Folkestone and Hythe District Council

Annual Status Report 2021

Bureau Veritas

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Company Name	Bureau Veritas UK Limited	Folkestone and Hythe District Council
Contact Name	Hannah Smith	Wai Tse
Position	Principal Consultant	Environmental Health Officer
Address	66 Prescot Street London E1 8HG	Civic Centre, Castle Hill Avenue, Folkestone, Kent, CT20 2QY

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	Name	Job Title	Signature
Prepared By	A Smith	Graduate Consultant	
Approved By	P Bentley	Senior Consultant	

2021 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

Date: August, 2021

Information	Folkestone and Hythe District Council Details
Local Authority Officer	Wai Tse
Department	Environmental Health
Address	Civic Centre, Castle Hill Avenue, Folkestone, Kent, CT20 2QY
Telephone	01303 853550
E-mail	Wai.Tse@folkestone-hythe.gov.uk
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Executive Summary: Air Quality in Our Area

Air Quality in Folkestone and Hythe 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[1,2].

The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages[3], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[4].

The District of Folkestone and Hythe is situated in Kent on the south east coast of England, approximately 75 miles from London. It occupies a key strategic position on the M20 as a gateway to continental Europe with the Channel Tunnel and London Ashford Airport all within its boundary. The District contains an area of 140 square miles and boasts a rich variety of attractive landscape. More than 33% of the District falls within the Kent Downs Area of Outstanding Natural Beauty (AONB) and there are over 15 Sites of Special Scientific Interest (SSSI).

In comparison to the rural areas of the District, the largest urban area is the town of Folkestone, where approximately half of the District's 100,000 population live. Other population centres within the District are Hythe, New Romney and Hawkinge.

The main source of pollution with the District is from road traffic emissions originating from major roads including the M20, A20, A259, A260 and A2034 that pass through the District. Due to the strategic nature of the roadlinks the majority of the vehicles are throughflow

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[1] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

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

[3] Defra. Air quality appraisal: damage cost guidance, July 2020

[4] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

traffic, they do not start nor end their journeys within Folkestone and Hythe. Other pollution sources including commercial, industrial and domestic sources also contribute to pollutant concentrations within the District.

Folkestone and Hythe District experiences relatively good air quality, with no reported exceedances of the annual mean NO_2 AQS objective since at least when monitoring begun in the district. As a result of this, there have never been any declared Air Quality Management Areas (AQMAs) within the District. The Council continues to review its monitoring network, deploying new monitoring sites in areas where there has either never been any monitoring conducted, or where there is a possibility of there being elevated NO_2 concentrations. Two new monitoring locations were deployed in 2020; DT17 and DT18, respectively located on St Andrews Road and Littlestone Road in Littlestone-on-Sea. This allows the Council to continue to ensure that its residents can experience relatively good and compliant air quality conditions.

During 2020, there were no reported exceedances of the annual mean NO_2 AQS objective. This continues the trend of having no reported exceedances in the past five years, and as such there is not a requirement to declare any AQMAs. The maximum reported annual mean NO_2 concentration in 2020 was 22.6µg/m^3 at monitoring location DT5.

There are no diffusion tube monitoring sites where the NO_2 annual mean is greater than 60µg/m^3, therefore in accordance with Defra LAQM.TG(16) there are no sites likely to be at risk of exceeding the 1-hour mean AQS objective.

There had been a significant decrease in annual mean NO_2 concentrations from 2019 to 2020, with an average decrease of 4.8µg/m^3 reported. This is believed to be a result of the impacts of the COVID-19 pandemic, where traffic volumes were observed to have decreased across the UK in urban areas in response to the Governments measures to control the pandemic. It has been estimated that concentrations of NO_2 decreased by up to 30% within certain areas during the first lockdown following the decrease in traffic volumes.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, and will continue to improve due to national policy decisions, there are some areas where local action is needed to improve air quality further.

The 2019 Clean Air Strategy[5] sets out the case for action, with goals even more ambitious than EU requirements to reduce exposure to harmful pollutants. The Road to Zero[6] sets out 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.

There have never been any exceedances of the AQS annual mean objective for NO_2 recorded by the current monitoring network across Folkestone and Hythe. As a result, no AQMAs have been declared within Folkestone and Hythe District Council.

Similar to previous years, during 2020 there were no exceedances of the NO_2 annual mean objective. This meant Folkestone and Hythe District Council, within the current monitoring network, retained its achievement of not recording any exceedances within the past five years.

Folkestone and Hythe District Council has welcomed the Click2cycle innovative bike sharing service in Folkestone, Sandgate and Hythe. The service was launched in June 2018 and continues to be endorsed. The scheme aims to replicate notable cycle sharing schemes often found in large metropolitan areas (e.g. Santander Cycles, Mobike, Lime). The Click2cycle scheme compliments the coastal cycling route, which stretches from Folkestone harbour to Dungeness in an attempted to promote alternative forms of travel which is accessible to help its residents lead active lifestyles. In July 2020 Click2cycle has relaunched a bespoke app to allow easy hiring of bikes.

The Council is still actively encouraging large developers at the planning stage to install electric charging points or the consideration of suitable infrastructure to allow for future cost efficient installations.

As part of the Council's commitment to reduce the impacts of, and tackle climate change, the Council is aiming to hit net-zero carbon emissions by 2030. Many measures to reduce CO_2 emissions have shared-benefits in reducing both NO_2 and PM emissions.

[5] Defra. Clean Air Strategy, 2019

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

Furthermore, a Local Cycling and Walking Infrastructure Plan and the Active Travel Fund has been launched by the Council during 2020 in order to encourage more sustainable and less polluting modes of transport.

Conclusions and Priorities

The monitoring results from 2020 show that annual mean NO_2 concentrations within the Folkestone and Hythe District continue to be well below the relevant AQS objectives at all monitoring locations. Despite this, Folkestone and Hythe District Council will continue to monitor air quality levels and review its monitoring network, to ensure that compliance is maintained throughout the district.

The following actions are considered to be key priorities in ensuring the air quality conditions within Folkestone and Hythe continue to comply with the AQS objectives:

- Constantly review the current monitoring programme, explore the need to deploy new monitoring locations in areas where monitoring has not previously been undertaken and where it is believed that there may be elevated concentrations of NO_2 in areas of relevant public exposure;
- Actively engage with large residential developers to consider installing electric vehicle charging points or alternatively, provide passive provisions for future installations;
- To work in conjunction with the County Council to investigate the scope for the introduction of traffic management initiatives where appropriate, including lorry management and traffic speed control;
- Provide an integrated transport network to facilitate the efficient movement of pedestrian and vehicular traffic, goods and services within the District;
- Continue to improve accessibility to key services and facilities and to direct development to sustainable locations in order to achieve sustainable development;
- Continue to limit the quantity of traffic on the District's roads by actively encouraging effective public transport, cycling and walking and by the careful integration of residential areas, shopping and recreational facilities and the workplace; and
- Continue to be an active member of the Kent and Medway Air Quality Partnership.

Local Engagement and How to get Involved

Due to the main source of air pollution within Folkestone and Hythe being from transport sources, the public can get involved in helping reduce the release of air pollution and thus improving air quality within the District by looking at alternative means of travel. The following are possible alternatives to private travel that would contribute to improving air quality within the District:

- Use public transport where available – This reduces the number of private vehicles in operation reducing pollutant concentration through the number of vehicles and reducing congestion;
- Walk or cycle if your journey allows – From choosing to walk or cycle for your journey the number of vehicles is reduced and also there is the added benefit of keeping fit and healthy;
- Car/lift sharing – Where a number of individuals are making similar journeys, such as travelling to work or to school car sharing reduces the number of vehicles on the road and therefore the amount of emissions being released. This can be promoted via travel plans through the workplace and within schools; and
- Alternative fuel / more efficient vehicles – Choosing a vehicle that meets the specific needs of the owner, fully electric, hybrid fuel and more fuel efficient cars are available, and all have different levels benefits by reducing the amount of emissions being released.

Further information about air quality and pollutants can be found on the Council's website. Additional information on air quality monitoring data, details on the main pollutants associated with air quality, alongside an air quality email subscription service is available on the KentAir website.

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1 Local Air Quality Management

This report provides an overview of air quality in the Folkestone and Hythe District during 2020. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Folkestone and Hythe 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 12 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

Folkestone and Hythe District Council currently does not have any declared AQMAs.

2.2 Progress and Impact of Measures to address Air Quality in Folkestone and Hythe District Council

Defra's appraisal of last year's ASR concluded that the report is well structured, detailed, and provides the information specified in the Guidance. Additional comments made are as follows:

1. *"Robust and accurate QA/QC procedures were applied. Calculations for bias adjustment, annualisation and distance-correction factors were outlined in detail.*
2. *The Council has included discussion and review of if AQMAs are needed and monitoring strategy, informed due to the monitoring network and also the additional tubes in place to provide data. This demonstrates the Councils proactive and dedicated approach to improving air quality across the area.*
3. *Comments from last year's ASR have been mentioned and addressed. This is welcomed, and we encourage this to continue in future ASRs.*
4. *The Public Health Outcomes Frameworks was mentioned, and this is encouraged. The Council have considered referring specifically to indicator D01, fraction of mortality attributable to particulate air pollution*
5. *Overall the report is detailed, concise and satisfies the criteria of relevant standards. The Council should continue their good and thorough work."*

Folkestone and Hythe District Council will strive to produce the same quality of report both this year and future years, completing it to at least the same level of detail as in 2020.

