix D: Map(s) of Monitoring Locations and AQMAs	42
Appendix E: Summary of Air Quality Objectives in England	54
Glossary of Terms	55

References56

Figures

Figure A.1 – Trends in Annual Mean NO ₂ Concentrations Clacton on Sea	26
Figure A.2 – Trends in Annual Mean NO ₂ Concentrations Thorpe, Kirby, Frinton and Walton	27
Figure A.3 – Trends in Annual Mean NO ₂ Concentrations Harwich and Manningtree.....	28
Figure A.4 – Trends in Annual Mean NO ₂ Concentrations Ardleigh, Frating, Elmstead, Brightlingsea and St Osyth.....	29
Figure A.5 – Trends in Number of NO ₂ 1-Hour Means > 200 µg/m ³	31
Figure A.6 – Trends in Number of 24-Hour Mean PM ₁₀ Results > 50µg/m ³	34
Figure A.7 – Trends in PM _{2.5} Concentrations.....	36
Figure D.1 – Map of Non-Automatic Monitoring Site.....	42

Tables

Table 2.2 – Progress on Measures to Improve Air Quality.....	5
Table A.1 – Details of Automatic Monitoring Sites	16
Table A.2 – Details of Non-Automatic Monitoring Sites	17
Table A.3 – Annual Mean NO ₂ Monitoring Results: Automatic Monitoring (µg/m ³).....	21
Table A.4 – Annual Mean NO ₂ Monitoring Results: Non-Automatic Monitoring (µg/m ³)	22
Table A.5 – 1-Hour Mean NO ₂ Monitoring Results, Number of 1-Hour Means > 200µg/m ³	30
Table A.6 – Annual Mean PM ₁₀ Monitoring Results (µg/m ³)	32
Table A.7 – 24-Hour Mean PM ₁₀ Monitoring Results, Number of PM ₁₀ 24-Hour Means > 50µg/m ³	33
Table A.8 – Annual Mean PM _{2.5} Monitoring Results (µg/m ³).....	35
Table B.1 – NO ₂ 2023 Diffusion Tube Results (µg/m ³)	37
Table C.1 – Annualisation Summary (concentrations presented in µg/m ³).....	40
Table C.2 – Bias Adjustment Factor	40

Table E.1 – Air Quality Objectives in England54

1 Local Air Quality Management

This report provides an overview of air quality in Tendring during 2023. 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 Tendring District Council to improve air quality and any progress 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.

Tendring District Council does not have any declared AQMAs.

An Air Quality Strategy is under development to prevent and reduce polluting activities. Currently Tendring District Council are working together with Essex County Council to produce and potentially adopt a joint Essex Air Quality Strategy.

2.2 Progress and Impact of Measures to address Air Quality in Tendring

Defra's appraisal of last year's ASR concluded:

'TDC enjoys generally good air quality and as a result do not have any designated air quality management areas (AQMAs) within their jurisdiction.

Automatic monitoring of NO₂ was undertaken at one site during 2022, in St Osyth. An annual mean NO₂ concentration of 9 µg/m³ was reported for 2022, significantly below the AQO. In April 2022, this site also started measuring PM₁₀ and PM_{2.5}. The annual mean PM₁₀ concentration at this site in 2022 was 12 µg/m³, well within the AQO. The annual mean PM_{2.5} concentration at the site was 7 µg/m³ for 2022, also below the AQO.

Non-automatic (passive) monitoring of NO₂ was undertaken at 41 sites in 2022. 12 sites were added between 2021 and 2022. Additional tubes have been installed around junction of North Road, Old Road and St Johns Road, Great Clacton, where high concentrations have been recorded in previous years. A maximum annual NO₂ concentration of 30.5 µg/m³ was recorded by DT45, located at the junction of North Road, Old Road and St Johns Road, Great Clacton. This value is below the AQO. However, the Council notes that the majority of monitoring locations reported a slight increase in concentrations of NO₂ for 2022 relative to 2021.

The Council has a robust QAQC process, calculations were appropriately applied, and description given in text. Both the automatic monitor and diffusion tubes achieved data capture of 75% or higher, therefore annualisation was not required. A national bias adjustment factor of 0.76 was applied to diffusion tube data in 2022. Due to concentrations at all sites being less than 36 µg/m³, there is no requirement for distance correction where sites are not positioned at locations of relevant exposure.

From 2023 those authorities who have not had to designate AQMAs and produce AQAPs will be required to draw up a local Air Quality Strategy. These strategies will not have a set format and authorities will be able to draw on content within their ASRs and local transport plans to produce them. The local Air Quality Strategy requirement aims to encourage local authority prevention and reduction of polluting activities in preference to only taking steps to reduce air pollution once exceedances have been identified. The Council has stated its intention to produce and implement an Air Quality Strategy.

Defra recommends that Directors of Public Health approve draft ASRs. Sign off is not a requirement, however collaboration and consultation with those who have responsibility for Public Health is expected to increase support for measures to improve air quality, with co-benefits for all. Please bear this in mind for the next annual reporting process.

On the basis of the evidence provided by the local authority the conclusions reached are accepted for all sources and pollutants. Following the completion of this report, Tendring District Council should submit an Annual Status Report in 2024.'

Tendring District Council acknowledges all the comments from Defra's appraisal of last year's ASR.

Tendring District Council has taken forward several direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1. 18 measures are included within Table 2.1, with the type of measure and the progress Tendring District Council have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

Tendring District Council worked to implement these measures in partnership with the following stakeholders during 2023:

- Neighbouring local Councils
- Essex County Council

Tendring's priority for the coming year is to maintain good levels of air quality within the district below the national air quality objectives.

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

- TDC Air Quality Strategy / adopt a joint Essex Air Quality Strategy
- Updates to be made to TDC website in relation to air quality information, bonfires, log burners, promotion of electric vehicles, cycling and walking initiatives, and sustainable transport

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	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
1	Promote, educate and provide high quality information and guidance on air quality	Public Information	Via leaflets, Internet and social media	2018	Ongoing	Local Authority Environmental Health	TDC	No	Funded	< £10k	Implementation	Reduced emissions due to improved awareness	Number of views and engagement on TDC website/Essex Air and number of air quality enquires	Continuing to update the TDC website with any air quality new information or legislation	-
2	Promote walking and cycling initiatives, and public transport	Promoting Low Emission Transport	Via the Internet and social media	2023	2024	Local Authority Environmental Health	TDC ECC	No	Partially funded	£10k - £50k	Implementation	Preventable emissions Reduced emissions	Reduced number of car journeys in Tendring	9.69 billion vehicle miles were travelled on roads in Essex in 2023. Increase from last year (DfT)	In process of updating TDC website
3	Promote green waste services and discourage use of bonfires	Public Information	Via leaflets, Internet and social media	2023	Ongoing	Local Authority Environmental Health, Local Authority Waste Dept.	TDC	No	Funded	£10k - £50k	Implementation	Reduced emissions from outdoor burning	Tonnage of green waste collected by TDC Number of bonfire complaints investigated	7096.52 tonnes of green waste collected in 2023 29 complaints investigated in relation to nuisance smoke from commercial and domestic bonfires in 2023 1 formal abatement notice served for waste related burning in 2023	Garden waste service promoted in Council tax renewal letters Updates to be made to TDC website and Environmental Protection advisory letters
4	Promote Defra's Burn Better, Breathe Better	Public Information Promoting Air Quality and awareness	Via TDC website, social media and leaflets	2023	Ongoing	Local Authority Environmental Health	TDC	No	Funded	< £10k	Implementation	Reduced emissions from log burners and open fires, and reduce the negative impact from log burners and open fires can have on health	Number of nuisance smoke from commercial and domestic chimneys investigated	The Environmental Protection team investigated 6 complaints relating to nuisance smoke from commercial and domestic chimneys. Defra's Burn Better advice leaflet given.	TDC may look to implement a new smoke control zone Updates to be made to TDC website
5	Regulation of Part B and Part 2(A) Environmental Permits	Environmental Permits	Other	Ongoing	Ongoing	Local Authority Environmental Health	TDC	No	Funded	< £10k	Implementation	Preventable emissions	Reduced emissions, particularly PM	No complaints received in 2023	Continuing to ensure operators compliance with Environmental Permits and encourage good practice regarding control of PM
6	Identify traffic 'bottlenecks'	Traffic Management	Other	2018	Ongoing	Local Authority Environmental Health	TDC	No	Funded	< £10k	Implementation	Not quantifiable	Number of monitoring sites	6 new monitoring locations in 2023	-
7	Responding to planning consultations considering air quality impacts	Policy Guidance and Development Control	Air Quality and Planning Guidance	2018	Ongoing	Local Authority Environmental Health	TDC	No	Funded	£10k - £50k	Implementation	Preventable emissions	Respond to planning consultations within timescale	The Environmental Protection team responded to 437 planning consultations in 2023	TDC may look to produce an Air Quality guidance for Planning
8	Implementation of air quality policies in the local plan	Policy Guidance and Development Control	Air Quality and Planning Guidance	2021	Ongoing	Local Authority Environmental Health and Planning Department	TDC	No	Funded	£10k - £50k	Implementation	Preventable emissions	Measures designed to encourage sustainable travel such as better public transport provisions, car clubs, electric vehicle charging	The Environmental Protection team responded to 437 planning consultations in 2023	-

Measure No.	Measure Title	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
													points and provision of cycle links and foot ways		
9	The Essex Pollution Group shares knowledge and best practices	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	2012	Ongoing	Local Authority Environmental Health and other Essex local authorities	TDC	No	Funded	< £10k	Implementation	Not quantifiable	Attend Essex Pollution Group meetings every 3 months	All meetings attended by Environmental Protection team	-
10	Home working policy	Policy Guidance and Development Control	Low Emissions Strategy	2018	2019	Local Authority Environmental Health	TDC	No	Funded	< £10k	Completed	Reduced vehicle use	Number of TDC staff working from home	TDC Remote Working Policy implemented in Jan 2019	Home working numbers at TDC remain high in 2023
11	Member of Essex Air	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop area wide Strategies to reduce emissions and improve air quality	2011	Ongoing	Local Authority Environmental Health and other Essex Local Authorities	TDC	No	Funded	< £10k	Completed	Not quantifiable	-	-	New Essex Air website launched in 2023
12	Climate Change Emergency Declaration	Policy Guidance and Development Control	Air Quality and Planning Guidance	2019	2030	Local Authority Environmental Health	TDC	No	Funded	£1 million - £10 million	Implementation	Preventable emissions Reduced emissions	Reduction in carbon emissions	Reduction in carbon emissions in comparison to previous year 2021/2022: 4,297 tCO ₂ e 2022/2023: 3,909 tCO ₂ e	-
13	Installation of EV charging points within TDC carparks	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to promote Low Emission Vehicles and EV charging	2017	Ongoing	TDC	TDC	No	Partially funded	£1m - £10m	Implementation	Reduced emissions	Number of EV charging points in TDC carparks	8 new EV charging points within TDC carparks during 2023	-
14	Electric Vehicle Charge Point Strategy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2022	2023	TDC	TDC	No	Funded	< £10k	Completed	Preventable emissions	Strategy produced	Completed	-
15	Increase the number of EVs in the Council's fleet	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2018	Ongoing	Local Authority Environmental Health, Local Authority Transport Dept.	TDC	No	Funded	£1 million - £10 million	Implementation	Preventable emissions	Number of Electric Vehicles	TDC have one electric van in their fleet	-
16	Encourage the use of electric vehicles	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging Via the Internet and social media	2023	2024	Local Authority Environmental Health, Local Authority Transport Dept	TDC	No	Funded	< £10k	Planning	Preventable emissions Reduced emissions	Number of EVs in Tendring	324 ultra-low emission vehicles (ULEVs) were licensed in Tendring 2020 – 102 more than 2019 (DfT)	-
17	Air Quality Strategy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2022	2024	Local Authority Environmental Health	TDC	No	Funded	< £10k	Planning	Preventable emissions Reduced emissions	Strategy produced and implemented	Implementation on-going	Liaising with Essex County Council to produce/adopt a joint Essex Air Quality Strategy

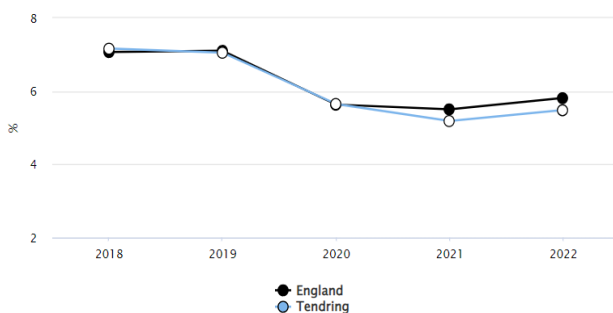
Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
18	Clean Air Day campaign	Promoting Air Quality and awareness Public Information	Via the Internet and social media	2022	2023	Local Authority Environmental Health	TDC	No	Funded	< £10k	Completed	Reduced emissions due to improved awareness	Behaviour change	Social media campaigns	-

2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy⁶, local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter (PM_{2.5}). There is clear evidence that PM_{2.5} (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Tendring District Council have not identified any PM_{2.5} hotspots areas in 2023 and therefore do not monitor PM_{2.5}.

