

Air Quality in Exeter: Non-Technical Summary 2025

Air quality across Exeter generally meets national objectives, with long-term monitoring showing consistent downward trends in pollutant concentrations. The city performs well overall, with only one identified small area where nitrogen dioxide (NO₂) levels have exceeded the government's objectives in the last three calendar years. However, in 2024, no location in Exeter exceeded the government's objectives for nitrogen dioxide (NO₂). This report provides an overview of the monitoring undertaken by Exeter City Council and presents the latest data on air pollution levels within the city.

The Air Quality Management Area and the Air Quality Action Plan

An **Air Quality Management Area (AQMA)** is declared when monitoring identifies an exceedance of a national air quality objective. With an AQMA, the Council must implement measures aimed at improving air quality.

Exeter's AQMA aims to address levels of nitrogen dioxide (NO₂) within the defined area for both the **1-hour mean** and **annual mean objectives**.

When an AQMA is declared, the local authority must prepare an **Air Quality Action Plan (AQAP)** setting out actions to achieve compliance with the objectives. Exeter's current AQAP was published in **2018** and runs until **2024**. It includes **17 measures** designed to reduce pollutant concentrations and limit exposure to air pollution, thereby improving health and quality of life for residents and visitors.

A new AQAP will be developed in **2026** and will be informed by the latest monitoring results. Public consultation will take place during 2026 in accordance with statutory requirements.

Further details of the Council's Air Quality Action Plan can be found on the Exeter City Council website under [Air Quality Action Plan](#).

Monitoring

Automatic monitoring

Exeter City Council operates two automatic (continuous) monitoring stations:

- **Royal Albert Memorial Museum (RAMM), Queen Street**
- **Alphington Street**

In **2024**, the RAMM site measured **nitrogen dioxide (NO₂)**, **ozone (O₃)** and **particulate matter (PM₁₀ and PM_{2.5})**. The Alphington Street site monitored **PM₁₀ and PM_{2.5}**.

The NO₂ monitor at Exeter Roadside is part of the [UK Automatic Urban and Rural Network \(AURN\)](#), with data collected and ratified by the AURN. Particulate data is collected, validated and ratified by Exeter City Council.

Non-automatic monitoring

In **2024**, Exeter City Council carried out non-automatic (passive) monitoring of NO₂ at **85 sites** across the city using **diffusion tubes**.

Diffusion tubes are small clear plastic tubes with a grey cap containing a steel mesh disc coated with a chemical that absorbs NO₂. As gases pass over the mesh, the chemical changes, indicating the NO₂ concentration during the monitoring period.

These tubes are positioned throughout the city on lampposts and drainpipes at locations chosen to represent relevant exposure points while avoiding interference from other pollution sources. Tubes are collected and replaced monthly, then sent to a laboratory for analysis.

A map of monitoring locations and the AQMA can be found on **page 5** of this document. An interactive map is available on the Exeter City Council website under [Air Quality Monitoring](#).

Air Quality in 2024

Monitoring data is ratified and adjusted to allow comparison with England's statutory air quality objectives as shown in Table 1.

Table 1. Air quality objectives in England

Pollutant	Concentration	Measured as
PM ₁₀	50 µg/m ³ , not to be exceeded more than 35 times a year	24-hour average
PM ₁₀	40 µg/m ³	Annual average
NO ₂	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour average
NO ₂	40 µg/m ³	Annual average
PM _{2.5}	20 µg/m ³	Annual average
PM _{2.5}	10 µg/m ³ target by 2040	Annual average

PM₁₀

Since August 2018, Exeter City Council has operated two continuous PM₁₀ analysers. However, equipment faults at the **Exeter Roadside (RAMM)** site meant that no PM₁₀ data was available from this location in 2024.

The **Alphington Street** roadside site recorded an annual mean concentration of **14.1 µg/m³**, well below the objective of 40µg/m³. There were **no exceedances** of the 24-hour mean objective (50µg/m³) in 2024.

Table 2. PM₁₀ annual average concentrations since 2020

Site Name	2020 PM ₁₀ Annual Average Concentration (µg/m ³)	2021 PM ₁₀ Annual Average Concentration (µg/m ³)	2022 PM ₁₀ Annual Average Concentration (µg/m ³)	2023 PM ₁₀ Annual Average Concentration (µg/m ³)	2024 PM ₁₀ Annual Average Concentration (µg/m ³)
Exeter Roadside (RAMM)	14.1	13.9	17.1(19.2)	18.8 (20.1)	-
Alphington Street	11.5	12.0	14.7	15.2	14.1

PM_{2.5}

Similarly, Exeter City Council operates two continuous PM_{2.5} analysers. Due to equipment faults at RAMM, no PM_{2.5} data was available from that site in 2024.