Folkestone and Hythe District Council continues to review its monitoring network to ensure that all residents have access to safe levels of air quality. New monitoring locations are positioned where the Council believes there may be elevated concentrations of NO_2 in areas of relevant public exposure, alongside areas where monitoring has not previously been undertaken. This proactive nature ensures that the Council can identify areas of potential concern at the nearest possible opportunity so that if required, effective mitigation measures can be implemented. This ensures that compliant levels of air quality are available to all of its residents.

During 2020, two additional sites were added to the monitoring network:

- DT 17 – A roadside location positioned along St Andrews Road, near to the entrance to Littlestone Warren Golf Club; and

- DT 18 – A roadside location positioned along Littlestone Road, between the junctions to Warren Road and Links Way.

Folkestone and Hythe District Council continues to be an active member of the Kent and Medway Air Quality Partnership. In 2020, the KentAir website was updated following a change of provider. It is possible to subscribe to an air quality email system, whereby an air pollution forecasts and alerts are emailed to the subscriber's inbox.

There have never been any exceedances of the AQS annual mean objective for NO_2 recorded by the current monitoring network across Folkestone and Hythe. As a result, no AQMAs have ever been declared within Folkestone and Hythe District Council.

Folkestone and Hythe District Council has welcomed the Click2cycle innovative bike sharing service in Folkestone, Sandgate and Hythe. The service was launched in June 2018 and continues to be endorsed. The scheme aims to replicate notable cycle sharing schemes often found in large metropolitan areas (e.g. Santander Cycles, Mobike, Lime). The Click2cycle scheme compliments the coastal cycling route, which stretches from Folkestone harbour to Dungeness in an attempted to promote alternative forms of travel which is accessible to help its residents lead active lifestyles. In July 2020 Click2cycle has relaunched a bespoke app to allow easy hiring of bikes.

The Council is still actively encouraging large developers at the planning stage to install electric charging points or the consideration of suitable infrastructure to allow for future cost efficient installations.

The Council is aiming to hit net-zero carbon emissions by 2030. Many measures to reduce CO_2 emissions also have shared-benefits in reducing NO_2 and PM emissions.

The Council have launched a Local Cycling and Walking Infrastructure Plan and the Active Travel Fund.

Local Cycling and Walking Infrastructure Plans (LCWIP) provide a new strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks, ideally over a 10-year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle

The active travel fund is a grant funding that supports local transport authorities with the development of cycling and walking facilities.

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

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm 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.

$PM_{2.5}$ can penetrate deep into the lungs, irritate and corrode the alveolar wall, and consequently impair lung function. It is believed there may also be a relationship between exposure to $PM_{2.5}$ and the impact of respiratory viruses, such as COVID-19.

Folkestone and Hythe District Council does not currently undertake monitoring of either PM_{10} or $PM_{2.5}$, therefore no concentrations of these can be reported or estimated using the methodology described in Box 7.7 of LAQM.TG(16).

The current Defra background maps for Folkestone and Hythe (2018 reference year) show that all 2020 background concentrations of $PM_{2.5}$ are far below the recommended 2020 annual mean AQS objective for $PM_{2.5}$ of 25µg/m^3. The highest concentration is predicted to be 10.6µg/m^3 within the 1km x 1km grid square with the centroid grid reference of 622500, 136500. This is largely a residential area within Folkestone and includes much of the A259 and connecting junctions, alongside Folkestone Central railway station and the South Eastern Main Line. It is important to note that these estimations do not take into consideration any impacts as a result of the COVID-19 pandemic.

The Public Health Outcomes Framework data tool compiled by Public Health England quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2019 fraction of mortality attributable to $PM_{2.5}$ pollution (indicator D01) across England is 5.1%, and in contrast the fraction within Folkestone and Hythe is slightly below the national average at 4.9%. The regional average for the South East is 5.2%. The 2019 fraction of mortality has been used as opposed to the 2020 fraction as the data has not been made available at the time of writing.

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.

LAQM.TG(16) Table A.1 Action toolbox presents a list of measures that can be implemented to help reduce concentrations of $PM_{2.5}$. Where required, Folkestone and Hythe District Council will review any proposed actions to be implemented with the Public Health team to consider the potential impact of the actions and whether any further action is required.

Currently, there are no designated smoke control areas within Folkestone and Hythe. Despite this, information and guidance in relation to bonfires is available on the Council's website. The Council also actively responds to any nuisance complaints relating to high levels of dust pollution, odours, smoke, and other environmental issues.

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

This section sets out the monitoring undertaken within 2020 by Folkestone and Hythe District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2016 and 2020 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Folkestone and Hythe District Council did not undertake any automatic monitoring of pollutants during 2020.

3.1.2 Non-Automatic Monitoring Sites

Folkestone and Hythe District Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 18 sites during 2020. Table A.1 in Appendix A presents the details of the non-automatic sites. Two new NO_2 diffusion tube monitoring locations were deployed during 2020 as detailed in Section 2.2 – DT17 and DT18. These are located on St Andrews Road and Littlestone Road, in Littlestone-on-Sea.

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.

In addition to the NO_2 diffusion tube monitoring that has been completed, monitoring of BTEX compounds benzene, toluene, ethylbenzene and xylenes has been completed using ADT (analytical thermal deposition) tubes at four locations within the District.

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 (NO_2)

Table A.2 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 40µg/m^3. 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 2020 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.

During 2020, all NO_2 diffusion tubes reported annual mean concentrations well below the annual mean NO_2 AQS objective of 40µg/m^3. The maximum reported annual mean concentration was 22.6µg/m^3 at the monitoring location DT5. As all reported concentrations are below 36µg/m^3, no fall-off with distance correction calculations have been carried out.

Where more than one years' worth of monitoring data is available, all sites had reported a decrease in annual mean NO_2 concentrations from previous years. An average decrease of 4.8µg/m^3 was has been observed from 2019 to 2020, and a low annual mean NO_2 concentration of 9.7µg/m^3 was reported at the monitoring location DT3. This decrease is likely a result of the impacts of the COVID-19 pandemic, whereby the UK Government enforced numerous lockdowns, alongside providing guidelines for home working and staying local. It has been observed across much of the UK, in particular in urban areas, that there has been a significant decrease in traffic volumes for part of 2020, alongside a change in traffic patterns. This is discussed further in Appendix F, but it has been estimated that during the first lockdown, at some locations NO_2 concentrations decreased up to 30%.

There are diffusion tube monitoring sites where the annual mean NO_2 concentration is greater than 60µg/m^3, therefore in accordance with Defra LAQM.TG(16) there are no sites likely to be at risk of exceeding the 1-hour mean AQS objective.

3.2.2 Other Pollutants

Table B.2 to Table B.6 in Appendix B presents the period concentrations for the BTEX compounds monitored at the four locations. Only benzene has an air quality objective within the Air Quality Strategy; an annual average of 5µg/m^3 and a running annual mean of 16.25µg/m^3. Contentrations monitored at the four sites in 2020 are below these objectives. As the concentrations have never been reported to be close to exceedance, the Council will cease monitoring of BTEX in 2020. This will allow resources which would be spent on this monitoring to be allocated elsewhere.

Note: No monitoring data is able to be reported for the monitoring periods between 30/06/2020 – 01/10/2020 due to a clerical error.

Appendix A: Monitoring Results

Table A.1 – 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)
DT1	Cheriton Road	Roadside	622584	135820	NO_2, BTEX	No	1.0	1.2	No	3.0
DT2	Cheriton Place	Roadside	622400	136100	NO_2, BTEX	No	5.0	1,8	No	2.6
DT3	Cold Harbour	Rural	609964	135279	NO_2	No	N/A	N/A	No	2.0
DT4	Stanford North	Urban Background	612900	138200	NO_2	No	N/A	N/A	No	2.0
DT5	Black Bull Road	Roadside	622734	136769	NO_2	No	1.0	5.0	No	3.0
DT6	Martello Cottages	Roadside	614552	134012	NO_2	No	7.0	10.0	No	2.5
DT7	Wear Bay Road	Roadside	622396	136976	NO_2, BTEX	No	11.5	3.0	No	3.5
DT8	Oak	Roadside	612694	136190	NO_2	No	6.0	3.5	No	2.6
DT9	Cherry garden Avenue	Roadside	621248	137352	NO_2, BTEX	No	7.5	8.0	No	2.5
DT10	Martins Cottages	Roadside	604116	124888	NO_2	No	1.2	1.0	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)
DT11	Hawking	Roadside	621436	139593	NO_2	No	1.2	1.0	No	3.0
DT12	Horn Street	Kerbside	618860	135899	NO_2	No	1.0	1.0	No	2.0
DT13	Kennett Lane	Rural	612481	137978	NO_2	No	91.0	0.0	No	2.0
DT14	Princes Parade	Roadside	618727	134797	NO_2	No	39.0	1.0	No	2.0
DT15	Dixiwell	Roadside	621361	135511	NO_2	No	15.0	0.0	No	2.0
DT16	Seabrok Road	Roadside	618680	134977	NO_2	No	8.0	0.0	No	2.0
DT17	St Andrews Road	Roadside	608206	124832	NO_2	No	21.5	0.0	No	2.0
DT18	Littlestone Road	Roadside	607675	124699	NO_2	No	16.3	0.0	No	2.0

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 – Annual Mean NO_2 Monitoring Results ($\mu g/m^3$)

