Armagh City, Banbridge & Craigavon Borough Council

2025 Air Quality Progress Report

In fulfilment of Environment (Northern Ireland) Order 2002

Local Air Quality Management

August 2025

Information	Armagh City, Banbridge Craigavon Borough Council
Local Authority Officer	Sam Mills
Department	Environmental Health
Address	Old Armagh City Hospital, 39 Abbey Street, Armagh, BT61 7DY
Telephone	03300561011
E-mail	Sam.mills@armaghbanbridgecraigavon.gov.uk
Report Reference Number	ABCBCLAQM - PR2025
Date	August 2025

Executive Summary

Armagh Banbridge Craigavon Borough Council has completed this 2025 Air Quality Progress Report in accordance with the provisions of the Environment (Northern Ireland) Order 2002 and the Northern Ireland Local Air Quality Management Policy Guidance document LAQM.PGNI (09).

In undertaking this report, we have completed a review of air quality monitoring data across the borough using a network of passive diffusion tubes and one monitoring station (Lonsdale Road, Armagh) which forms part of a UK National AURN network.

Data and trends have been assessed against Air Quality Strategy Objectives and European Commission Limit Values.

This Progress Report shows that nitrogen dioxide emissions since reducing during the covid pandemic of 2020 have plateaued, or slightly increased.

In 2024, Council undertook a review of NO_2 diffusion tube monitoring network, with the introduction of an expanded network, to include additional residential areas, and transport routes throughout the borough. It is proposed to maintain a longterm monitoring presence in these smaller settlements to allow greater understanding of air quality across the borough and to inform any future detailed studies.

The Council are publishing this updated suite of data and welcome any comments or feedback from residents or interested stakeholders. The Council do not intend to revoke the AQMA at this stage. The Council's Action Plan focusses on the reduction of unnecessary nitrogen dioxide emissions across the Borough as a whole and across NI as a region. We believe this aligns closely with the Council's declaration of a Climate Emergency made in July 2019 and the strategy and policies being developed to meet 'net zero' targets by 2050.

Revoking the AQMA would be premature in the absence of a NI Clean Air Strategy and NI Energy Strategy (which it is hoped will provide a clear and supported route-map to reducing emission potential across Northern Ireland).

At the end of this document an updated review of the Council's Air Quality Action Plan is provided.

Armagh Banbridge Craigavon Borough Council Council's Air Quality Action Plan is provided at the end of this report in section 9.

Table of Contents

List of Figures

List of Tables

Appendices

1 Introduction

1.1 Description of Local Authority Area

The Borough is a beautiful rural, historic area served by the main motorway network in Northern Ireland, with major road links to the business capitals of Belfast and Dublin. Armagh City. Banbridge and Craigavon Borough has a mixture of heavy industry, services such as local government, the local education authority, health and social services, retail, and agriculture. The greatest contribution to air quality pollution in the Borough is from road traffic, particularly in the city/town centres of Armagh, Portadown and Lurgan where the road network is frequently congested. Given the size of the rural hinterland, public transport options are limited and there is a greater tendency to rely on the private car as the primary means of transport. The road network within the Borough is regarded as a route hub to the border with the Republic Of Ireland and is a main through-route between mid-Ulster and the south-east of Northern Ireland and hence has a traffic flow higher than that which could be created by local traffic alone. Particulate Matter (PM_{10}) and NO_2 would be considered as the pollutants most at risk of breaching the objective limits in the Borough as a result of road traffic.

Domestic fuel usage throughout the Borough has historically been based on solid fuel/oil with limited use of gas. As within the province generally, the use of coal is declining although a trend of secondary or primary heating using wood or multi-fuel burning stoves is apparent giving rise to additional air quality concerns.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in the Environment (Northern Ireland) Order 2002, the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 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 exceedances are considered likely, the local authority must then 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.