The **Alphington Street** site recorded an annual mean of **8.5 µg/m³**, well below both the current limit (20µg/m³) and the 2040 target (10µg/m³).

Table 3. PM_{2.5} annual average concentrations since 2020

Site Name	2020 PM _{2.5} Annual Average Concentration (µg/m ³)	2021 PM _{2.5} Annual Average Concentration (µg/m ³)	2022 PM _{2.5} Annual Average Concentration (µg/m ³)	2023 PM _{2.5} Annual Average Concentration (µg/m ³)	2024 PM _{2.5} Annual Average Concentration (µg/m ³)
Exeter Roadside (RAMM)	8.6	8.4	11.1 (12.7)	13.2	-
Alphington Street	6.8	7.5	9.0	8.8	8.5

NO₂

Diffusion tube monitoring in 2024 showed **no** exceedances of the annual mean objective (40µg/m³) at any site. This is the **first year** all measurements have been below the objective, marking a significant milestone in Exeter's air quality improvement.

East Wonford Hill, the only site above the objective in 2023, recorded 38.1µg/m³ in 2024, 1.9 µg/m³ below the limit.

Table 4. NO₂ annual average concentrations since 2020 for East Wonford Hill

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
East Wonford Hill	38.2	42.2	40.4	40.5	38.1

Trend analysis:

- Significant reduction in NO₂ between **2019 and 2020**, likely due to COVID-19 restrictions and changes in travel behaviour.
- Partial rebound in 2021, followed by stable levels through 2024.
- Improvements attributed to:
 - Reduced traffic flows.
 - Cleaner vehicle technologies.
 - Measures in the Air Quality Action Plan.
 - Natural variability (roadworks, weather patterns, etc.).

Full NO₂ data for all the diffusion tubes and the RAMM continuous monitor (2020-2024) is available on pages 6 to 11 of this document.

Long-Term Trends in Air Quality

Figures 1 and 2 illustrate a clear downward trend in annual average concentrations of **NO₂** and **PM₁₀** since around 2009. For NO₂, this reduction is clear at both **urban background** and **roadside** monitoring sites.

This sustained improvement is particularly encouraging given the significant housing and commercial development in Exeter over the same period. However, it has not been possible to attribute this trend to any single national or local intervention. Some degree of **year-to-year** variability is expected due to factors such as **weather conditions** and temporary changes in traffic patterns.