Tendring District Council notes the Public Health Outcomes Framework. The Public Health Indicators for PM_{2.5} provides a useful indication as to the burden associated with concentrations of PM_{2.5} within the local authority area. The latest available data (2022) shows the fraction of mortality attributable to particulate air pollution in Tendring is 5.5% and concentrations of PM_{2.5} within Tendring is 7.3 µg/m³.



Recent trend: Could not be calculated

Period	Count	Tendring			England
		Value	95% Lower CI	95% Upper CI	
2018	-	7.2%	-	-	7.1%
2019	-	7.1%	-	-	7.1%
2020	-	5.6%	-	-	5.6%
2021	-	5.2%	-	-	5.5%
2022	-	5.5%	-	-	5.8%

Source: Background annual average PM_{2.5} concentrations for the year of interest are modelled on a 1km x 1km grid using an air dispersion model, and calibrated using measured concentrations taken from background sites in Defra's Automatic Urban and Rural Network (<https://uk-air.defra.gov.uk/interactive-map>). By approximating LA boundaries to the 1km by 1km grid, and using census population data, population weighted background PM_{2.5} concentrations for each lower tier LA are calculated. This work is completed under contract to Defra, as a small extension of its obligations under the Ambient Air Quality Directive (2008/50/EC). Concentrations of total PM_{2.5} are used for estimating the mortality burden attributable to particulate air pollution (COMEAP, 2022).

Indicator	Period	Tendring			England			
		Recent Trend	Count	Value	Value	Worst/Lowest	Range	Best/Highest
Gastrointestinal infection								
Fraction of mortality attributable to particulate air pollution (old method)	2021	-	-	5.2%	5.5%	3.5%		7.2%
Fraction of mortality attributable to particulate air pollution (new method)	2022	-	-	5.5%	5.8%	2.5%		8.3%
Air pollution: fine particulate matter (new method - concentrations of total PM _{2.5}) New data	2022	-	-	7.3	7.8	11.2		3.2

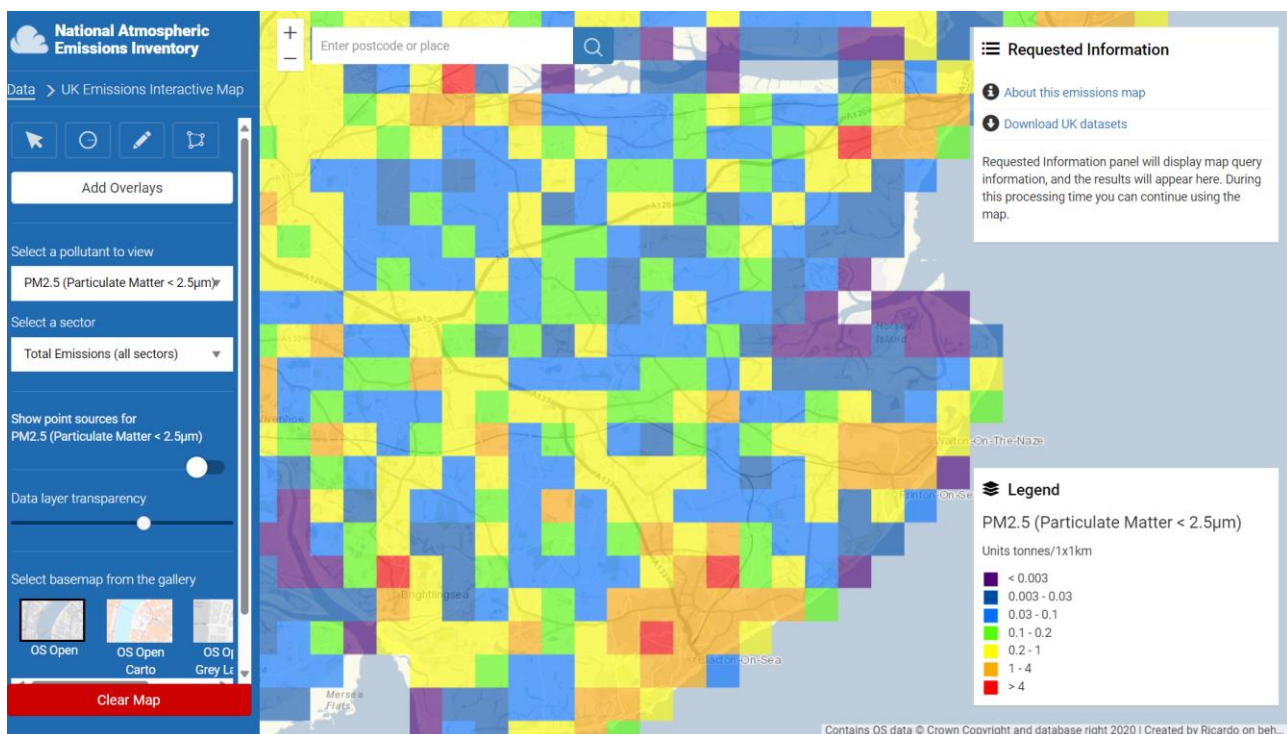
⁶ Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

Within Tendring there are no designated Smoke Control Areas.

During 2023, Tendring District Council's Environmental Protection team received 29 complaints relating to nuisance smoke from commercial and domestic bonfires, and 6 complaints relating to nuisance smoke from commercial and domestic chimneys. The Environmental Protection team served one formal abatement notice under Section 80 of Environmental Protection Act 1990 in relation to statutory smoke nuisance in 2023. As well as enforcement action, the Council promotes its green garden waste service to discourage bonfires across the district.

Tendring District Council are taking the following measures to address PM_{2.5} and other pollutants by:

- In the absence of PM_{2.5} monitoring Tendring District Council use the National Atmospheric Emission Inventory to review the maximum background annual mean PM_{2.5} concentrations within the district



- Tendring District Council's Environmental Protection team ensure where necessary PM_{2.5} air quality assessments are submitted in support of planning applications
- The Environmental Protection team undertake regular inspections of permitted industry where combustion and non-combustion processes could lead to anthropogenic emissions of PM_{2.5}

- The Essex Air twitter account is encouraging the reporting of excessively smoky vehicle exhaust emissions through the DVSA reporting service. It is possible to report either heavy goods vehicles or public service vehicles (buses)

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

This section sets out the monitoring undertaken within 2023 by Tendring District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2019 and 2023 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Bureau Veritas undertook automatic (continuous) monitoring at one site during 2023 within Tendring. Table A.1 in Appendix A shows the details of the automatic monitoring sites.

NB. Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem.

The [UK-Air](#) website presents automatic monitoring results within Tendring.

Maps showing the location of the monitoring locations 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.

The monitoring of NO₂ hourly mean concentrations within Tendring was undertaken by Bureau Veritas as part of the Automatic Urban and Rural Network (AURN).

The monitoring of PM₁₀ within Tendring was undertaken by Bureau Veritas as part of the Automatic Urban and Rural Network (AURN).

The monitoring of PM_{2.5} within Tendring was undertaken by Bureau Veritas as part of the Automatic Urban and Rural Network (AURN).

3.1.2 Non-Automatic Monitoring Sites

Tendring District Council undertook non-automatic (i.e. passive) monitoring of NO₂ at 45 sites during 2023. Table A.2 in Appendix A presents the details of the non-automatic sites. Six new monitoring locations were added across Tendring in 2023.

Maps showing the location of the monitoring sites are provided in Appendix D and available on [Essex Air](#).

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.

All non-automatic monitoring data presented has been properly ratified and corrected for bias where applicable.

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 compares the ratified and adjusted monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40µg/m³. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2023 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 NO₂ hourly mean concentrations for the past five years with the air quality objective of 200µg/m³, not to be exceeded more than 18 times per year.

The monitoring data found no exceedances of the NO₂ 1-hour mean air quality objective of 200µg/m³. Figure A.5 shows the trends in NO₂ 1-Hour mean concentrations.

The monitoring data found no exceedances of the NO₂ annual mean air quality objective of 40 µg/m³.

Except for two monitoring sites, the non-automatic monitoring data found concentrations of NO₂ have slightly decreased or remained stable across the majority of Tendring. The two monitoring sites, DT48 and DT58, increased slightly in comparison to previous years. In previous years concentrations of NO₂ has increased steadily across the district.

The two monitoring sites, DT48 and DT58 increased slightly in comparison to previous years. DT48 is located at Harwich Quay, the main source of pollution is from port and industrial emissions, as well as road traffic. DT58 is located at the busy junction and mini roundabout at North Road, Clacton on Sea, it is heavily congested by road traffic throughout the day and during rush hours.

There were a few high concentrations of NO₂ noted at several monitoring sites throughout Tendring (DT40, DT48, DT49 and DT58).

At Clacton Road, St Osyth (DT40) a high concentration of NO₂, 64.7µg/m³, was recorded in December 2023. DT40 is located at a busy cross junction and the main source of pollution is from road traffic.

DT48 and DT49 are located at Harwich Quay and Harwich International measuring emissions from port activities and road traffic. Both high NO₂ concentrations were recorded in December 2023 (43.5µg/m³ and 51.5µg/m³).

DT58 recorded occasional high concentrations of NO₂ throughout the year (40.2µg/m³, 41.8µg/m³ and 49.2µg/m³) however overall did not exceed the annual air quality objective. The North Road junction in Clacton on Sea has been an area of concern over the last few years. Tendring District Council have increased the number of monitoring sites in this area due to the high levels of congestion and high levels of air pollution. The monitoring site is at a busy junction and mini roundabout, with residential properties close by the roadside.

3.2.2 Particulate Matter (PM₁₀)

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM₁₀ annual mean concentrations for the past five years with the air quality objective of 40µg/m³.

Table A.7 in Appendix A compares the ratified continuous monitored PM₁₀ daily mean concentrations for the past five years with the air quality objective of 50µg/m³, not to be exceeded more than 35 times per year.

There were no exceedances of the PM₁₀ air quality objectives. The rural background levels of PM₁₀ remain low within St Osyth. The 2023 annual mean was 11.9µg/m³, which is a very slight decrease in comparison to last year's result (12 µg/m³).

Figure A.6 shows the trends of 24-Hour Mean PM₁₀ concentrations.

3.2.3 Particulate Matter (PM_{2.5})

PM_{2.5} is the pollutant which has the biggest impact on public health and on which the Public Health Outcomes Framework (PHOF) indicator is based.

Table A.8 in Appendix A presents the ratified and adjusted monitored PM_{2.5} annual mean concentrations for the past five years.

There were no exceedances of the PM_{2.5} air quality objectives. The rural background levels of PM_{2.5} remain low within St Osyth. The 2023 annual mean was 7.6 µg/m³, which is a slight increase in comparison to last year's result (7 µg/m³).

Figure A.7 shows the trends in PM_{2.5} concentrations.

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)
CM1	St Osyth	Rural Background	610430	213198	Ozone Nitric oxide Nitrogen dioxide Nitrogen oxides as nitrogen dioxide PM10 particulate matter (Hourly measured) PM2.5 particulate matter (Hourly measured)	No	Chemiluminescent	896	98	4

Notes:

(1) 0m 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) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT29	Clacton Town Centre – Pier Avenue	Roadside	617397	214882	NO ₂	No	0	4	No	2.5
DT55	Clacton Town Centre – Station Road	Roadside	617569	214716	NO ₂	No	0	2.2	No	2.5
DT61	Carnarvon Road, Clacton on Sea	Roadside	617873	214807	NO ₂	No	6	0.5	No	2.5
DT30	Clacton Seafront / Hospital	Roadside	617232	214219	NO ₂	No	7	2.8	No	2.5
DT11	1 – Clacton Town Hall	Urban Background	617272	215021	NO ₂	No	29	9	No	2.5
DT12	2 – Clacton Town Hall	Urban Background	617272	215021	NO ₂	No	29	9	No	2.5
DT13	3 – Clacton Town Hall	Urban Background	617272	215021	NO ₂	No	29	9	No	2.5
DT22	1 – Wellesley Road, Clacton on Sea	Roadside	617451	215385	NO ₂	No	4.7	2.3	No	2.5
DT41	2 – Wellesley Road, Clacton on Sea	Roadside	617505	215662	NO ₂	No	4.4	2	No	2.5
DT42	Old Road / St Annes Road, Clacton on Sea	Roadside	617336	215793	NO ₂	No	6	1.6	No	2.5
DT56	Old Road / Herbert Road, Clacton on Sea	Roadside	617189	215265	NO ₂	No	2.9	1.2	No	2.5
DT57	St Osyth Road, Clacton on Sea	Roadside	616771	215248	NO ₂	No	3.1	1.6	No	2.5
DT62	Cloes Lane, Clacton on Sea	Roadside	615940	215830	NO ₂	No	8	2.1	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) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT43	Holland Road, Holland on Sea	Roadside	619671	216499	NO ₂	No	6	1	No	2.5
DT31	1 – Valley Road, Clacton on Sea	Roadside	617888	216298	NO ₂	No	5.3	3.4	No	2.5
DT44	2 – Valley Road, Clacton on Sea	Roadside	618007	216281	NO ₂	No	10	2.3	No	2.5
DT63	20 St Johns Road, Clacton on Sea	Roadside	617551	216502	NO ₂	No	10	1.3	No	2.5
DT64	5 North Road, Clacton on Sea	Roadside	617610	216550	NO ₂	No	10	2.3	No	2.5
DT45	1 – North Road junction	Roadside	617618	216487	NO ₂	No	3	1.2	No	2.5
DT58	2 – North Road junction	Roadside	617654	216434	NO ₂	No	3.2	1	No	2.5
DT32	London Road, Clacton on Sea	Roadside	617143	216143	NO ₂	No	8	1	No	2.5
DT65	St Johns Road Shops, Clacton on Sea	Roadside	615919	216337	NO ₂	No	8	2.3	No	2.5
DT14	A133 Clacton Bypass	Roadside	616163	218287	NO ₂	No	11	2.8	No	3
DT33	High Street, Thorpe Le Soken	Roadside	617887	222370	NO ₂	No	0	2.3	No	2.5
DT46	Landermere Road, Thorpe Le Soken	Roadside	618042	222315	NO ₂	No	1.5	1.5	No	2.5
DT66	Halstead Road, Kirby Le Soken	Roadside	621963	221025	NO ₂	No	6	1.6	No	2.5
DT47	Frinton Road, Kirby Le Soken	Roadside	621992	220859	NO ₂	No	4.5	2.2	No	2.5
DT34	Connaught Avenue, Frinton on Sea	Roadside	623643	220058	NO ₂	No	0	3.4	No	2.5
DT23	Walton Road, Walton on the Naze	Roadside	625163	221687	NO ₂	No	20	1.5	No	2.5
DT9	Harwich Hospital, Main Road	Roadside	624294	231258	NO ₂	No	14	4	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) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT21	1 – High Street, Harwich	Roadside	625600	231601	NO ₂	No	0	2.2	No	2.5
DT59	2 – High Street, Harwich	Roadside	625464	231556	NO ₂	No	0	2.5	No	2.5
DT48	The Quay, Harwich	Industrial	625977	232866	NO ₂	No	25	2.3	No	2.5
DT49	Harwich International	Industrial	623978	231633	NO ₂	No	365	n/a	No	2.5
DT20	A120 Hempstall Farm	Roadside	612619	227395	NO ₂	No	243	1	No	2.5
DT35	High Street, Manningtree	Roadside	610596	231858	NO ₂	No	0	2	No	2.5
DT36	Cox's Hill, Manningtree	Roadside	609595	232190	NO ₂	No	5.3	2.6	No	2.5
DT37	Long Road, Manningtree	Roadside	609537	231036	NO ₂	No	4	2.5	No	2.5
DT50	Harwich Road, Ardleigh	Roadside	605355	229466	NO ₂	No	3	1.8	No	2.5
DT60	The Old Post Office, Main Road, Frating	Roadside	609093	223293	NO ₂	No	5.2	4	No	2.5
DT38	A133 Colchester Road, Elmstead	Roadside	606168	224553	NO ₂	No	3.5	3	No	2.5
DT51	Main Road, Alresford	Roadside	606666	221895	NO ₂	No	3.7	2	No	2.5
DT39	Church Road, Brightlingsea	Roadside	608285	217741	NO ₂	No	10	1.8	No	2.5
DT52	Brightlingsea Quay	Industrial	608499	216315	NO ₂	No	2	2	No	2.5
DT53	Spring Road, St Osyth	Roadside	612322	215566	NO ₂	No	3	2.3	No	2.5
DT40	1 – Clacton Road, St Osyth	Roadside	612328	215659	NO ₂	No	0.5	1.3	No	2.5
DT54	2 – Clacton Road, St Osyth	Roadside	612413	215696	NO ₂	No	2	2	No	2.5

Notes:

- (1) 0m 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 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
CM1	610430	213198	Rural Background	99	99	13	8	8	9	7.3

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.

Where exceedances of the NO₂ annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2023.

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO₂ annual mean objective of 40µg/m³ 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 (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
DT29	617397	214882	Roadside	91.6	91.6	-	16.4	19.3	19.1	16.1
DT55	617569	214716	Roadside	75	75	-	-	-	20.9	17.8
DT61	617873	214807	Roadside	91.6	91.6	-	-	-	-	15.7
DT30	617232	214219	Roadside	100	100	-	16.8	17.6	20	15.8
DT11	617272	215021	Urban Background	91.6	91.6	14	11	12.2	13.1	11.9
DT12	617272	215021	Urban Background	91.6	91.6	13.7	-	-	13.2	12.2
DT13	617272	215021	Urban Background	100	100	13.8	-	-	13.4	12.6
DT22	617451	215385	Roadside	91.6	91.6	19	25.6	28.2	27.9	25.7
DT41	617505	215662	Roadside	100	100	-	-	23.2	22.2	19.1
DT42	617336	215793	Roadside	91.6	91.6	-	-	31.5	27.6	24.2
DT56	617189	215265	Roadside	100	100	-	-	-	20.7	18.1
DT57	616771	215248	Roadside	100	100	-	-	-	21.9	18.1
DT62	615940	215830	Roadside	100	100	-	-	-	-	14.3
DT43	619671	216499	Roadside	91.6	91.6	-	-	17.4	16.2	14.3
DT31	617888	216298	Roadside	91.6	91.6	-	24	26.6	25.7	22.9
DT44	618007	216281	Roadside	91.6	91.6	-	-	24.3	25.6	20.6
DT63	617551	216502	Roadside	91.6	91.6	-	-	-	-	18.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
DT64	617610	216550	Roadside	100	100	-	-	-	-	18.5
DT45	617618	216487	Roadside	100	100	-	-	31.5	30.4	25.0
DT58	617654	216434	Roadside	100	100	-	-	-	24.3	26.3
DT32	617143	216143	Roadside	100	100	-	16	23.4	22.9	19.6
DT65	615919	216337	Roadside	100	100	-	-	-	-	20.1
DT14	616163	218287	Roadside	91.6	91.6	-	17.4	23.4	23.8	20.4
DT33	617887	222370	Roadside	83.3	83.3	-	17.3	19.8	18.9	15.3
DT46	618042	222315	Roadside	91.6	91.6	-	-	18.3	19.5	16.7
DT66	621963	221025	Roadside	91.6	91.6	-	-	-	-	14.1
DT47	621992	220859	Roadside	100	100	-	-	23.4	24.1	17.8
DT34	623643	220058	Roadside	100	100	-	15.2	14.7	15.3	13.6
DT23	625163	221687	Roadside	83.3	83.3	20.1	15	16.9	19	16.0
DT9	624294	231258	Roadside	100	100	17.4	15.6	16.9	16.2	12.9
DT21	625600	231601	Roadside	100	100	20.3	18.4	18.8	19.1	17.6
DT59	625464	231556	Roadside	100	100	-	-	-	19.7	17.8
DT48	625977	232866	Industrial	91.6	91.6	-	-	19.7	18.3	20.2
DT49	623978	231633	Industrial	100	100	-	-	22.5	21.5	20.7
DT20	612619	227395	Roadside	100	100	20.3	15.8	15.5	15.9	15.3

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
DT35	610596	231858	Roadside	100	100	-	18.2	19	19.1	16.0
DT36	609595	232190	Roadside	100	100	-	15.4	16.7	17.8	16.3
DT37	609537	231036	Roadside	100	100	-	17.9	17.4	17.8	15.3
DT50	605355	229466	Roadside	100	100	-	-	15.9	16	13.4
DT60	609093	223293	Roadside	100	100	-	-	-	17.5	15.8
DT38	606168	224553	Roadside	100	100	-	17.4	18.6	19.2	16.2
DT51	606666	221895	Roadside	100	100	-	-	14.2	13.9	12.2
DT39	608285	217741	Roadside	100	100	-	15	16	16.8	14.1
DT52	608499	216315	Industrial	91.6	91.6	-	-	14	13.7	12.3
DT53	612322	215566	Roadside	91.6	91.6	-	-	14.2	13.7	12.3
DT40	612328	215659	Roadside	100	100	-	22.6	23.5	23.4	23.1
DT54	612413	215696	Roadside	91.6	91.6	-	-	14.7	15	13.5

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.

Notes:

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

Exceedances of the NO₂ annual mean objective of $40\mu\text{g}/\text{m}^3$ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 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 Clacton on Sea

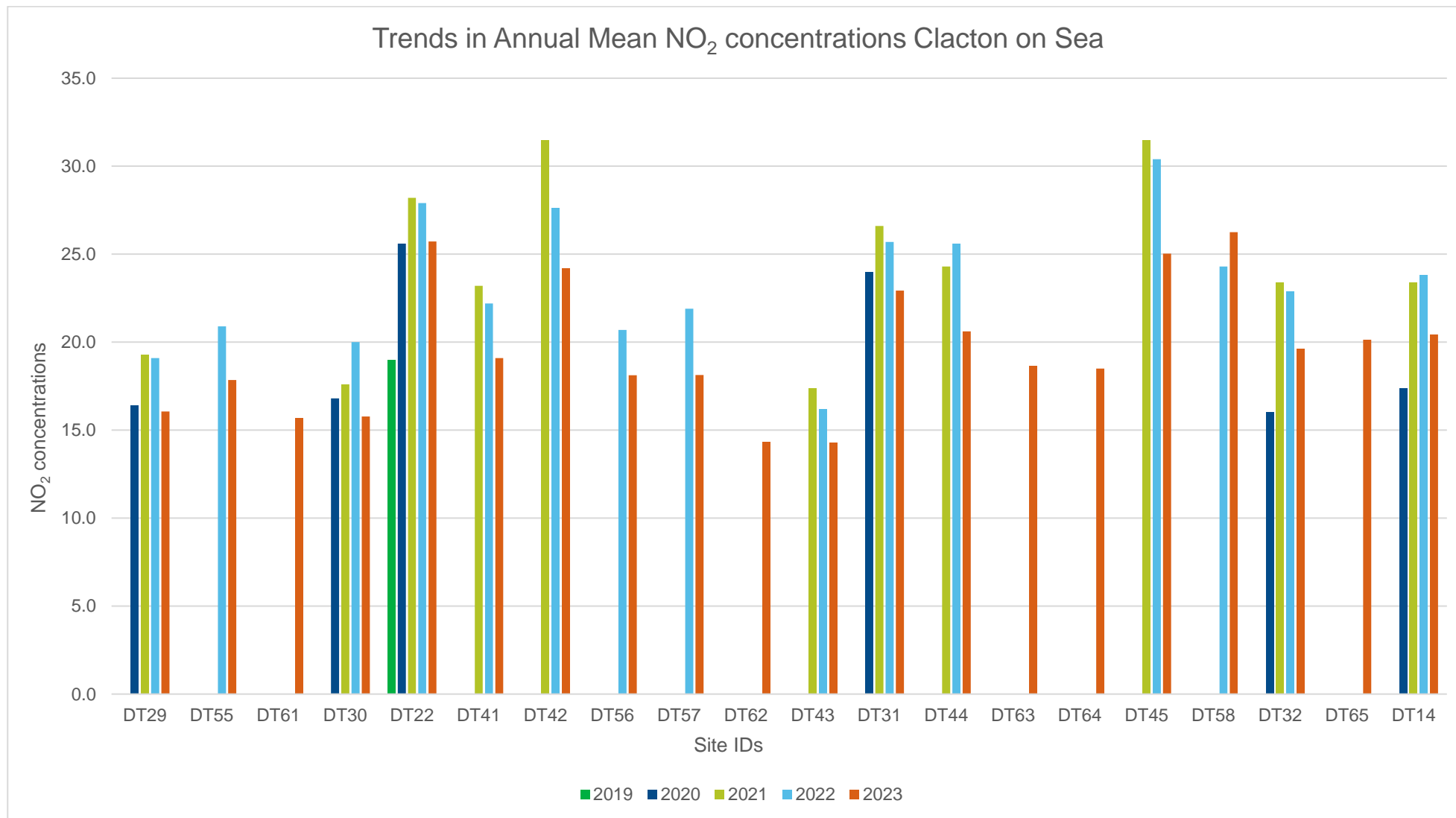


Figure A.2 – Trends in Annual Mean NO₂ Concentrations Thorpe, Kirby, Frinton and Walton