For Local Authorities in Northern Ireland, Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the LAQM process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedance of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in **Northern Ireland** are set out in the Air Quality Regulations (Northern Ireland) 2003, Statutory Rules of Northern Ireland 2003, no. 342, and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre μg/m^3 (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedances in each year that are permitted (where applicable).

Table 1-1: Air Quality Objectives included in Regulations for the purpose of LAQM in Northern Ireland

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m^3	Running annual mean	31.12.2003
	3.25 µg/m^3	Running annual mean	31.12.2010
1,3-butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m^3	Annual mean	31.12.2004
	0.25 µg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m^3	Annual mean	31.12.2005
Particulate matter (PM_{10}) (gravimetric)	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

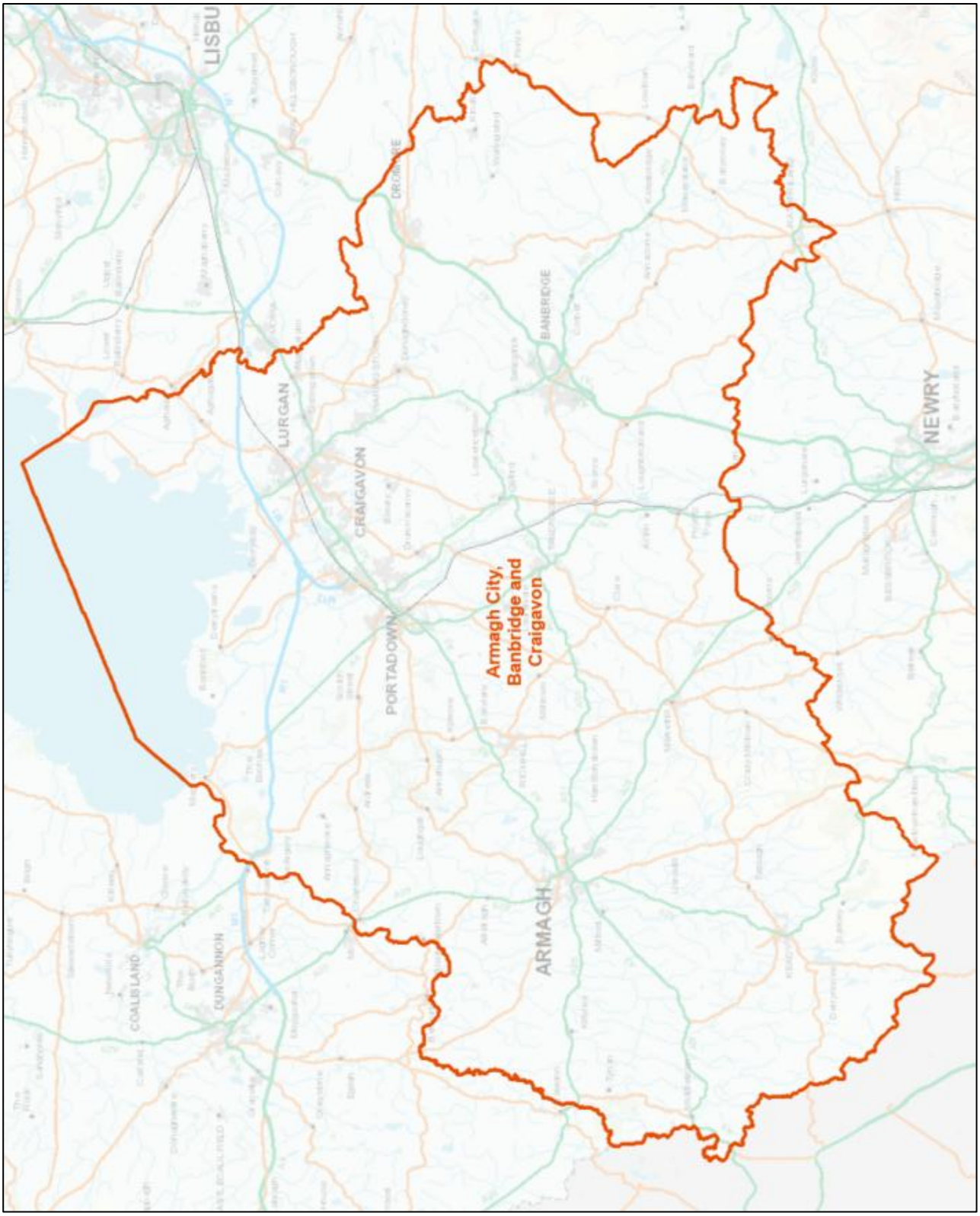
1.4 Summary of Previous Review and Assessments