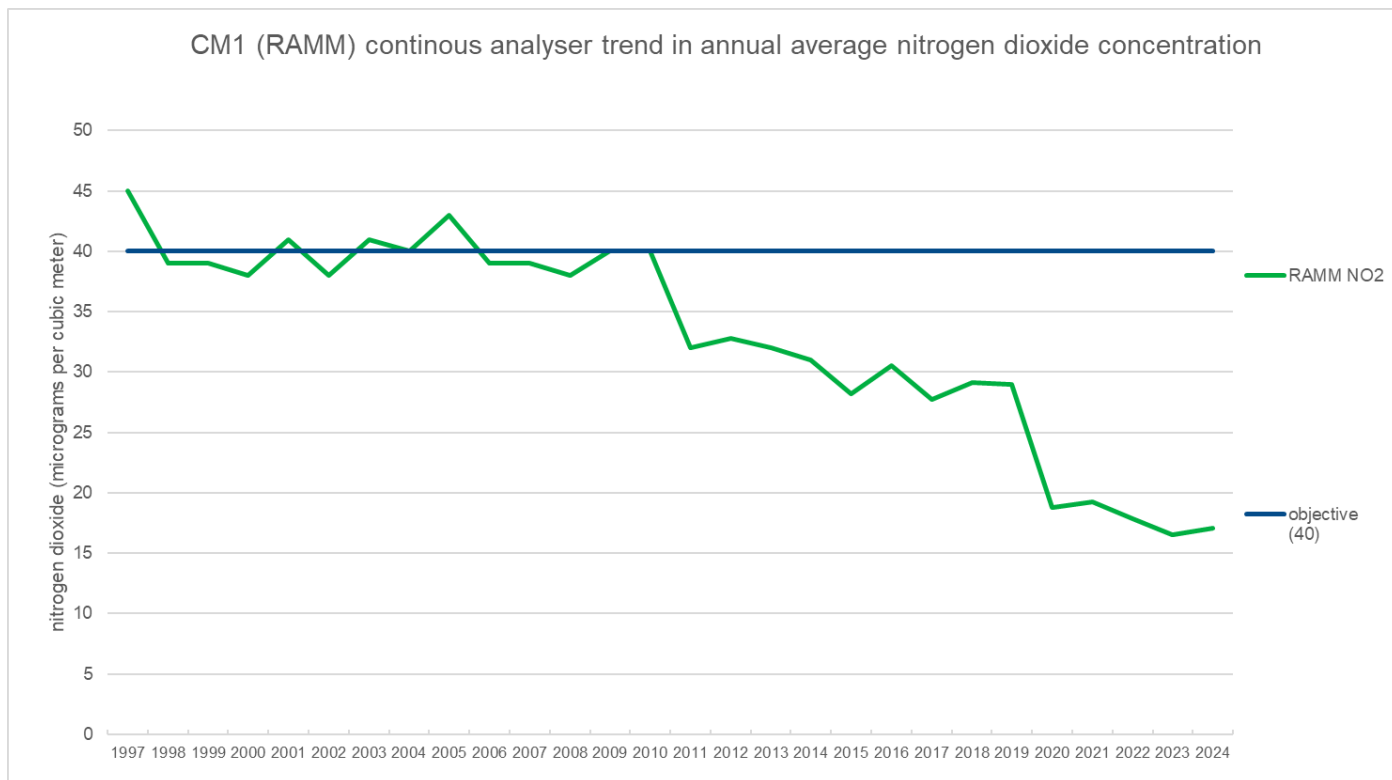


Figure 1. Trends in annual average NO₂ concentrations at the continuous monitoring site between years 1997 and 2024. There are no exceedances of the annual mean objective in 2024. There is a general trend of reduction since 2010.