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 2020 (%) [2]	2016	2017	2018	2019	2020
DT1	622584	135820	Roadside	74.6	74.6	21.5	23.5	25.4	21.0	18.3
DT2	622400	136100	Roadside	93.4	93.4	28.6	27.9	19.6	25.7	15.6
DT3	609964	135279	Rural	93.4	93.4	14.9	16.5	12.0	11.8	9.7
DT4	612900	138200	Urban Background	58.6	58.6	19.6	19.9	18.1	17.8	13.7
DT5	622734	136769	Roadside	93.4	93.4	30.4	30.2	29.7	27.9	22.6
DT6	614552	134012	Roadside	93.4	93.4	25.1	23.2	23.2	25.3	19.6
DT7	622396	136976	Roadside	93.4	93.4	20.7	22.5	17.2	17.7	14.2
DT8	612694	136190	Roadside	93.4	93.4	22.7	21.4	21.3	22.4	13.9
DT9	621248	137352	Roadside	93.4	93.4	28.7	29.5	28.8	30.0	19.7
DT10	604116	124888	Roadside	93.4	93.4	18.8	16.2	16.5	16.6	13.1
DT11	621436	139593	Roadside	93.4	93.4	17.4	22.5	19.8	19.3	14.5
DT12	618860	135899	Kerbside	86.5	86.5	20.0	19.2	18.8	16.2	14.1
DT13	612481	137978	Rural	93.4	93.4	14.0	18.5	16.7	13.6	10.9

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 2020 (%) (2)	2016	2017	2018	2019	2020
DT14	618727	134797	Roadside	83.1	83.1	-	-	15.8	16.3	12.9
DT15	621361	135511	Roadside	93.4	93.4	-	-	-	24.3	20.1
DT16	618680	134977	Roadside	93.4	93.4	-	-	-	18.1	14.4
DT17	608206	124832	Roadside	85.6	85.6	-	-	-	-	9.9
DT18	607675	124699	Roadside	93.4	93.4	-	-	-	-	14.0

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16.**

☒ **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 µg/m^3.

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

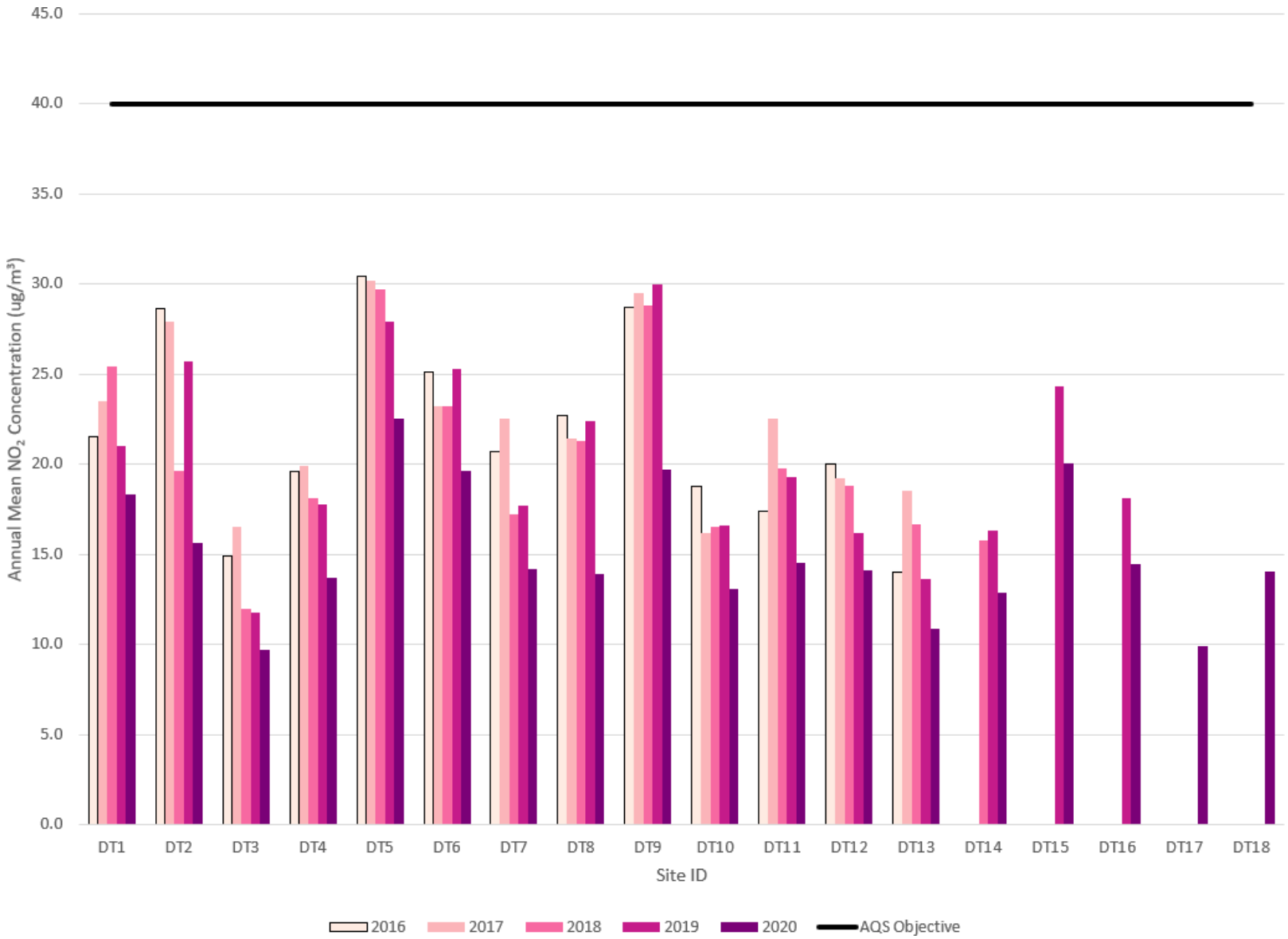
Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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 NO_2 Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2020

Table B.1 – NO_2 2020 Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan[1]	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.76)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	622584	135820	-	18.0	18.7	34.3	19.9	25.3	17.6	27.0			30.3	27.4	24.1	18.3	-	
DT2	622400	136100	-	10.8	24.2	26.4	18.1	24.9	13.6	25.0	21.1	20.7	23.0	20.5	20.5	15.6	-	
DT3	609964	135279	-	10.3	11.4	14.7	11.0	12.1	9.3	12.9	14.1	15.1	19.2	11.5	12.7	9.7	-	
DT4	612900	138200	-	11.8	9.7		14.8	19.3	13.3	19.5	18.8				15.4	13.7	-	
DT5	622734	136769	-	21.3	23.0	43.6	26.1	32.8	18.2	34.6	36.1	29.9	32.5	30.3	29.7	22.6	-	
DT6	614552	134012	-	24.2	21.0	33.5	22.6	26.5	16.5	31.3	25.7	29.1	28.0	25.4	25.9	19.6	-	
DT7	622396	136976	-	14.7	15.5	34.4	17.8	22.7	12.0	19.6	17.5	17.3	22.7	15.1	18.7	14.2	-	
DT8	612694	136190	-	16.9	13.8	19.1	15.9	23.5	16.2	22.6	6.1	20.9	27.6	19.2	18.3	13.9	-	
DT9	621248	137352	-	25.6	22.0	25.7	17.8	22.8	21.1	26.8	33.2	30.9	35.0	25.8	25.9	19.7	-	
DT10	604116	124888	-	11.5	13.5	21.5	17.6	19.5	7.5	23.9	20.8	18.5	18.4	16.1	17.2	13.1	-	
DT11	621436	139593	-	18.5	18.4	19.1	13.1	19.2	15.1	18.5	21.8	21.4	25.3	21.9	19.1	14.5	-	
DT12	618860	135899	-	13.6	14.5	21.5	18.9		12.6	21.1	25.3	18.3	21.3	19.4	18.6	14.1	-	
DT13	612481	137978	-	11.1	9.9	16.3	12.4	14.8	11.5	15.1	19.5	16.6	19.2	12.3	14.3	10.9	-	
DT14	618727	134797	-	14.2	14.5	19.3		18.9	11.9	20.1	17.3	20.0	20.4	13.2	16.9	12.9	-	
DT15	621361	135511	54.7	26.1	24.2	28.1	20.2	27.8	19.7	26.0	31.1	31.0	30.6	26.9	26.4	20.1	-	
DT16	618680	134977	29.3	19.6	11.0	22.3	15.2	19.9	13.1	20.7	23.0	19.2	25.3	21.0	19.0	14.4	-	
DT17	608206	124832	15.3	9.9	9.7	20.8	14.7	17.4	8.0	13.6		11.2	15.3	12.0	13.1	9.9	-	
DT18	607675	124699	21.3	14.5	13.8	24.4	17.2	21.6	11.1	22.1	20.5	19.0	21.1	18.7	18.5	14.0	-	

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1.**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16.**

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column.**

☒ **Folkestone and Hythe District Council confirm that all 2020 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

[1] Only four tubes were deployed in the January monitoring period and were exposed for two weeks. Due to having a shorter monitoring period than that which is advised by the LAQM Calendar alongside a lack of certainty of whether these are truly representative, these concentrations have been omitted from calculations of annual averages.