Report Type	Date	Exceedences	Detailed Assessment Required	AQMA's Declared
Initial Review and Assessment	Jan 2001	None	No	None
Progress Report	April 2005	None	No	None
Updating & Screening Assessment	April 2006	None	No	None
Progress Report	April 2007	None	No	None
Detailed Assessment for NO_2	Nov 2007	None	No	None
Progress Report	April 2008	NO_2	No	Yes
Updating & Screening Assessment	April 2009	NO_2	No	In the previous year
Progress Report	May 2010	NO_2	Yes	None
Progress Report	May 2011	NO_2	No	Yes
Updating and Screening Assessment	April 2012	NO_2	No	Yes
Progress Report	April 2013	NO_2	No	No

Report Type	Date	Exceedences	Detailed Assessment Required	AQMA's Declared
Progress Report	April 2014	NO_2	No	No new AQMAs
Updating and Screening Assessment	April 2015	NO_2	Yes	No new AQMAs
Progress Report & DA (hereby presented)	April 2016 (May 2017)	NO_2	Yes	To be declared
Progress Report	August 2017	NO_2	Yes	Declaration prepared
Update and Screening Assessment	October 2018	NO_2	No	Borough-wide declaration made
Progress Report	2019	NO_2	No	Borough-wide AQMA remains unchanged
Progress Report	2020	NO_2	No	Borough-wide AQMA remains unchanged
Updating and Screening Assessment	2021	NO_2	No	Borough-wide AQMA remains unchanged

Report Type	Date	Exceedences	Detailed Assessment Required	AQMA's Declared
Progress Report	2022	NO_2	No	Borough-wide AQMA remains unchanged
Progress Report	2023	NO_2	No	Borough-wide AQMA remains unchanged
Updating and Screening Assessment	2024	NO_2	No	Borough-wide AQMA remains unchanged
Progress Report	2025	NO_2	No	Borough-wide AQMA remains unchanged

Figure 1-1: Map of AQMA Boundaries



2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

Armagh Banbridge Craigavon Borough Council operates one automatic monitoring station located at Lonsdale Road, Armagh

This station forms part of DEFRA's Automatic Urban and Rural Network (AURN) network.

As an AURN Network site, to ensure that the data is both accurate and representative, a fortnightly calibration is carried out by Council staff in accordance with the procedures detailed in the DEFRA Automatic Urban and Rural Network local site operators' manual.

Data management, quality assurance and quality control and service and maintenance support are all provided by DEFRA's appointed contractors. The data from our sites is made available to the Department of Agriculture, Environment and Rural Affairs and is reported on the 'Northern Ireland Air' website in near real time.

All data is validated and corrected in accordance with Government technical guidance, such as Bata Attenuation Monitoring (BAM) for PM_{10}.

For consistency, all automatic monitoring data reported in this progress report has been obtained from the 'Northern Ireland Air Quality' website.

Automatic data reported in this report relates to the calendar year (i.e. January – December) and data capture levels exceed substantially the Department's 75% data capture threshold for the calculation of annual statistics.