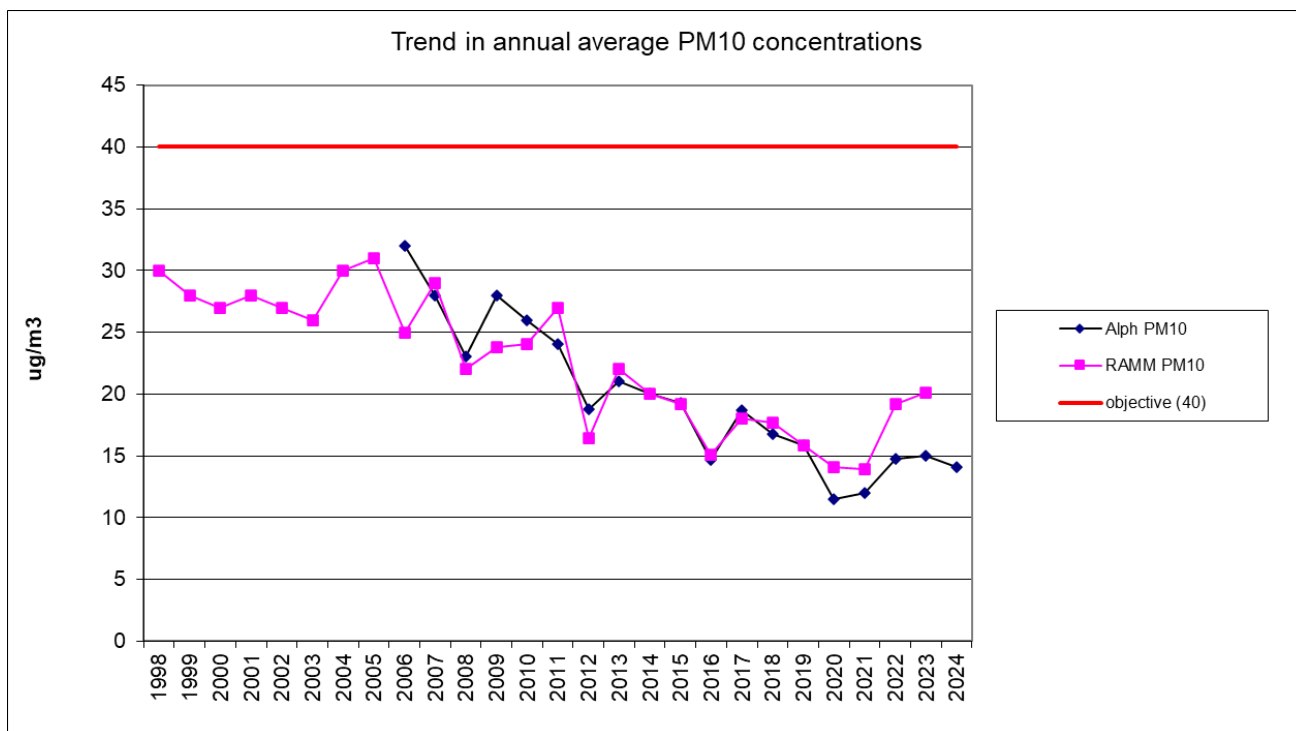


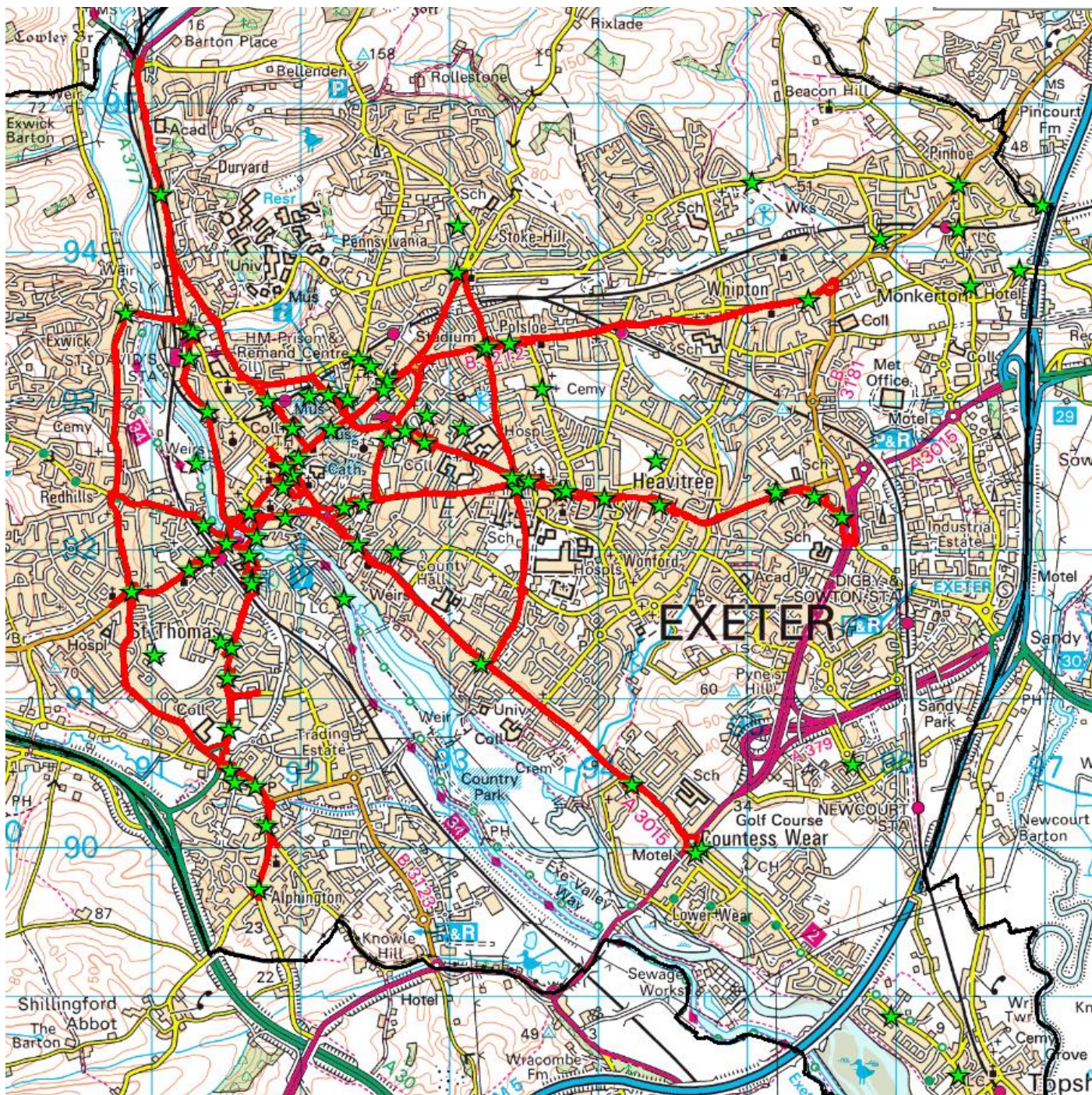
Figure 2. Trends in annual average PM₁₀ concentrations for the two monitoring sites in Exeter between 1998 and 2024. There are no exceedances of the annual mean objective in 2024 although concentrations have increased since 2021. Otherwise, there is a general trend of reduction experienced across both sites.