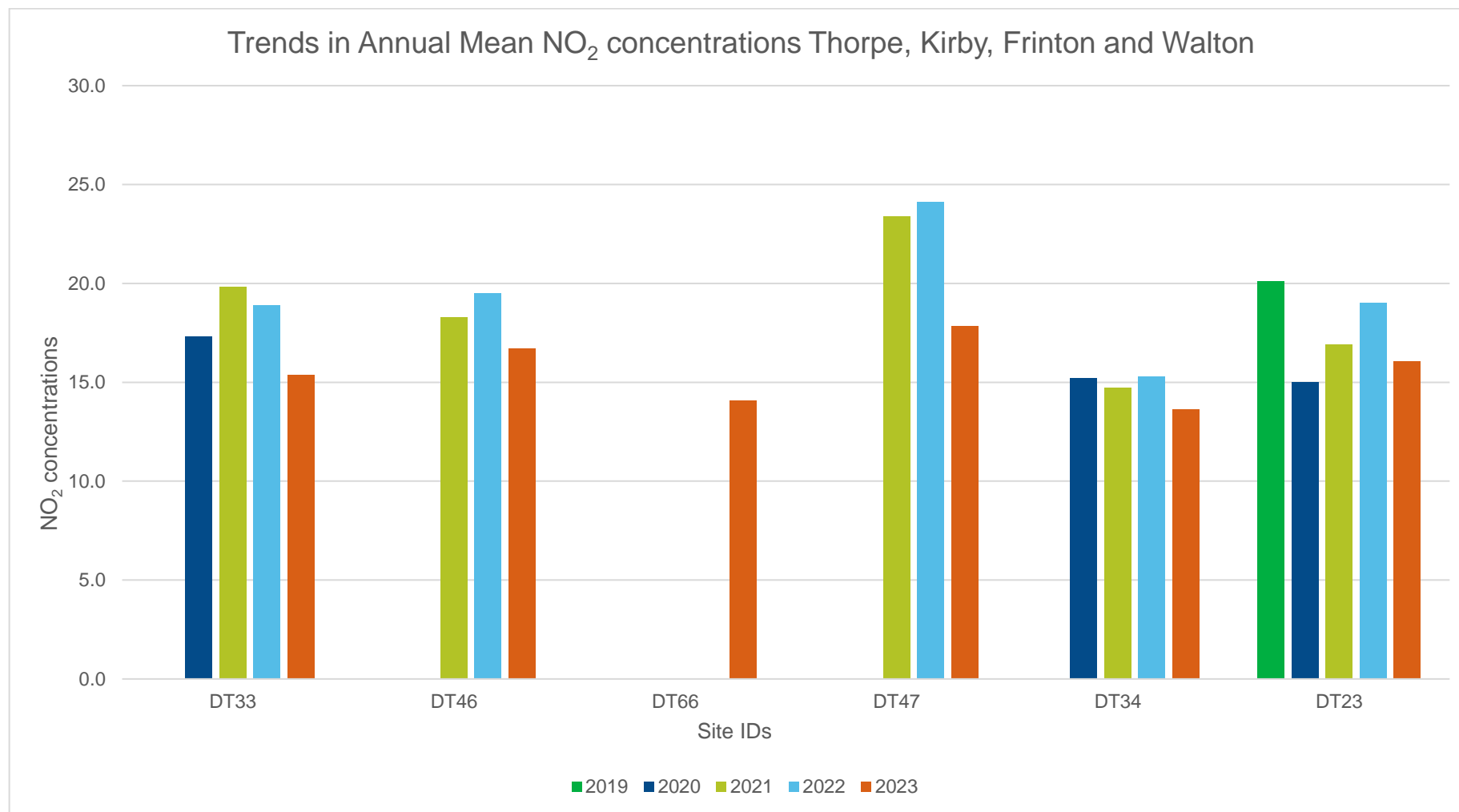


Figure A.3 – Trends in Annual Mean NO₂ Concentrations Harwich and Manningtree

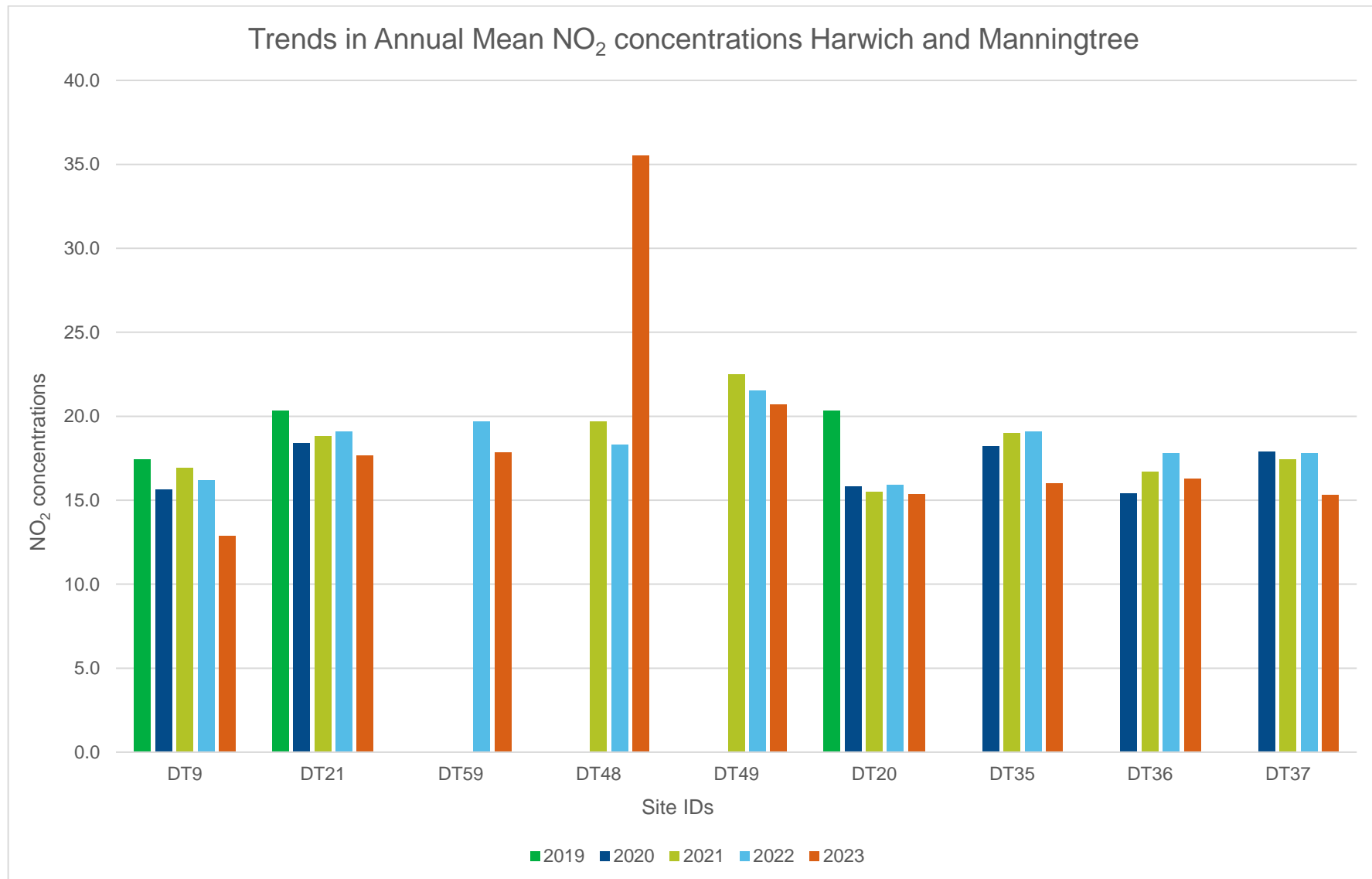


Figure A.4 – Trends in Annual Mean NO₂ Concentrations Ardleigh, Frating, Elmstead, Brightlingsea and St Osyth

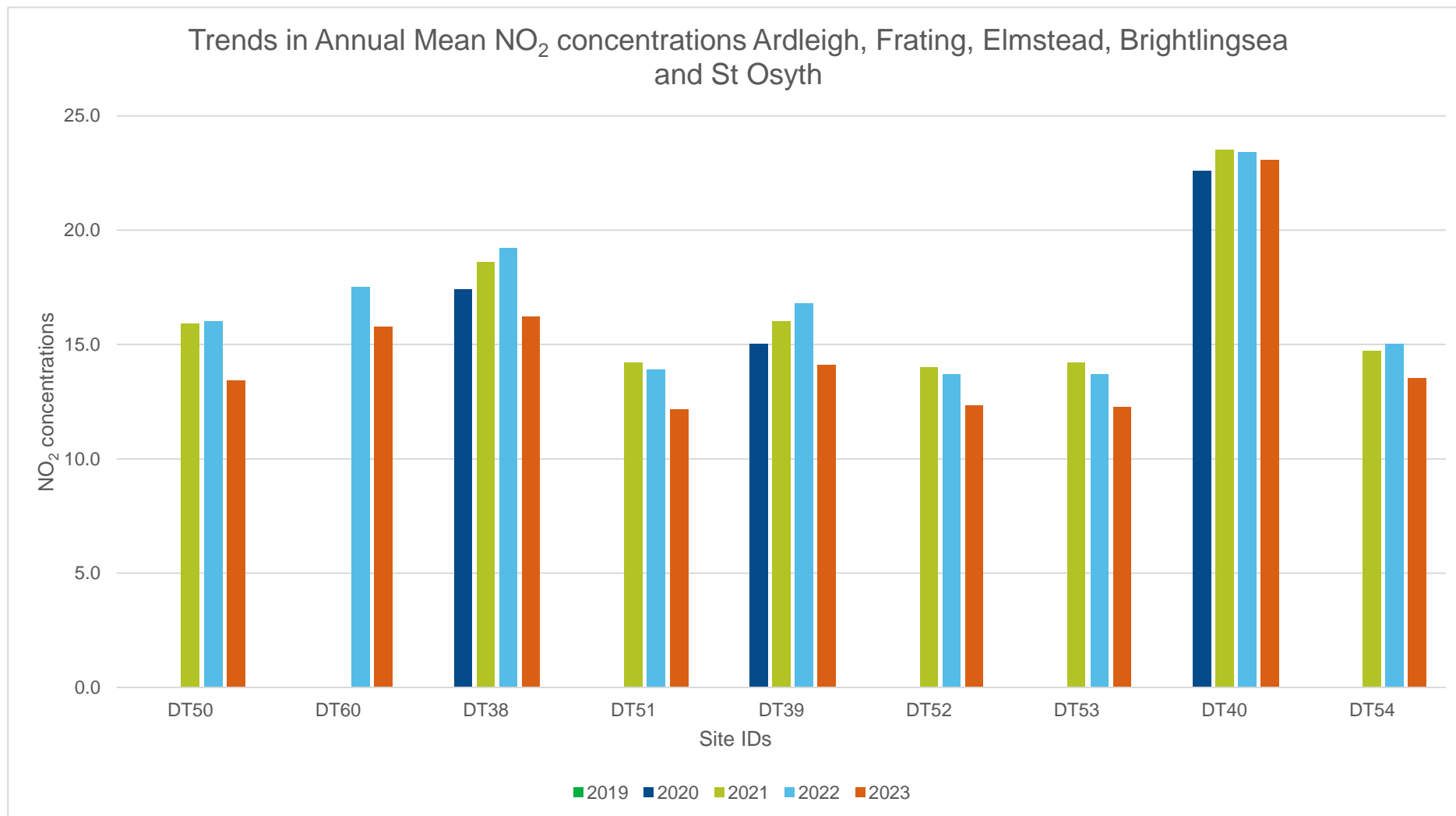


Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
CM1	610430	213198	Rural Background	99	99	-	-	-	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m³ have been recorded.

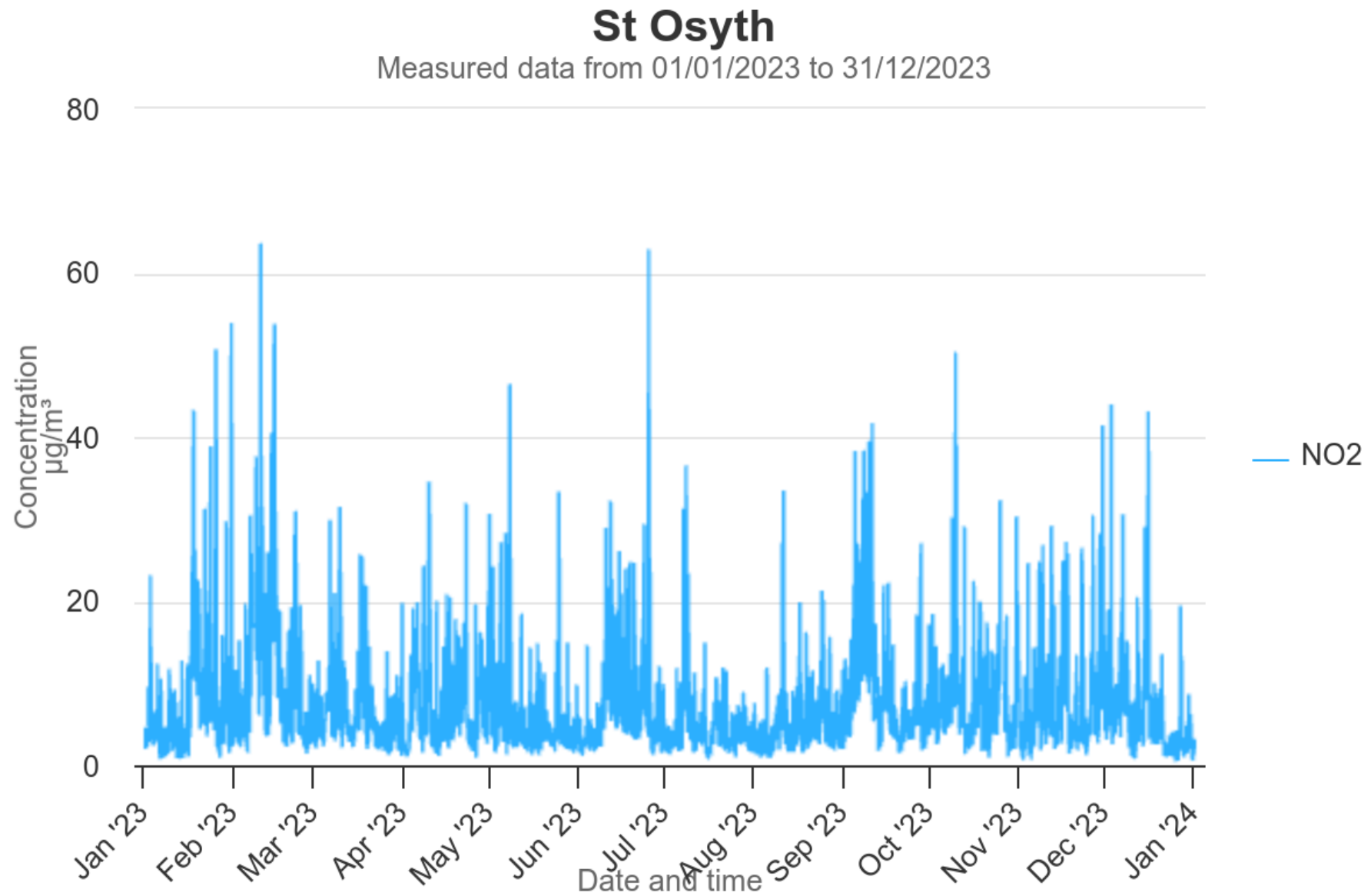
Exceedances of the NO₂ 1-hour mean objective (200µg/m³ not to be exceeded more than 18 times/year) are shown in **bold**.