Table B.2 – Benzene Concentrations (µg/m^3)

Site Name	10/12/2019 - 10/01/2020	10/01/2020 - 04/02/2020	04/02/2020 - 06/03/2020	06/03/2020 - 01/04/2020	01/04/2020 - 29/04/2020	29/04/2020 - 05/06/2020	05/06/2020 - 30/06/2020	01/10/2020 - 10/11/2020	10/11/2020 - 02/12/2020	02/12/2020 - 07/01/2021	Annual Average
Cheriton Road	1.0	1.0	0.7	1.0	0.6	0.5	0.7	0.5	1.0	2.0	1.0
Cheriton Place	0.8	0.9	0.7	1.0	NR	0.6	0.7	2.0	2.0	1.0	1.0
Wear Bay Road	0.8	1.0	1.0	1.0	NR	0.6	<0.6	0.7	1.0	1.0	1.0
Cherry Garden Avenue	2.0	1.0	1.0	2.0	0.8	0.5	<0.6	-	0.9	1.0	1.0

Table B.3 – Toluene Concentrations (µg/m^3)

Site Name	10/12/2019 - 10/01/2020	10/01/2020 - 04/02/2020	04/02/2020 - 06/03/2020	06/03/2020 - 01/04/2020	01/04/2020 - 29/04/2020	29/04/2020 - 05/06/2020	05/06/2020 - 30/06/2020	01/10/2020 - 10/11/2020	10/11/2020 - 02/12/2020	02/12/2020 - 07/01/2021	Annual Average
Cheriton Road	2.0	2.0	1.0	7.0	8.0	1.0	2.0	1.0	3.0	3.0	3.0
Cheriton Place	1.0	2.0	19.0	2.0	NR	4.0	1.0	5.0	4.0	4.0	5.0
Wear Bay Road	1.0	2.0	33.0	2.0	NR	2.0	<1.0	2.0	3.0	4.0	6.0
Cherry Garden Avenue	1.0	2.0	2.0	7.0	2.0	3.0	<1.0	-	2.0	5.0	3.0

Table B.4 – Ethyl-Benzene Concentrations (µg/m^3)

Site Name	10/12/2019 - 10/01/2020	10/01/2020 - 04/02/2020	04/02/2020 - 06/03/2020	06/03/2020 - 01/04/2020	01/04/2020 - 29/04/2020	29/04/2020 - 05/06/2020	05/06/2020 - 30/06/2020	01/10/2020 - 10/11/2020	10/11/2020 - 02/12/2020	02/12/2020 - 07/01/2021	Annual Average
Cheriton Road	0.3	0.4	0.3	0.7	1.0	0.6	2.0	0.2	2.0	1.0	1.0
Cheriton Place	<0.2	0.3	0.7	0.4	NR	90.0	0.4	2.1	3.6	3.0	13.0
Wear Bay Road	0.3	0.4	0.6	0.3	NR	0.7	<0.3	0.5	1.0	2.5	1.0
Cherry Garden Avenue	<0.2	0.4	0.5	0.9	0.3	17.0	<0.3	-	<0.3	1.0	3.0

Table B.5 – m,p-Xylene Concentrations (µg/m^3)

Site Name	10/12/2019 - 10/01/2020	10/01/2020 - 04/02/2020	04/02/2020 - 06/03/2020	06/03/2020 - 01/04/2020	01/04/2020 - 29/04/2020	29/04/2020 - 05/06/2020	05/06/2020 - 30/06/2020	01/10/2020 - 10/11/2020	10/11/2020 - 02/12/2020	02/12/2020 - 07/01/2021	Annual Average
Cheriton Road	0.9	2.0	1.0	2.0	2.0	1.0	3.0	0.9	4.0	3.0	2.0
Cheriton Place	<0.7	1.0	1.0	1.0	NR	74.0	2.0	4.0	8.0	5.0	12.0
Wear Bay Road	0.9	1.0	2.0	0.8	NR	3.0	0.9	2.0	3.0	4.0	2.0
Cherry Garden Avenue	0.8	1.0	2.0	2.0	0.9	16.0	1.0	-	1.0	3.0	3.0

Table B.6 – o-Xylene Concentrations (µg/m^3)

Site Name	10/12/2019 - 10/01/2020	10/01/2020 - 04/02/2020	04/02/2020 - 06/03/2020	06/03/2020 - 01/04/2020	01/04/2020 - 29/04/2020	29/04/2020 - 05/06/2020	05/06/2020 - 30/06/2020	01/10/2020 - 10/11/2020	10/11/2020 - 02/12/2020	02/12/2020 - 07/01/2021	Annual Average
Cheriton Road	0.4	0.8	0.5	0.8	<0.4	0.5	1.0	0.4	2.0	1.0	1.0
Cheriton Place	<0.3	0.6	0.5	0.5	NR	24.0	0.8	2.0	4.0	2.0	4.0
Wear Bay Road	0.4	0.6	0.7	<0.4	NR	0.8	<0.4	0.7	1.0	2.0	1.0
Cherry Garden Avenue	0.4	0.6	1.0	1.0	0.4	5.9	0.7	-	0.5	1.0	1.0

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

New or Changed Sources Identified Within Folkestone and Hythe District Council During 2020

Folkestone and Hythe District Council has not identified any new sources relating to air quality within the reporting year of 2021.

Additional Air Quality Works Undertaken by Folkestone and Hythe District Council During 2020

Folkestone and Hythe District Council has not completed any additional works within the reporting year of 2020.

QA/QC of Diffusion Tube Monitoring

Folkestone and Hythe District Council's diffusion tubes in 2020 were supplied and analysed by SOCOTEC Didcot, using the 50% Triethanolamine (TEA) in acetone preparation method. SOCOTEC's laboratory is UKAS accredited, participating in the AIR-PT Scheme for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high caliber. The lab follows the procedures set out in the Harmonisation Practical Guidance. In the latest available AIR-PT results, AIR PT AR036 (January – February 2020) and AIR PT AR040 (September – October 2020), SOCOTEC scored 100%. No results are available between May and August 2020 as testing rounds were cancelled due to the COVID-19 pandemic. The percentage score reflects the results deemed to be satisfactory based upon the z-score of $< \pm 2$.

All local authority co-location studies which use tubes supplied by SOCOTEC with the 50% TEA in acetone preparation method in 2020 were rated as 'good', 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 2020 had largely been completed in adherence with the 2020 Diffusion Tube Monitoring Calendar, whereby most changeovers were completed within ±2 days of the specified date. This did however deviate during the January, October and November monitoring periods. In January, the tubes were exposed for approximately two weeks. This is significantly shorter than that which is recommended by the LAQM Calendar. In addition, although this was prior to the first UK Government enforced lockdown and therefore concentrations are expected to be higher than much of the year, compared to 2019 NO_2 concentrations these appear to be slightly different to what would be expected during the winter period. As a result, these have been omitted from any calculations of the annual average in case they are not truly representative. For the October and November monitoring periods, the exposure periods varied by up to six days. As this is not a significant deviation, and the reported concentrations did not appear to be anomalous, these have been retained and used in calculations. These largely occurred due to the impacts of the COVID-19 pandemic and the availability of staff.

Diffusion Tube Annualisation

Annualisation is required for any site with data capture less than 75% but greater than 25%. As such, one site operated by Folkestone and Hythe District Council required annualisation in 2020. This was conducted using the latest version of the Diffusion Tube Data Processing Tool (v1.1). These sites, alongside the details of the calculation method undertaken, are provided in Table C.2. Continuous monitoring data from the four nearest AURN Urban Background monitoring locations with greater than 85% data capture have been utilised.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2021 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.TG16 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.

Folkestone and Hythe District Council have applied a national bias adjustment factor of 0.76 to the 2020 monitoring data. A summary of bias adjustment factors used by Folkestone and Hythe District Council over the past five years is presented in Table C.1.

No co-location studies are carried out by Folkestone and Hythe District Council therefore only a national factor can be applied. The national factor for SOCOTEC Didcot 50% TEA in acetone, as presented in the Diffusion Tube Bias Factors Spreadsheet v06_21, was 0.76 based on 24 studies. The National Bias Adjustment Spreadsheet is presented in Figure C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2020	National	06/21 (24 studies)	0.76
2019	National	03/20 (24 studies)	0.75
2018	National	03/19 (22 studies)	0.76
2017	National	03/18 (27 studies)	0.77
2016	National	03/17 (30 studies)	0.77

NO_2 Fall-off with Distance from the Road

Wherever possible, local authorities should ensure that monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure should be estimated using the Diffusion Tube Data Processing Tool/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 diffusion tube NO_2 monitoring locations within Folkestone and Hythe District Council required distance correction during 2020.

Table C.2 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor Canterbury AURN	Annualisation Factor Brighton Preston Park AURN	Annualisation Factor Rochester Stoke AURN	Annualisation Factor Thurrock AURN	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
DT4	1.1572	1.1995	1.2206	1.1189	1.1741	15.4	18.0	

Figure C.1 – National Bias Adjustment Factor Spreadsheet (06/21)

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 06/21

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadhseet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of Sept 2021
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List

If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List

If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List

If a year is not shown, we have no data[2]

Step 4:

Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[5] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Aberdeen Scientific Services	20% TEA in water	2020		Overall Factor[3] (7 studies)				Use		0.78
Edinburgh Scientific Services	50% TEA in acetone	2020		Overall Factor[3] (5 studies)				Use		0.85
Glasgow Scientific Services	20% TEA in water	2020		Overall Factor[3] (9 studies)				Use		0.95
Gradko	20% TEA in water	2020		Overall Factor[3] (27 studies)				Use		0.81
Gradko	50% TEA in acetone	2020		Overall Factor[3] (21 studies)				Use		0.83
Lambeth Scientific Services	50% TEA in acetone	2020		Overall Factor[3] (10 studies)				Use		0.95
Milton Keynes Council	20% TEA in water	2020		Overall Factor[3] (4 studies)				Use		0.83
SOCOTEC Didcot	20% TEA in water	2020		Overall Factor[3] (6 studies)				Use		0.74
SOCOTEC Didcot	50% TEA in acetone	2020		Overall Factor[3] (24 studies)				Use		0.76
SOCOTEC Glasgow	20% TEA in water	2020		Overall Factor[3] (1 study)				Use		0.79
SOCOTEC Glasgow	50% TEA in acetone	2020		Overall Factor[3] (1 study)				Use		0.79
Somerset County Council	20% TEA in water	2020		Overall Factor[3] (10 studies)				Use		0.85
South Yorkshire Air Quality Samplers	50% TEA in acetone	2020		Overall Factor[3] (1 study)				Use		0.77
Staffordshire Scientific Services	20% TEA in water	2020		Overall Factor[3] (15 studies)				Use		0.85
Tayside Scientific Services	20% TEA in water	2020		Overall Factor[3] (1 study)				Use		0.75