Further Information

Exeter City Council publishes an **Annual Status Report (ASR)** each year, providing a more detailed summary of the city's latest air pollution levels and actions being taken to reduce pollution.

The report covering work during **2025** is available to download at the [exeter.gov.uk](https://www.exeter.gov.uk/exeter-air-quality/annual-status-report) webpage on air quality monitoring ([Annual Status Report 2025](#)).

Exeter's air quality monitoring locations and AQMA



 represents an air quality monitoring location|  represents the Air Quality Management Area boundary

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An online map of the monitoring locations and AQMA can be found at the [exeter.gov.uk webpage on air quality monitoring](https://www.exeter.gov.uk/air-quality-monitoring).

Annual average NO₂ monitoring results since 2020

- **Exceedances** of the NO₂ annual average objective (40µg/m³) are shown in **bold**.
- NO₂ annual averages exceeding **60µg/m³**, which may indicate a potential exceedance of the 1-hour mean objective are shown in **bold and underlined**.
- An asterisk (*) after the site name indicates that the data is **not representative of exposure**. These results would be corrected for distance to the nearest receptor before comparison with objective levels.

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
Alphington Cross	20.4	25.6	22.5	23.8	22.9
Alphington Road inbound	22.4	27.4	24.3	24.5	23.6
Alphington Road outbound	17.7	21.2	20.6	18.4	17.2
Alphington Road outer*	15.3	20.6	18.7	18.1	16.5
Alphington Street	28.5	35.7	33.1	34.3	31.5
Archibald Road	13.2	16.8	15.2	15.7	14.3
Beacon Heath*	13.6	15.1	13.6	14.6	12.8
Blackboy Road (Polsloe Road)	19.2	23.5	20.6	21.0	21.8
Bonhay Road (St Clements Lane)	19.2	24.7	21.8	22.6	22.8
Bonhay Road bridge	-	-	26.9	27.1	26.6
Bridge Road (Countess Wear)	17.8	16.9	15.6	15.0	13.8

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
Carder's Court, Shilhay	15.5	18.3	15.7	15.9	16.1
Chudleigh Road	11.1	13.7	12.6	12.3	12.1
Church Road Alphington	18.3	24.3	18.5	17.8	17.2
Church Road II	16.2	19.8	20.9	22.1	20.1
Cowick Barton Playing Fields	7.6	9.3	8.9	8.3	7.2
Cowick Street (Cowick Lane)	26.8	31.6	30.1	31.2	29.9
Cowick Street (Exe Bridges)	22.1	28.2	26.7	27.5	26.5
Cowick Street (inbound)	15.6	19.9	17.5	18.1	17.1
Cowick Street (outbound)	24.3	29.8	28.7	29.2	28.1
Cowley Bridge Road	22.9	27.5	26.5	25.9	24.2
East John Walk	9.7	11.6	10.4	9.7	9.6
East Wonford Hill	38.2	42.2	40.4	40.5	38.1
Exeter Road	14.3	16.4	16.6	16.6	15.2
Exwick Playing Fields	12.3	15.9	13.9	12.7	15.1