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%).

Figure A.5 – Trends in Number of NO₂ 1-Hour Means > 200 µg/m



Highcharts.com

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 (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
CM1	610430	213198	Rural Background	99.9	99.9	-	-	-	12	11.9

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

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the PM₁₀ annual mean objective of 40µg/m³ 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%).

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 (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
CM1	610430	213198	Rural Background	99.9	99.9	-	-	-	0	0

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 PM₁₀ 24-hour mean objective (50µg/m³ 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

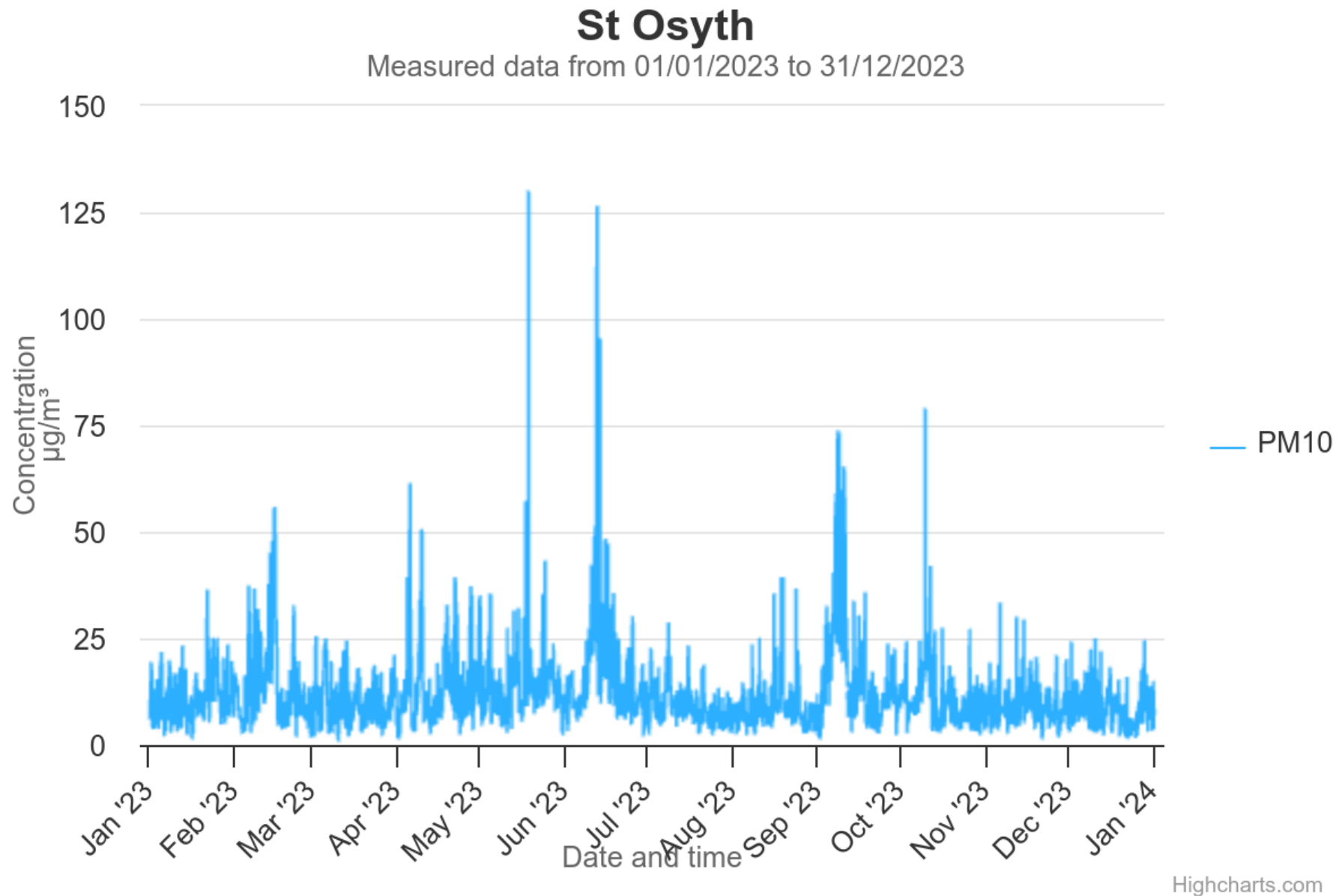


Table A.8 – Annual Mean PM_{2.5} Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
CM1	610430	213198	Rural Background	99.9	99.9	-	-	-	7	7.6

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

Notes:

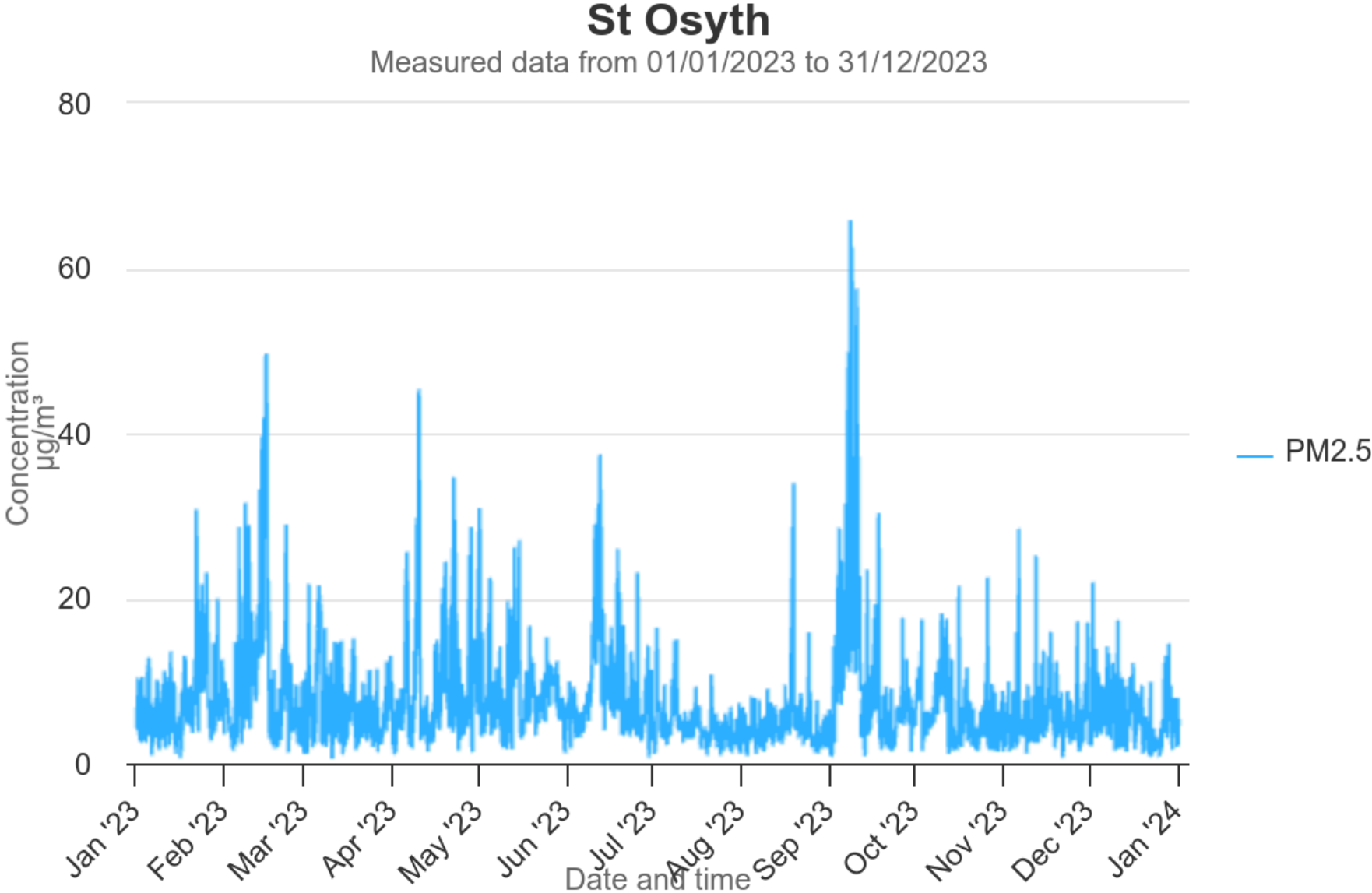
The annual mean concentrations are presented as µg/m³.

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.7 – Trends in PM_{2.5} Concentrations



Highcharts.com

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO₂ 2023 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 (0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT29	617397	214882	27.6	-	20.1	21.5	15.9	18.1	16.9	18.2	23.6	24	25.5	18	20.9	16.8	-	
DT55	617569	214716	30.8	-	-	29.9	24.9	25.1	16.4	-	24.8	22.2	22	12.5	23.2	17.8	-	
DT61	617873	214807	28.4	27.4	18.1	17.1	14.1	18.7	19.8	18.5	-	26	19	17.1	20.4	15.7	-	
DT30	617232	214219	28.5	24.3	19.5	17.3	13.2	20.3	20.6	18.7	22.5	23.7	21	16.3	20.5	15.8	-	
DT11	617272	215021	20.2	26.1	-	13.3	10.5	14.2	11	14.3	13.9	17.1	14.3	14.4	15.4	11.9	-	
DT12	617272	215021	17.3	22.4	18.3	16.3	13	12.5	12	11.7	17.9	14.5	18.9	-	15.9	12.2	-	
DT13	617272	215021	17.9	22.5	17.1	18.6	10	18.3	12.8	14.9	18.9	16	16.2	12.4	16.3	12.6	-	
DT22	617451	215385	-	33	33.2	38.8	30.9	31.5	32.4	33.1	36.8	38.8	33.5	25.5	33.4	25.7	-	
DT41	617505	215662	36.8	23.2	22.8	25.4	16.4	19.9	20.3	21	28.4	29.2	33	21.2	24.8	19.1	-	
DT42	617336	215793	39.6	39.2	30.4	37	21	28.8	31	29.9	31.5	29.4	-	27.8	31.4	24.2	-	
DT56	617189	215265	29.2	24.3	20	29.4	23	23.2	18.6	22.6	26.3	23.3	23.1	19.3	23.5	18.1	-	
DT57	616771	215248	28.3	30.8	23.4	30	14.8	21.7	21	22.6	28.4	20.1	24.9	16.6	23.6	18.1	-	
DT62	615940	215830	22.5	25	17.1	22.5	16.4	18.2	11.7	13.7	19.9	16.6	22.5	17.4	18.6	14.3	-	
DT43	619671	216499	27.7	19.7	15.9	-	13.5	17.2	17.4	14.8	19.4	16.7	25	16.8	18.6	14.3	-	
DT31	617888	216298	33.7	-	28.3	29.6	24.4	28.5	25.3	29	35	36.4	32.3	25	29.8	22.9	-	
DT44	618007	216281	30.5	33.5	27.2	13.3	-	23.6	25.7	26.9	33.3	33.4	26.2	20.9	26.8	20.6	-	
DT63	617551	216502	32.2	27.9	23.2	24.8	-	19.5	21.6	22.3	26.8	30.9	25.5	11.7	24.2	18.6	-	
DT64	617610	216550	33.6	22.9	26.9	16.5	20.9	23.4	19	24.7	31.1	25.8	18.6	24.9	24	18.5	-	
DT45	617618	216487	35.8	37.7	24.9	30.3	35.9	34.6	30.7	38.7	34.3	30.5	31.7	25	32.5	25	-	
DT58	617654	216434	40.2	36.9	34.5	49.2	26.2	28.5	27.7	31.6	41.8	38.1	32.1	22.3	34.1	26.3	-	
DT32	617143	216143	32.1	39.8	27.4	13.6	21.8	23	20.9	21.3	29.4	25.4	23.3	28	25.5	19.6	-	
DT65	615919	216337	31.6	34.7	23.6	26	24.2	29.1	20.1	22	30.3	25.6	29.2	17.4	26.2	20.1	-	
DT14	616163	218287	24.2	-	21.3	32.4	35.6	37.4	19.7	28.2	31.3	25.5	20.7	15.6	26.5	20.4	-	
DT33	617887	222370	26	-	21.7	15.7	15.4	20.2	18.4	19.5	24.8	20.8	-	16.8	19.9	15.3	-	
DT46	618042	222315	29.9	27.9	20.6	13.4	17.2	23	18.5	18.8	26.2	23.9	19.4	-	21.7	16.7	-	
DT66	621963	221025	20.6	24	14.8	18.9	-	18.4	13.3	14.7	18.6	20.7	17.2	19.7	18.3	14.1	-	
DT47	621992	220859	25.1	25.3	22.9	28	19.4	20.7	21	20.8	23.8	21.6	29.3	20.1	23.2	17.8	-	