Appendix D: Maps of Monitoring Locations and AQMAs

Figure D.1 – Map of Non-Automatic Monitoring Sites across the Whole District

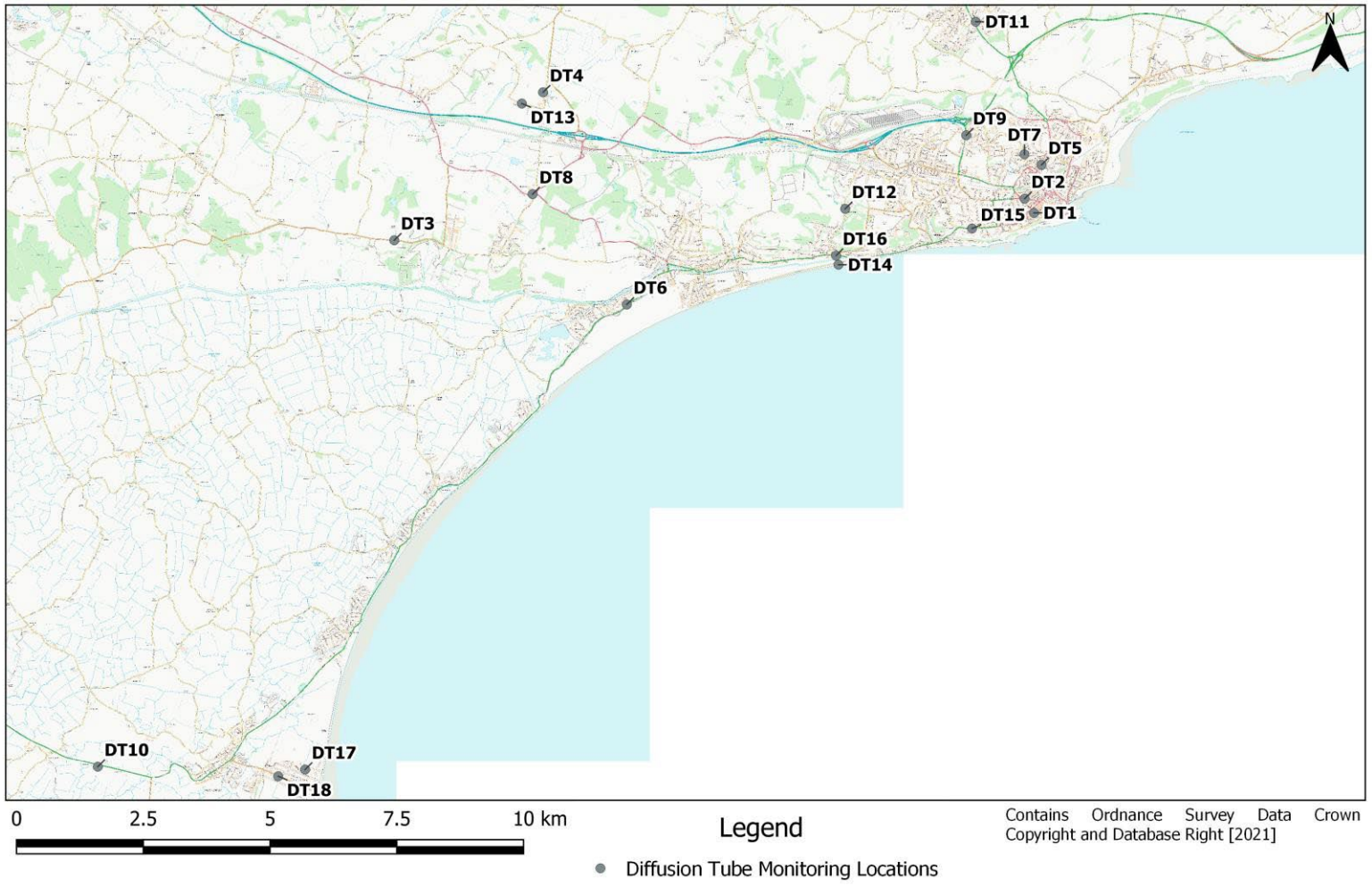


Figure D.2 – Map of Non-Automatic Monitoring Sites near Lympne

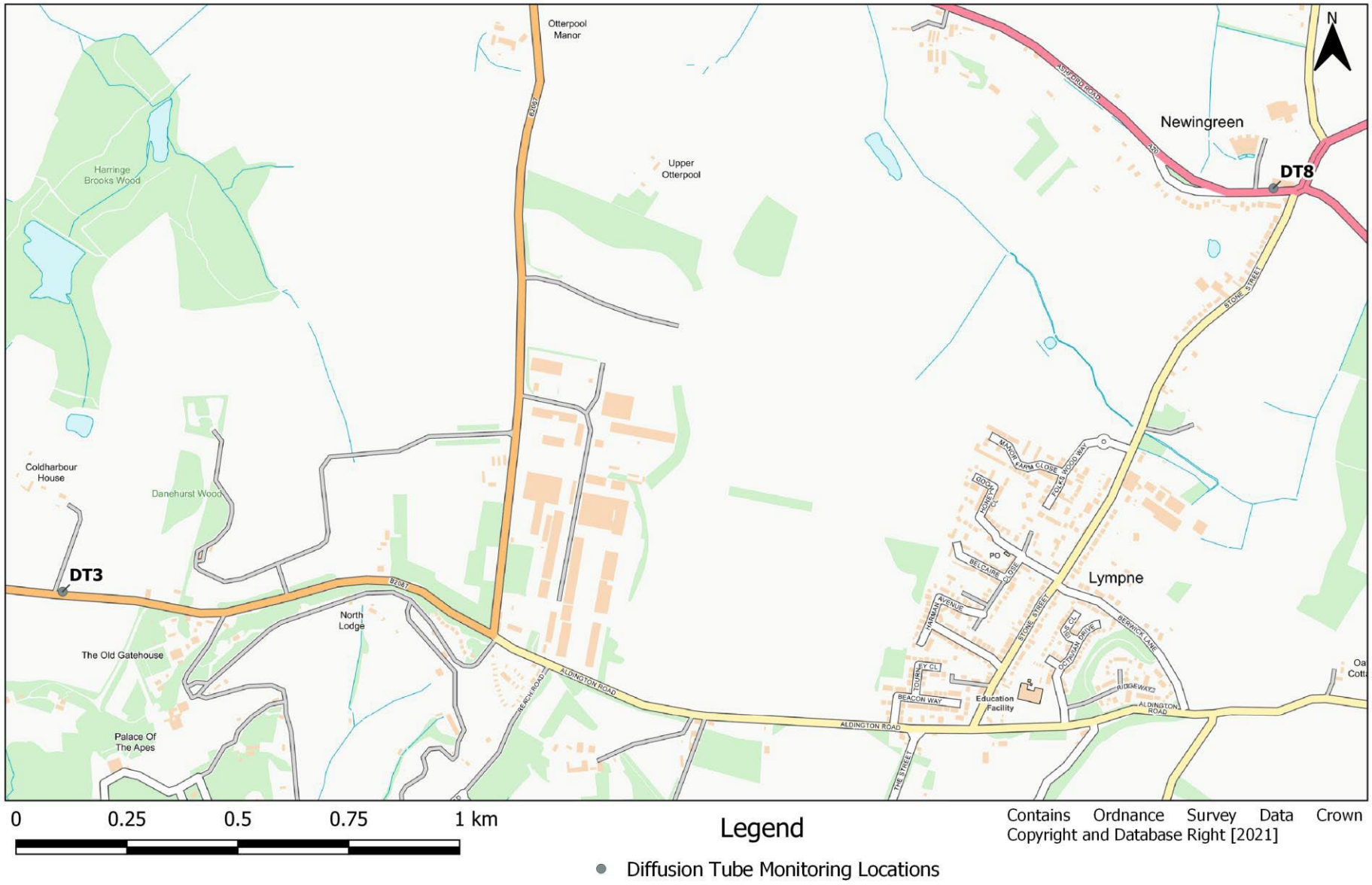