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
Fore Street Heavitree inbound	29.0	32.2	30.5	30.6	28.5
Fore Street Heavitree outbound*	19.8	23.4	20.7	20.9	19.9
Heavitree Pleasure Grounds	7.6	9.1	8.7	7.8	7.2
Heavitree Road inbound	13.2	16.5	14.6	14.5	14.0
Heavitree Road outbound	22.3	28.0	24.0	25.8	23.8
High Street /Castle Street*	17.0	20.9	15.7	17.5	18.1
High Street Guildhall	15.7	20.4	18.1	18.3	19.6
High Street Topsham	17.2	22.1	18.7	18.7	17.7
Holloway Street	21.3	26.6	21.9	21.5	23.5
Honiton Road façade	14.8	16.0	14.9	14.9	13.7
Honiton Road*	33.2	35.4	31.7	33.5	32.2
Ladysmith School/Pretoria Road	10.6	12.2	10.5	10.9	9.7
Langaton Lane*	13.3	15.1	12.7	13.1	10.8
Livery Dole	31.1	34.9	32.3	34.7	32.0
Longbrook Street	17.5	21.4	19.0	20.0	18.9

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
Lower Coombe Street	15.5	18.6	15.4	16.5	17.0
Magdalen Road (Barrack Road)	24.3	29.4	27.6	27.9	26.4
Magdalen Street façade	20.0	23.8	22.9	18.7	18.6
Magdalen Street*	19.5	24.7	22.5	22.0	21.0
Market Street	18.6	23.4	20.7	20.1	19.7
Mill Lane	9.6	12.3	11.3	11.5	11.0
New Bridge Street	19.5	24.0	22.5	22.7	21.8
New North Road	18.8	22.6	20.1	19.6	19.0
Newcourt Way*	11.5	14.7	13.6	13.5	12.6
Newtown	10.8	12.6	12.0	11.9	11.3
North Street	22.6	27.9	24.0	23.9	28.8
Northernhay Gardens	8.3	10.7	8.4	9.4	-
Okehampton Street	17.3	20.6	18.7	19.0	18.6
Pennsylvania	7.5	8.3	7.8	7.6	7.2
Pennsylvania Road	18.3	23.2	21.6	21.5	20.5
Pinhoe Road (Fairfield Avenue)	12.6	15.8	15.9	13.7	13.8

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
Pinhoe Road (Polsloe Road)	25.6	30.6	28.0	29.6	28.6
Pinhoe Road inbound	20.9	24.0	22.3	23.5	22.3
Pinhoe*	18.4	21.8	18.6	20.5	19.1
Pinn Lane*	12.8	15.5	14.3	16.2	-
Queen Street	16.2	19.0	16.6	17.4	16.1
Queen's Road	9.1	11.7	10.1	9.9	9.7
RAMM 1 & 2	18.5	21.3	17.8	17.3	17.9
RAMM continuous analyser	18.8	19.2	17.9	16.4	17.1
Rear of Gervase Avenue*	15.8	19.2	17.5	17.6	17.5
Red Cow II	21.5	26.0	23.1	24.2	23.1
Red Cow Village	26.5	32.1	29.7	31.7	27.1
Riverside Valley Park	9.4	11.7	9.9	10.3	10.1
Rowancroft	27.4	32.1	27.2	28.6	27.1
Salutary Mount*	32.7	37.3	33.5	32.2	31.4
Sidmouth Road lamp post*	23.5	26.8	25.0	24.7	23.6
Sidmouth Road Middlemoor	15.5	19.2	17.5	17.5	16.6
Sidwell Street	18.6	23.8	20.5	21.6	22.5
South Gate	-	-	-	-	22.4

Site Name	2020 NO ₂ Annual Average Concentration (µg/m ³)	2021 NO ₂ Annual Average Concentration (µg/m ³)	2022 NO ₂ Annual Average Concentration (µg/m ³)	2023 NO ₂ Annual Average Concentration (µg/m ³)	2024 NO ₂ Annual Average Concentration (µg/m ³)
South Street*	18.7	24.2	20.6	20.2	20.5
St. Leonards Road	11.2	13.9	12.2	11.9	11.1
Station Road	17.7	21.2	20.3	20.7	19.6
Station Road Pinhoe	10.6	13.4	12.5	13.5	12.1
Tithebarn Link Road	14.5	17.3	15.4	15.8	15.2
Topsham Road (Barrack Road)	15.9	19.1	19.2	18.3	17.2
Topsham Road (Countess Wear)	18.1	20.7	17.4	19.1	17.7
Topsham Road (Tollards Road)	25.0	30.0	27.9	28.8	27.5
Union Road	16.7	21.0	19.3	18.7	17.7
Venny Bridge*	14.2	16.6	15.3	15.2	15.6
Western Way (Acorn)	-	-	-	-	28.0
York Road School*	18.1	23.0	20.7	20.3	19.0
York Road*	23.3	31.2	27.8	26.9	25.2