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 (0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT34	623643	220058	24.2	22.8	15.1	19.1	11.1	17.2	14.7	15.2	18.7	18	20.7	15.7	17.7	13.6	-	
DT23	625163	221687	24.9	28.1	18.8	17.4	21.3	25.2	18.4	19.7	-	17.2	-	17.4	20.8	16	-	
DT9	624294	231258	22.6	17.5	17.3	17.3	18.4	20.8	13.1	14.5	19.7	15.6	12.7	11	16.7	12.9	-	
DT21	625600	231601	25.3	26.5	20.1	18.7	20	31.9	18.4	20.8	26.6	25.4	24.3	17	22.9	17.6	-	
DT59	625464	231556	25.7	26.2	20.9	16.9	24.2	29.6	19.4	21	25.3	25.6	23.8	19.2	23.2	17.8	-	
DT48	625977	232866	27.3	29.5	26.3	24.3	25.7	24.3	19.7	-	22.7	243	21.1	43.5	26.2	20.2	-	
DT49	623978	231633	26.2	29.8	21.1	19.5	24.6	23.6	19.2	21.4	29.9	30.8	24.9	51.5	26.9	20.7	-	
DT20	612619	227395	24.4	22.1	17	17.8	19.2	16.4	16	18.7	21.2	22.7	22.1	21.4	19.9	15.3	-	
DT35	610596	231858	29.3	27.1	23.9	17.2	15.8	17.3	19.2	15.9	22.4	24.5	20.4	16.5	20.8	16	-	
DT36	609595	232190	26.5	26	21.8	22.4	14.9	17.6	18	17.9	22.4	26.8	24.6	14.5	21.1	16.3	-	
DT37	609537	231036	20.4	21	20	23.2	15.1	17.3	18.1	18.4	22	24.5	21.1	17.5	19.9	15.3	-	
DT50	605355	229466	23.1	18.4	18.2	18.8	13.6	15.5	14.2	14.3	19.4	20.8	17.3	15.2	17.4	13.4	-	
DT60	609093	223293	23.7	16.7	19	22.1	17	20.3	18.4	18.3	23	27.4	22.7	17.2	20.5	15.8	-	
DT38	606168	224553	28.5	23.9	15	19.4	14.2	17.4	20.9	20.9	25.3	26.2	23.3	17.7	21.1	16.2	-	
DT51	606666	221895	20.5	14.6	14.1	18.2	12.2	12.7	12.6	14.8	16.9	19.8	16.8	16.4	15.8	12.2	-	
DT39	608285	217741	21.9	24.2	17.8	19.2	16.4	17.3	12.5	15.9	19.9	20	21.6	12.9	18.3	14.1	-	
DT52	608499	216315	19.7	20.2	15	14.9	11.1	12.2	13.5	12.9	16.6	18.1	-	22.1	16	12.3	-	
DT53	612322	215566	21.2	21.1	16.8	18.6	11.9	12.9	11.5	13.2	16.3	15.1	16.3	-	15.9	12.3	-	
DT40	612328	215659	31.8	27.2	26.7	24.2	17.7	23.5	24.5	28.5	30.4	33.6	26.8	64.7	30	23.1	-	
DT54	612413	215696	19.2	22.5	15.9	19.1	14.7	16.4	14.7	16.4	20.9	-	16.5	16.8	17.5	13.5	-	

- All erroneous data has been removed from the NO₂ diffusion tube dataset presented in Table B.
- 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.
- Tendring District Council confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 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 Tendring During 2023

Tendring District Council has not identified any new sources relating to air quality within the reporting year of 2023.

Tendring's Environmental Protection team notes the proposal for the construction of an agricultural reservoir involving the extraction, processing and exportation at Lufkins Farm, Great Bentley Road, Frating, CO7 7HN. Tendring District Council will continue to review the proposed development and the impact it may have on the local air quality, in particularly PM₁₀.

Additional Air Quality Works Undertaken by Tendring District Council During 2023

Tendring District Council has not completed any additional works within the reporting year of 2023.

QA/QC of Diffusion Tube Monitoring

Tendring District Council undertook monitoring of Nitrogen Dioxide (NO₂) using diffusion tubes that were supplied and analysed by SOCOTEC Didcot.

All diffusion tubes were analysed in accordance with SOCOTEC's standard operating procedure ANU/SOP/1015. This method meets the guidelines set out in Defra's 'Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance.'

The tubes were prepared by spiking acetone: triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection.

In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a Satisfactory laboratory.

All monitoring was completed in adherence with the 2023 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

Annualisation was required for one non-automatic monitoring site within Tendring. Details of the calculation method undertaken is provided in Table C.1. Annualisation is required for any site with data capture less than 75% but greater than 25%.

Table C.1 – Annualisation Summary (concentrations presented in $\mu\text{g}/\text{m}^3$)

Site ID	Annualisation Factor St Osyth	Annualisation Factor Rochester Stoke	Annualisation Factor Wicken Fen	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
DT55	1.0142	1.0108	1.0244	1.0165	23.2	23.6

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2024 ASR has 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_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Tendring District Council have applied a national bias adjustment factor of 0.77 to the 2023 monitoring data. A summary of bias adjustment factors used by Tendring District Council over the past five years is presented in Table C.2.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.77
2022	National	06/22	0.76
2021	National	03/22	0.78
2020	National	09/19	0.76
2019	National	09/18	0.75

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO₂ fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO₂ concentrations corrected for distance are presented in Table B.1.

No diffusion tube monitoring sites within Tendring required distance correction during 2023.

QA/QC of Automatic Monitoring

There is one automatic (continuous) monitoring site within Tendring. The site is part of the Automatic Urban and Rural Network (AURN) and is operated by Bureau Veritas. Details of calibration, auditing and serving of the automatic monitoring site is not known to Tendring District Council.

The live and historic data is available at: [Data Archive - Defra, UK](#)

Automatic Monitoring Annualisation

All automatic monitoring locations within Tendring 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 NO₂ concentration at the nearest location relevant for exposure has been estimated using the NO₂ fall-off with distance calculator available on the LAQM Support website.

No automatic monitoring locations within Tendring required distance correction during 2023.

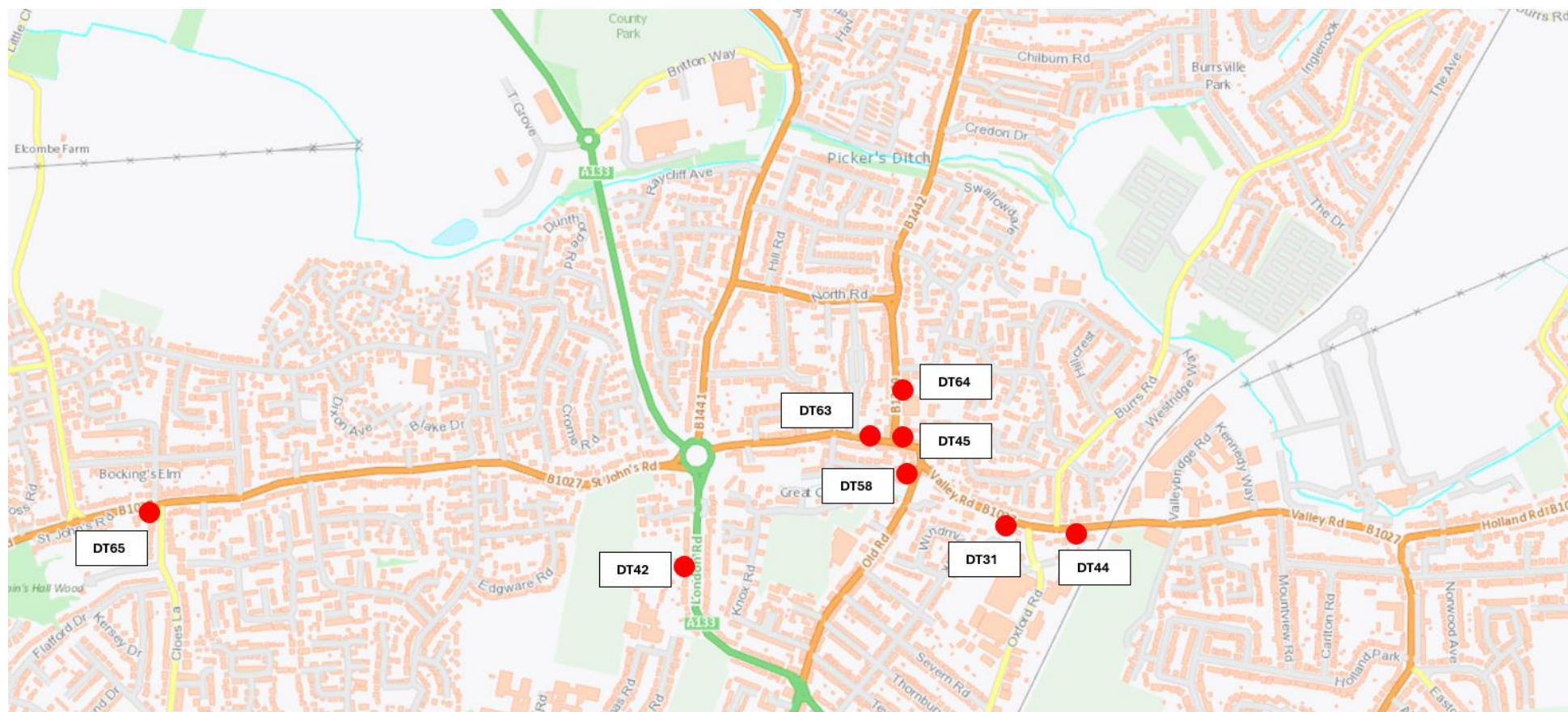
Appendix D: Map(s) of Monitoring Locations and AQMAs