Figure D.3 – Map of Non-Automatic Monitoring Sites in Folkestone

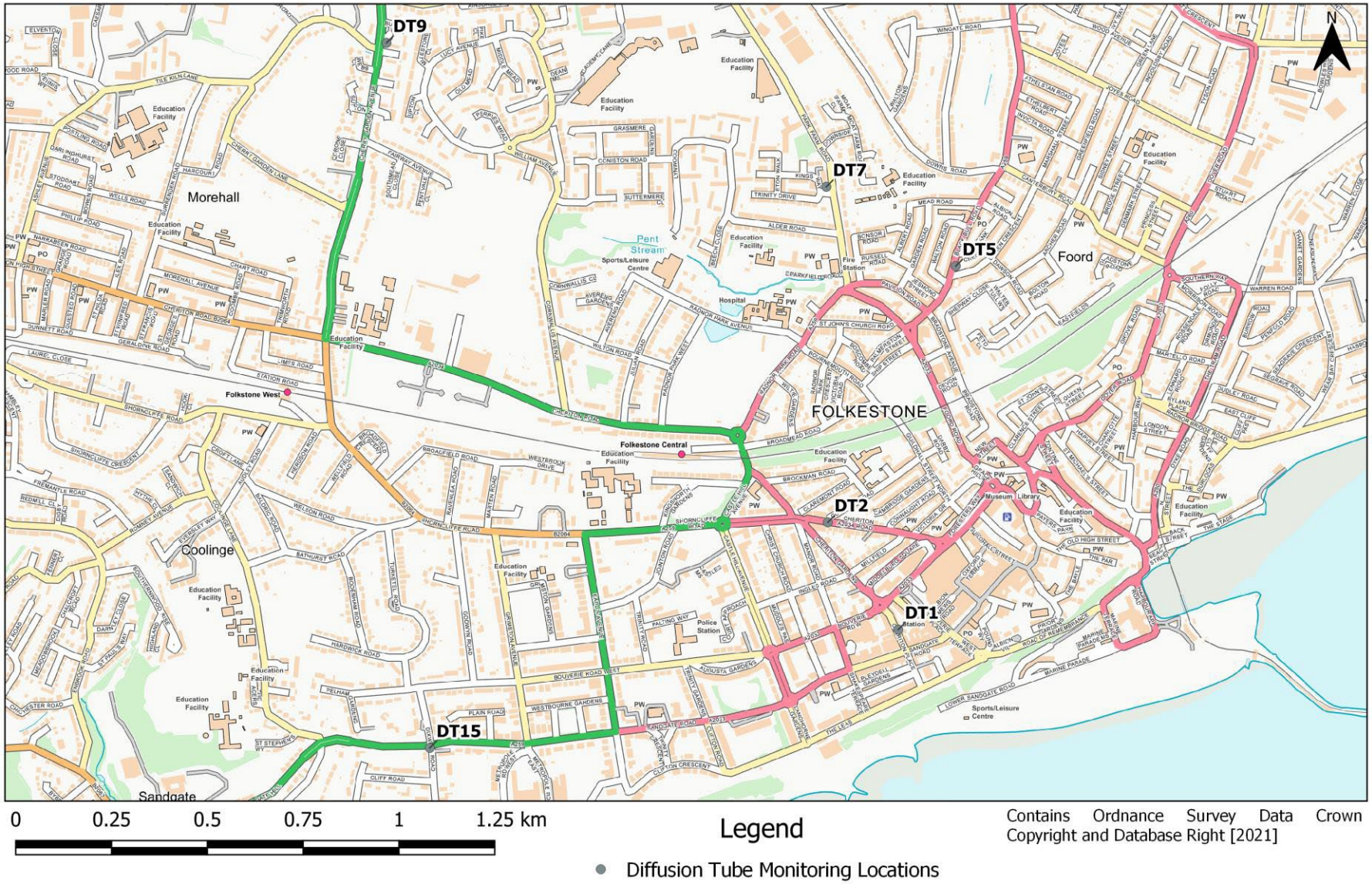


Figure D.4 – Map of Non-Automatic Monitoring Sites in Hawkinge

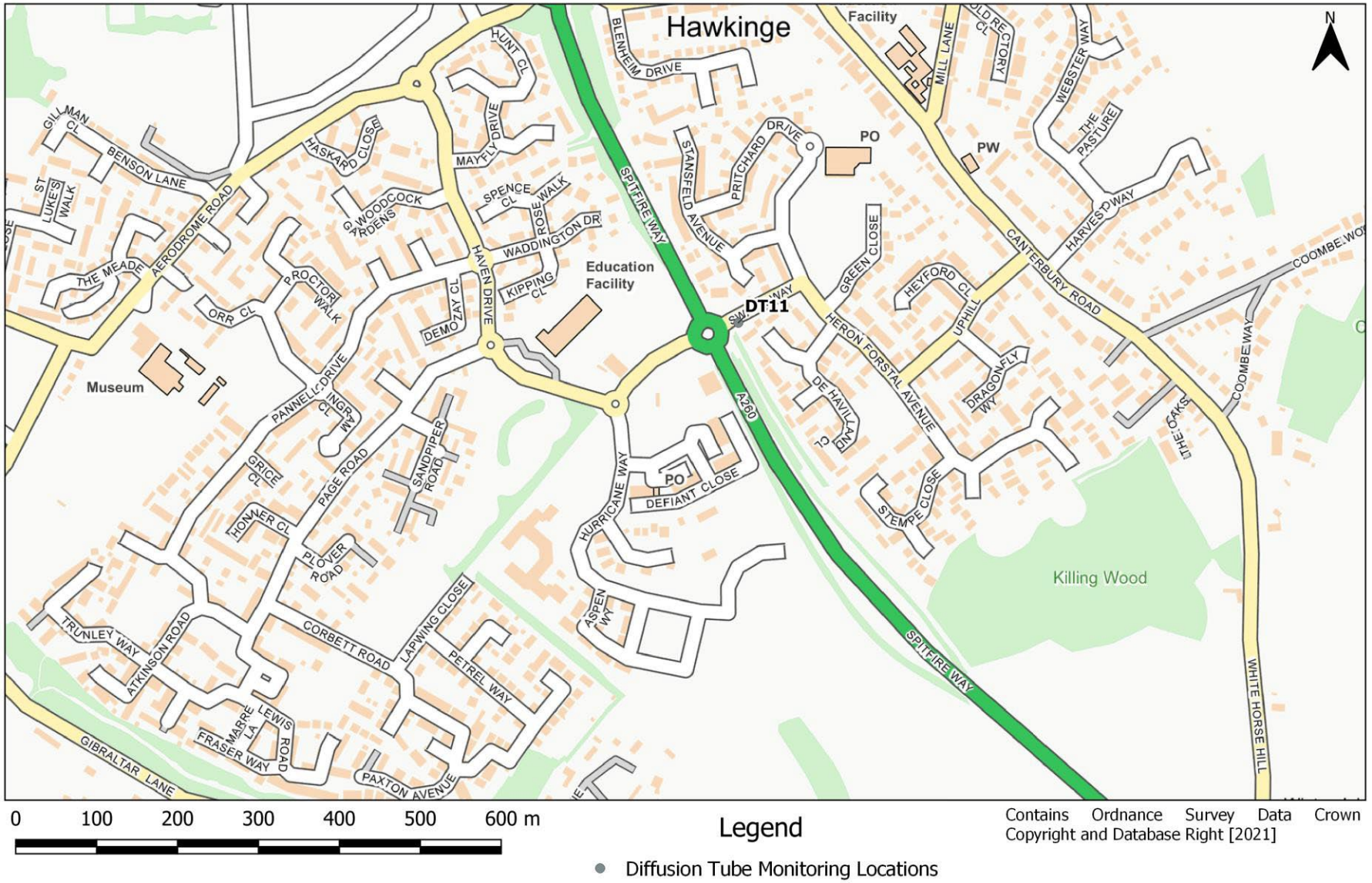


Figure D.5 – Map of Non-Automatic Monitoring Sites in Pennypot