Figure D.1 – Map of Non-Automatic and Automatic Monitoring Site

Clacton on Sea Non-Automatic Monitoring Sites



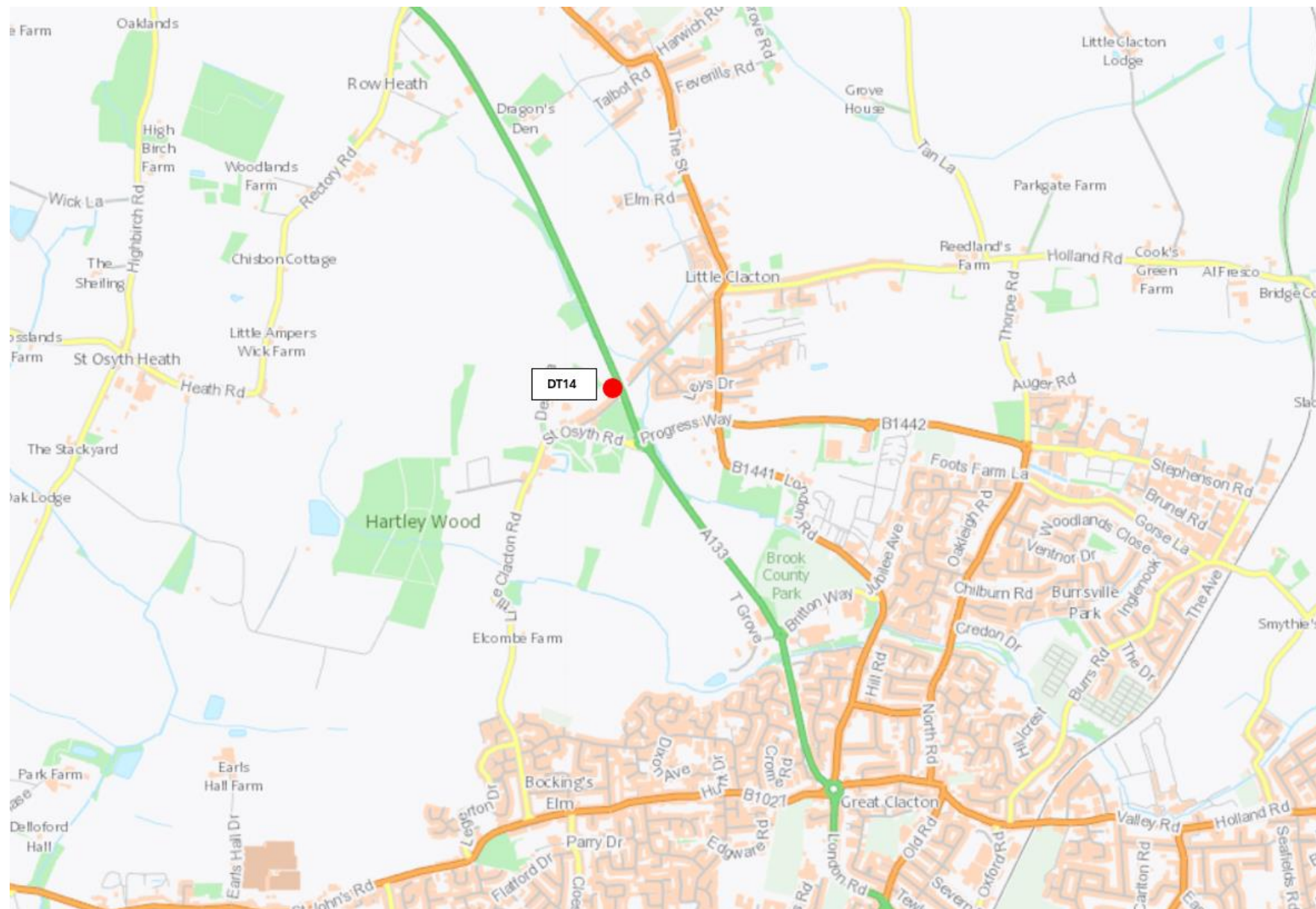
Clacton on Sea Non-Automatic Monitoring Sites



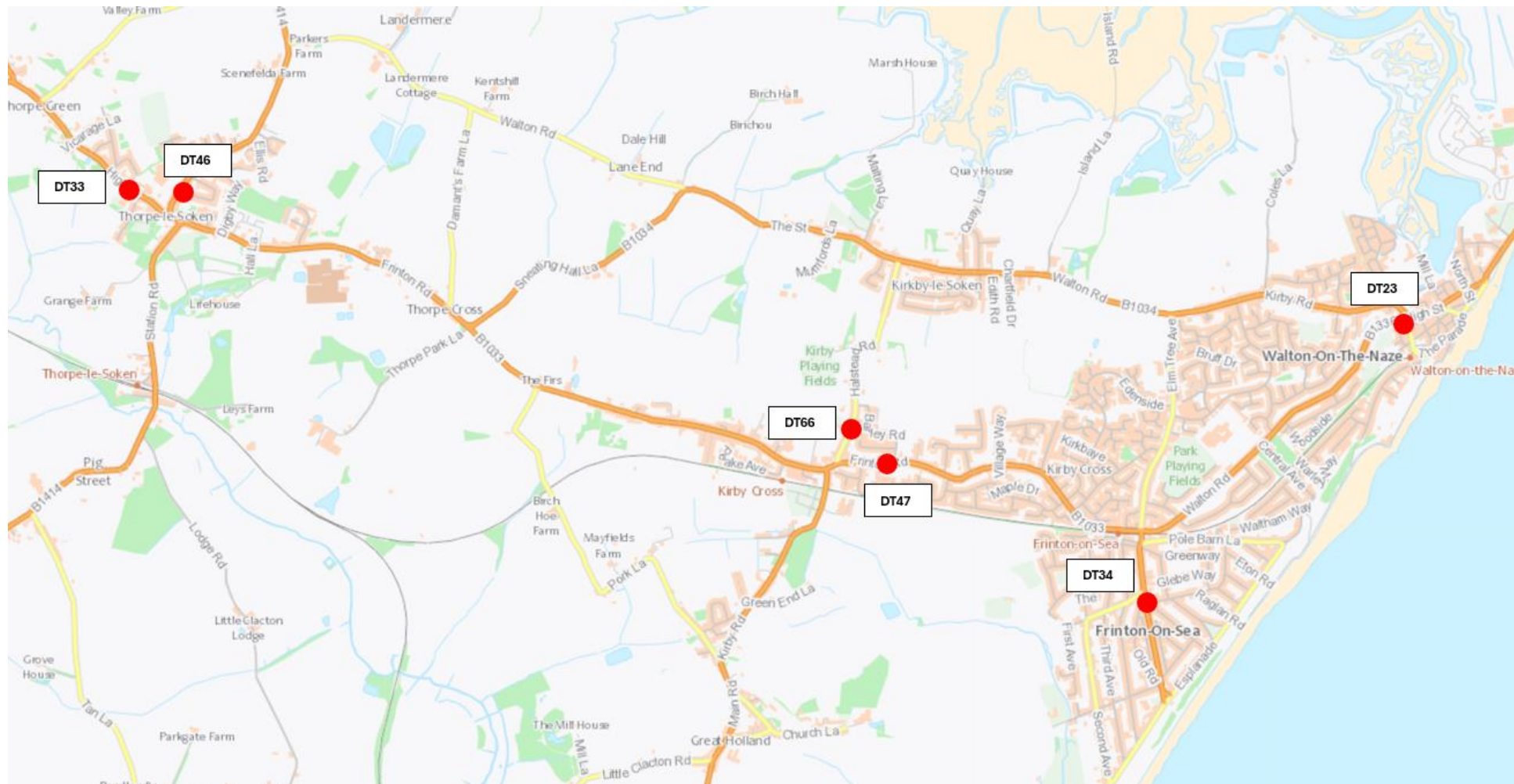
Holland on Sea Non-Automatic monitoring site



Clacton Bypass Non-Automatic monitoring site



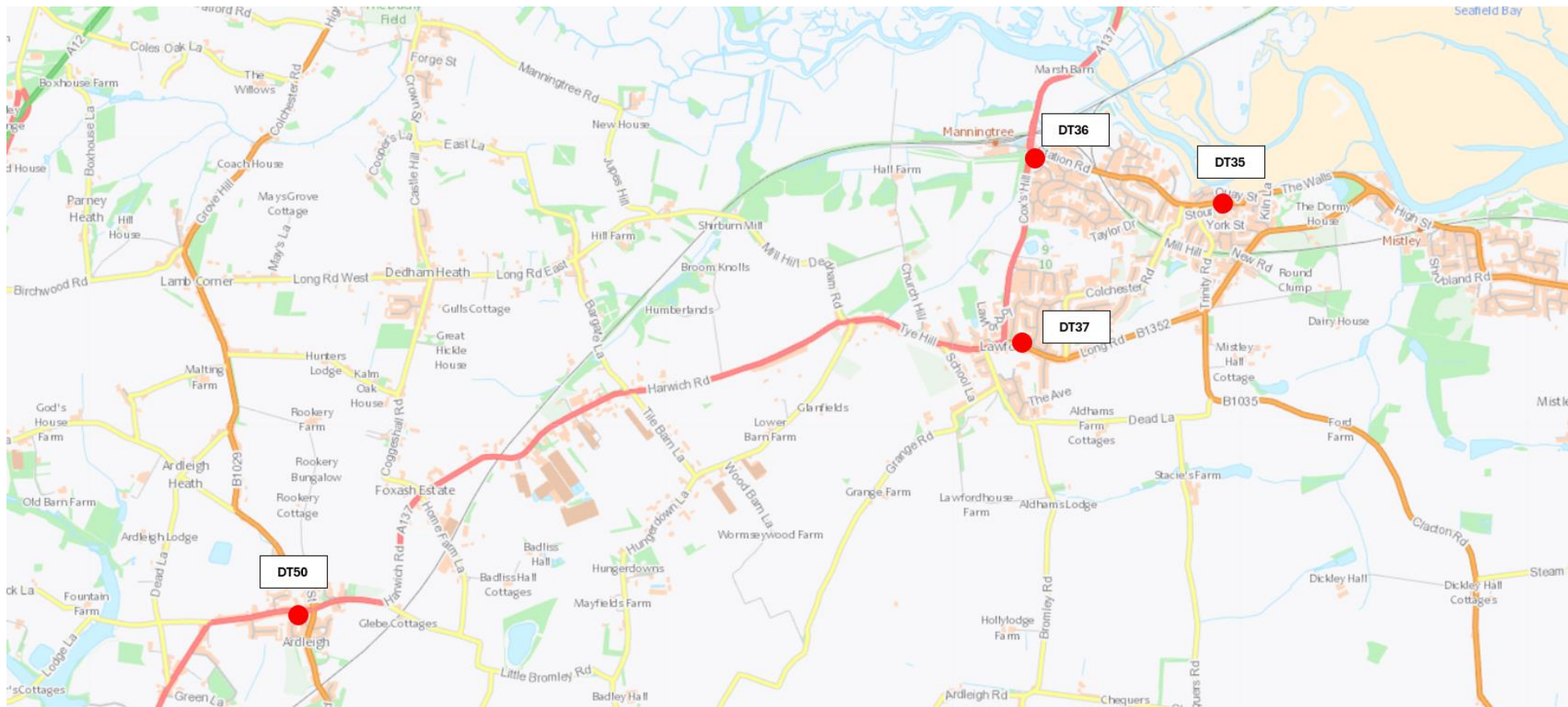
Thorpe, Kirby, Frinton and Walton Non-Automatic monitoring sites