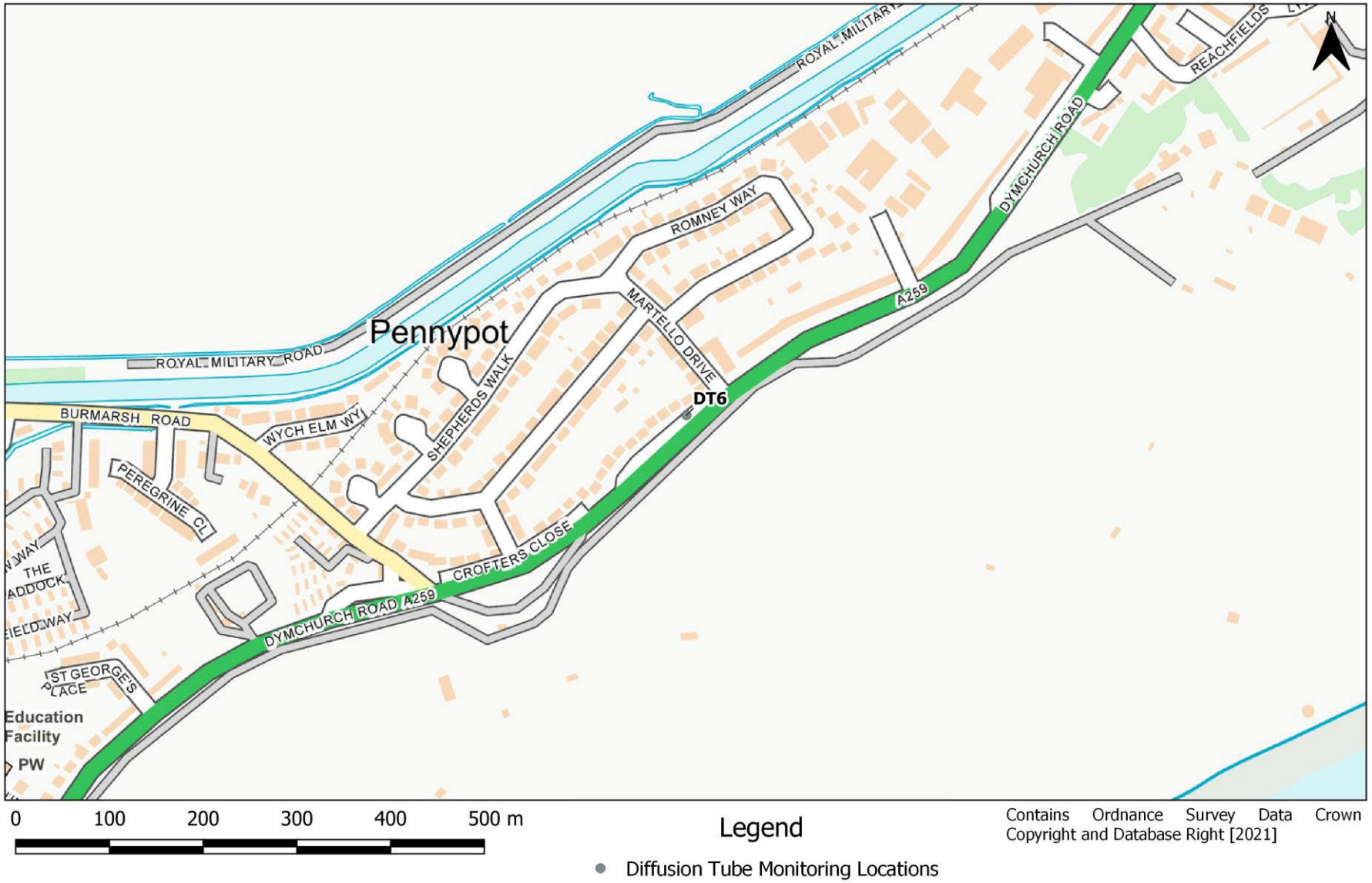


Figure D.6 – Map of Non-Automatic Monitoring Sites in Romney

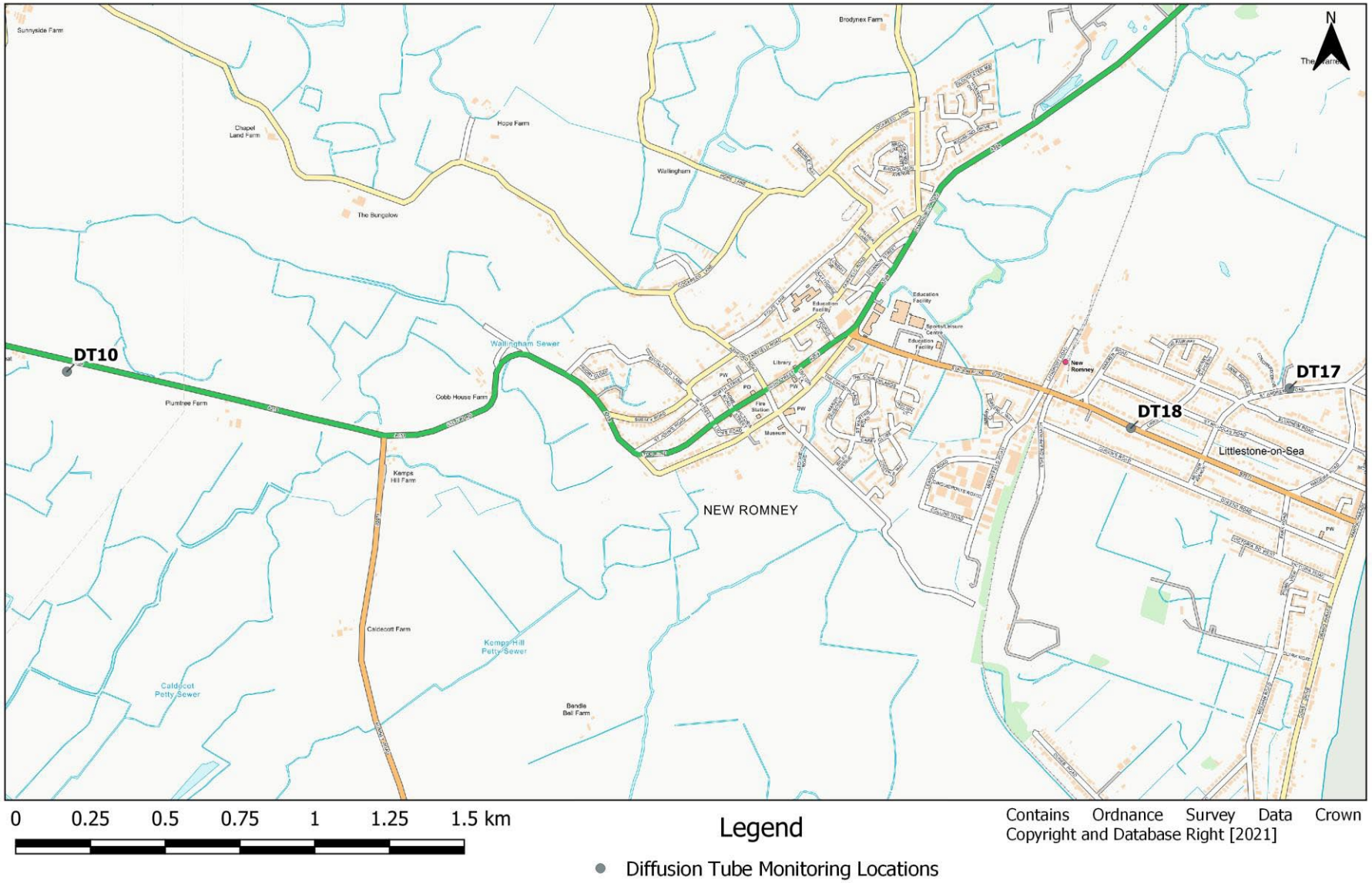


Figure D.7 – Map of Non-Automatic Monitoring Sites in Seabrook

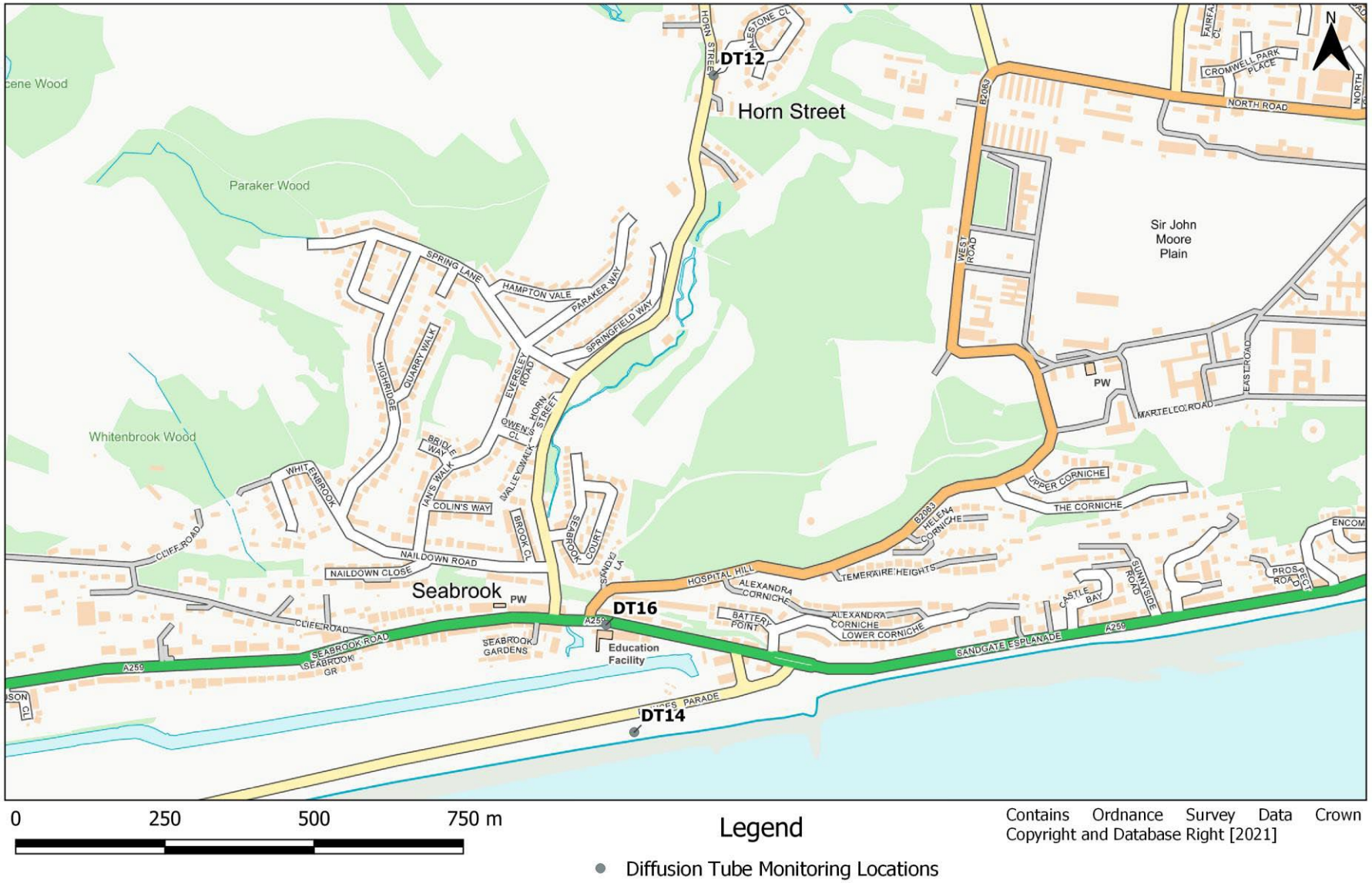
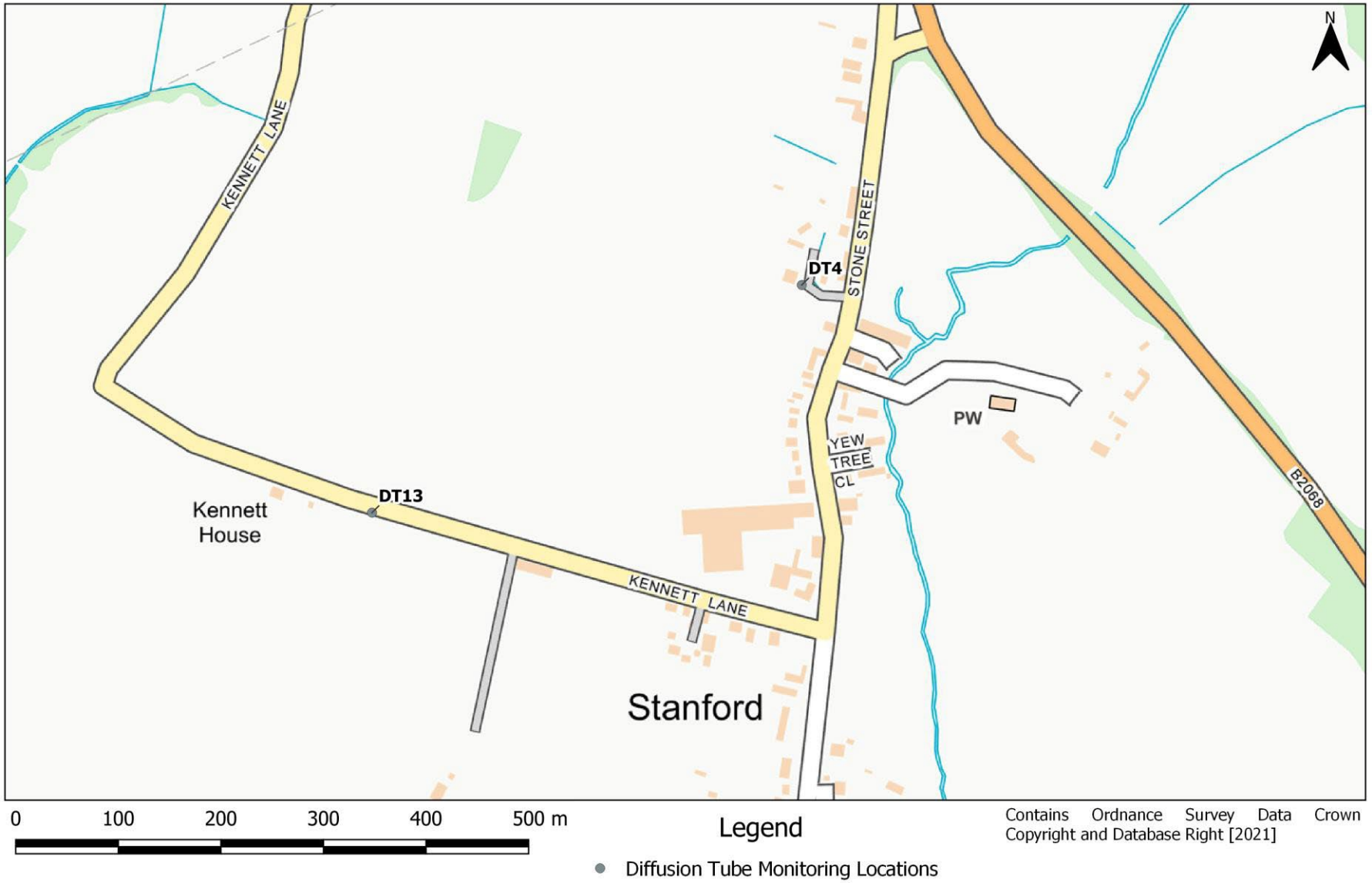


Figure D.8 – Map of Non-Automatic Monitoring Sites in Stanford



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[7]

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/m^3).

Appendix F: Impact of COVID-19 upon LAQM

COVID-19 has had a significant impact on society. Inevitably, COVID-19 has also had an impact on the environment, with implications to air quality at local, regional and national scales.

COVID-19 has presented various challenges for Local Authorities with respect to undertaking their statutory LAQM duties in the 2021 reporting year. Recognising this, Defra provided various advice updates throughout 2020 to English authorities, particularly concerning the potential disruption to air quality monitoring programmes, implementation of Air Quality Action Plans (AQAPs) and LAQM statutory reporting requirements. Defra has also issued supplementary guidance for LAQM reporting in 2021 to assist local authorities in preparing their 2021 ASR. Where applicable, this advice has been followed.

Despite the challenges that the pandemic has given rise to, the events of 2020 have also provided Local Authorities with an opportunity to quantify the air quality impacts associated with wide-scale and extreme intervention, most notably in relation to emissions of air pollutants arising from road traffic. The vast majority (>95%) of AQMAs declared within the UK are related to road traffic emissions, where attainment of the annual mean objective for nitrogen dioxide (NO_2) is considered unlikely. On 23rd March 2020, the UK Government released official guidance advising all members of public to stay at home, with work-related travel only permitted when absolutely necessary. During this initial national lockdown (and to a lesser extent other national and regional lockdowns that followed), marked reductions in vehicle traffic were observed; Department for Transport (DfT) data[8] suggests reductions in vehicle traffic of up to 70% were experienced across the UK by mid-April, relative to pre COVID-19 levels.

This reduction in travel in turn gave rise to a change of air pollutant emissions associated with road traffic, i.e. nitrous oxides (NO_x), and exhaust and non-exhaust particulates (PM). The Air Quality Expert Group (AQEG)[9] has estimated that during the initial lockdown period in 2020, within urbanised areas of the UK reductions in NO_2 annual mean concentrations were between 20 and 30% relative to pre-pandemic levels, which

[8] Prime Minister's Office, COVID-19 briefing on the 31st of May 2020

[9] Air Quality Expert Group, Estimation of changes in air pollution emissions, concentrations and exposure during the COVID-19 outbreak in the UK, June 2020

represents an absolute reduction of between 10 to 20µg/m^3 if expressed relative to annual mean averages. During this period, changes in $PM_{2.5}$ concentrations were less marked than those of NO_2. $PM_{2.5}$ concentrations are affected by both local sources and the transport of pollution from wider regions, often from well beyond the UK. Through analysis of AURN monitoring data for 2018-2020, AQEG have detailed that $PM_{2.5}$ concentrations during the initial lockdown period are of the order 2 to 5µg/m^3 lower relative to those that would be expected under business-as-usual conditions.

As restrictions are gradually lifted, the challenge is to understand how these air quality improvements can benefit the long-term health of the population.

Impacts of COVID-19 on Air Quality within Folkestone and Hythe District Council

The only identifiable impact as a consequence of COVID-19 upon air quality within Folkestone and Hythe District Council is the reduction in annual mean NO_2 concentrations observed in 2020 compared to 2019. An average decrease of 4.8µg/m^3 was reported across 16 monitoring locations (all sites where more than 1 years' worth of data is available), whereas from 2018 to 2019 an average decrease of 1.8µg/m^3 was reported at seven monitoring locations (14 monitoring locations in total where there was more than one years' worth of data available).

Opportunities Presented by COVID-19 upon LAQM within Folkestone and Hythe District Council

No LAQM related opportunities have arisen as a consequence of COVID-19 within Folkestone and Hythe District Council.

Challenges and Constraints Imposed by COVID-19 upon LAQM within Folkestone and Hythe District Council

No significant challenges or constraints relating to LAQM have arisen during 2020 as a consequence of COVID-19 within Folkestone and Hythe District Council.

Table F.1 – Impact Matrix

Category	Impact Rating: None	Impact Rating: Small	Impact Rating: Medium	Impact Rating: Large
Automatic Monitoring – Data Capture (%)	More than 75% data capture	50 to 75% data capture	25 to 50% data capture	Less than 25% data capture
Automatic Monitoring – QA/QC Regime	Adherence to requirements as defined in LAQM.TG16	Routine calibrations taken place frequently but not to normal regime. Audits undertaken alongside service and maintenance programmes	Routine calibrations taken place infrequently and service and maintenance regimes adhered to. No audit achieved	Routine calibrations not undertaken within extended period (e.g. 3 to 4 months). Interruption to service and maintenance regime and no audit achieved
Passive Monitoring – Data Capture (%)	More than 75% data capture	50 to 75% data capture	25 to 50% data capture	Less than 25% data capture
Passive Monitoring – Bias Adjustment Factor	Bias adjustment undertaken as normal	<25% impact on normal number of available bias adjustment colocation studies (2020 vs 2019)	25-50% impact on normal number of available bias adjustment studies (2020 vs 2019)	>50% impact on normal number of available bias adjustment studies (2020 vs 2019) and/or applied bias adjustment factor studies not considered representative of local regime
Passive Monitoring – Adherence to Changeover Dates	Defra diffusion tube exposure calendar adhered to	Tubes left out for two exposure periods	Tubes left out for three exposure periods	Tubes left out for more than three exposure periods
Passive Monitoring – Storage of Tubes	Tubes stored in accordance with laboratory guidance and analysed promptly.	Tubes stored for longer than normal but adhering to laboratory guidance	Tubes unable to be stored according to be laboratory guidance but analysed prior to expiry date	Tubes stored for so long that they were unable to be analysed prior to expiry date. Data unable to be used
AQAP – Measure Implementation	Unaffected	Short delay (<6 months) in development of a new AQAP, but is on-going	Long delay (>6 months) in development of a new AQAP, but is on-going	No progression in development of a new AQAP
AQAP – New AQAP Development	Unaffected	Short delay (<6 months) in development of a new AQAP, but is on-going	Long delay (>6 months) in development of a new AQAP, but is on-going	No progression in development of a new AQAP

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
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
EU	European Union
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

References

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