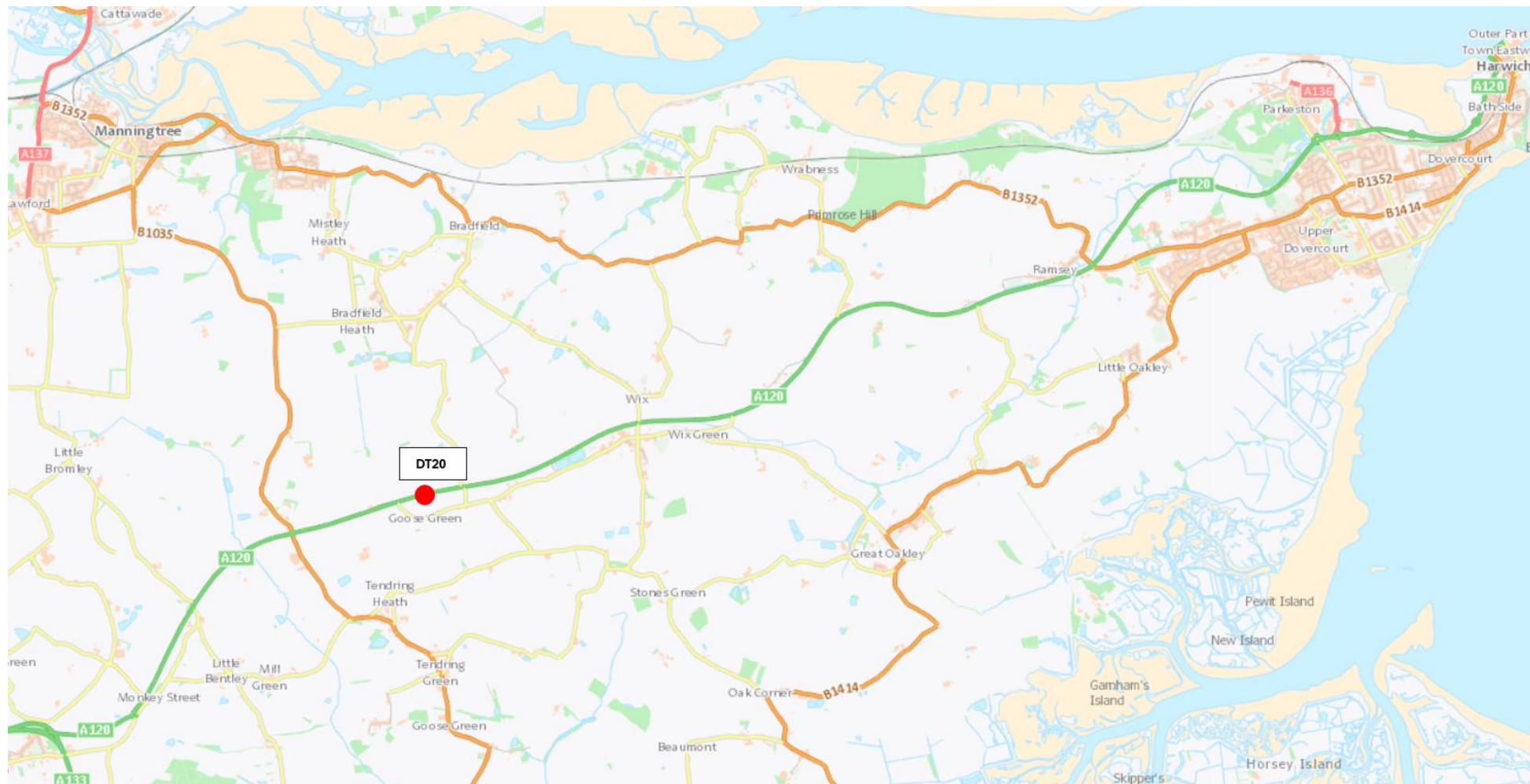
Harwich Non-Automatic monitoring sites



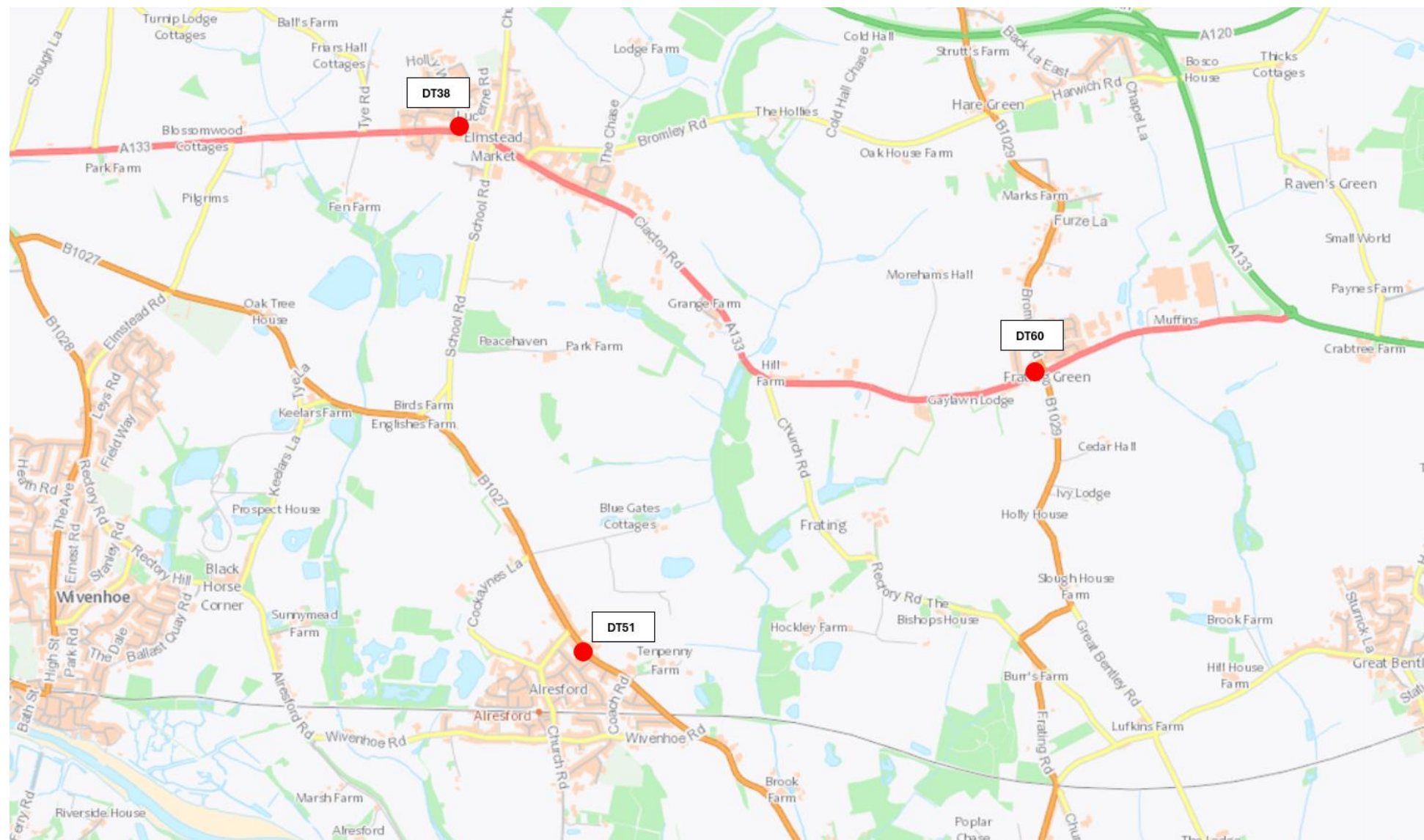
Manningtree and Ardleigh Non-Automatic monitoring sites



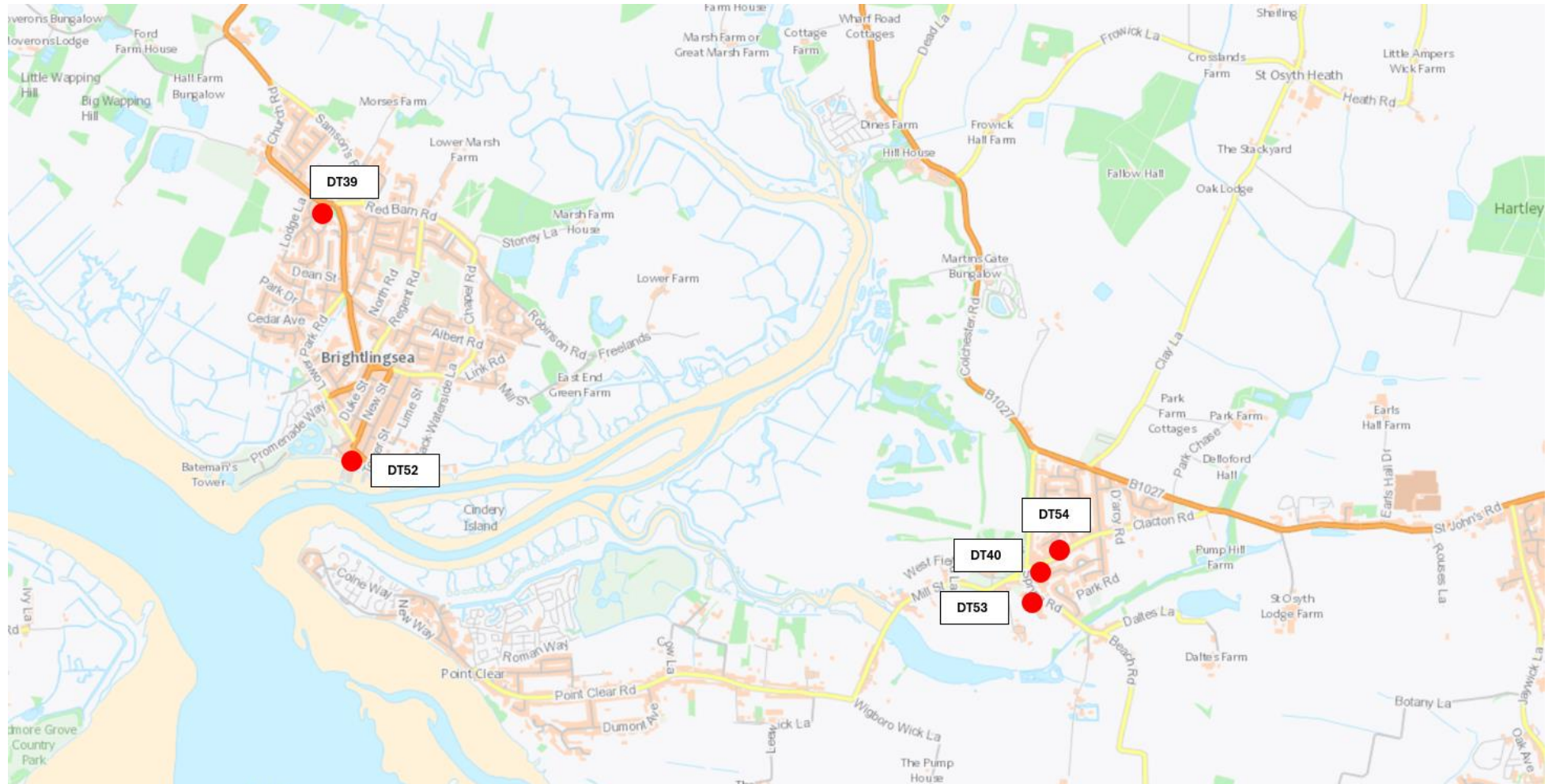
A120 Non-Automatic monitoring site



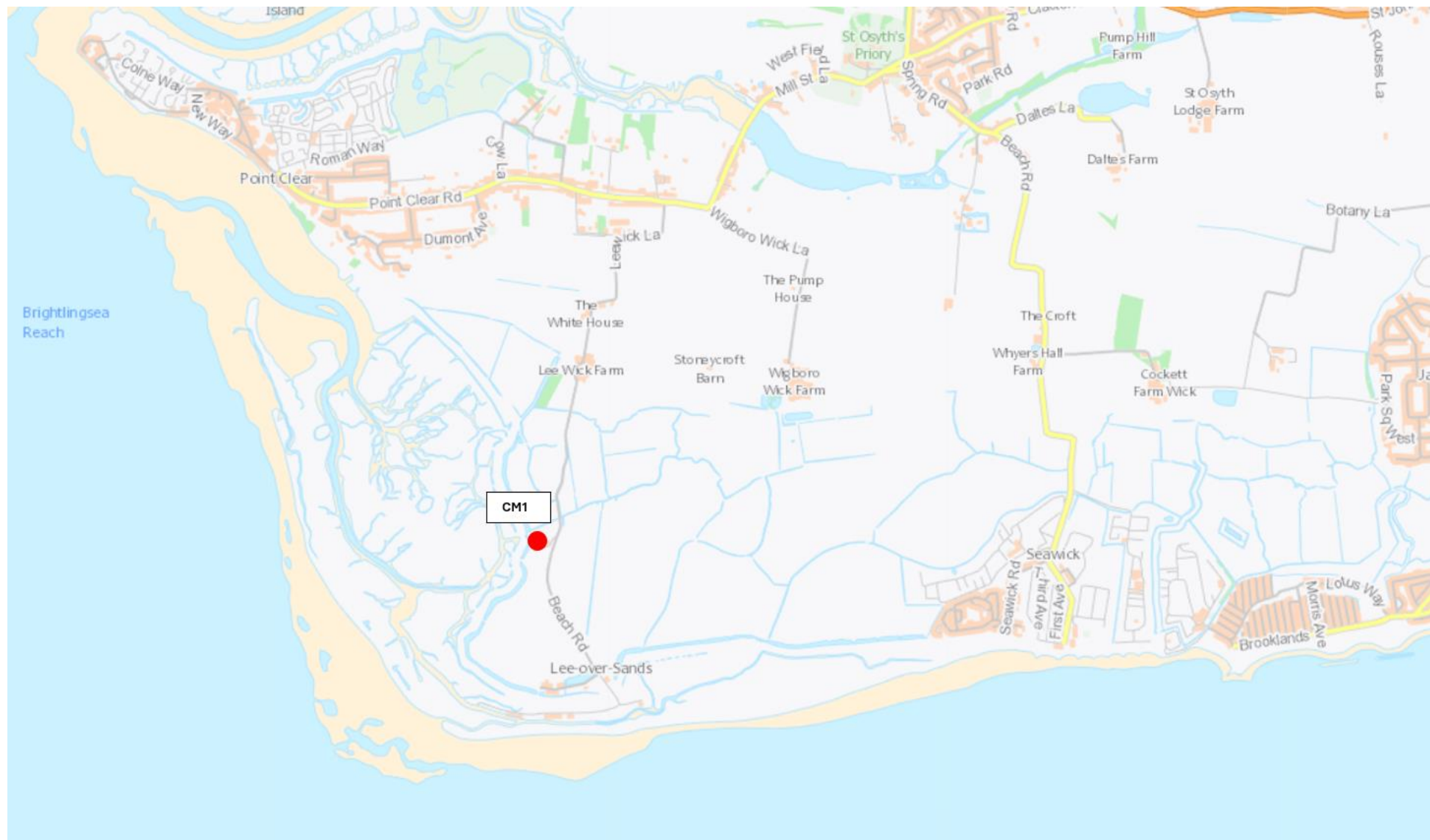
Elmstead Market, Frating and Alresford Non-Automatic monitoring sites



Brightlingsea and St Osyth Non-Automatic Monitoring sites



St Osyth Rural Automatic Monitoring site



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England⁷

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO ₂)	200µg/m ³ not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO ₂)	40µg/m ³	Annual mean
Particulate Matter (PM ₁₀)	50µg/m ³ , not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM ₁₀)	40µg/m ³	Annual mean
Sulphur Dioxide (SO ₂)	350µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO ₂)	125µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO ₂)	266µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean

⁷ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

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
AURN	Automatic Urban and Rural Network
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
ECC	Essex County Council
EU	European Union
EV	Electric Vehicle
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide
TDC	Tendring District Council
ULEVs	Ultra-low emission vehicles

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.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.
- [New dawn for Jaywick Sands as Sunspot commercial workspace development nears completion \(tendringdc.gov.uk\)](#)
- [Long awaited new car park to open in Dovercourt this week | Harwich and Manningtree Standard](#)
- [More than 700 trees planted around district \(tendringdc.gov.uk\)](#)
- [Essex Pedal Power launches in Harwich and Dovercourt | Clacton and Frinton Gazette\)](#)