Figure 2-1: Map of Automatic Monitoring Sites

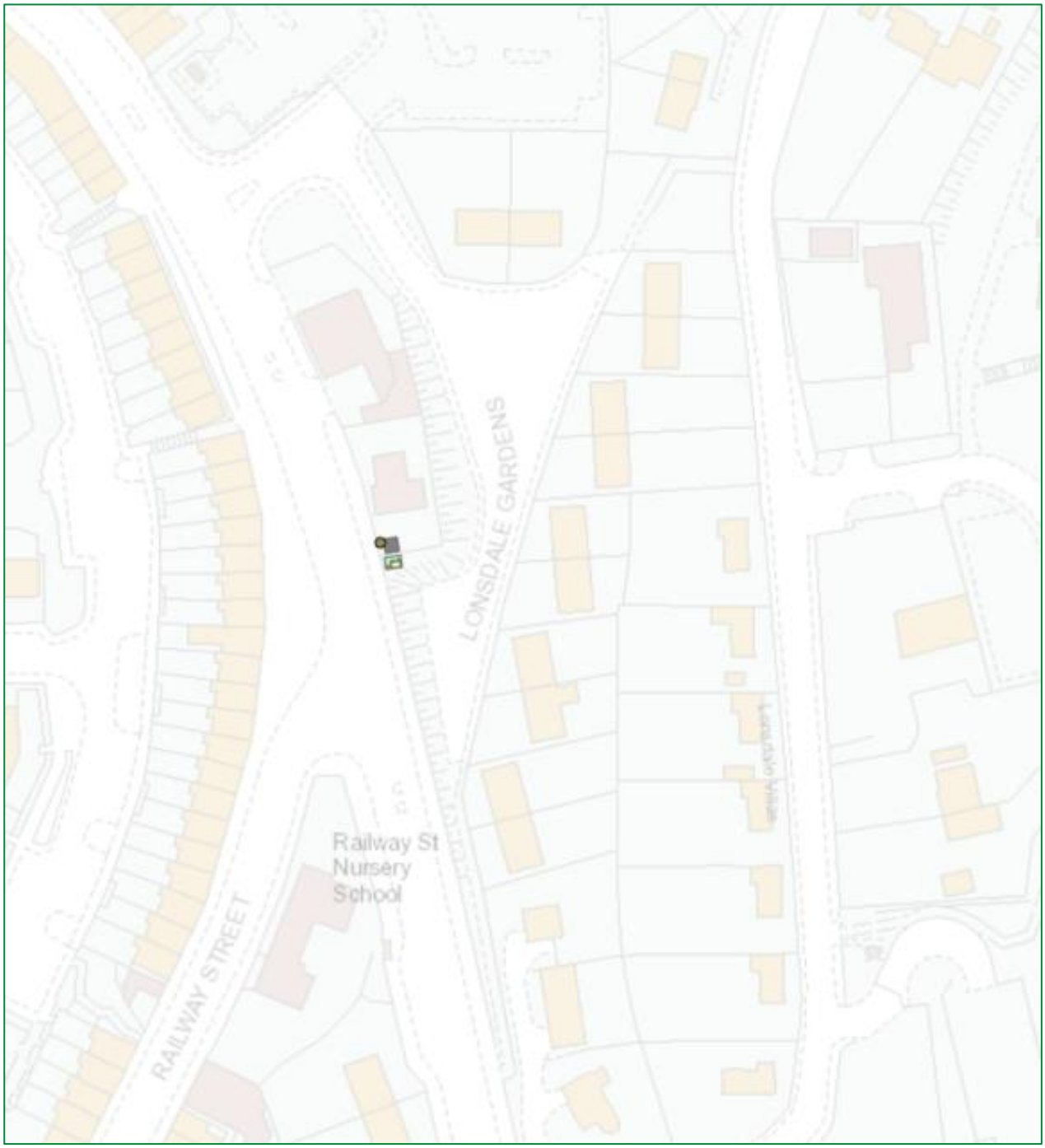


Table 2-1: Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Inlet Height (m)	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst-Case Exposure?
AURN1	Lonsdale Road	Roadside	287520	345840	2.5	NO_2 NO_x NO PM_{10} PAH	Y	API (NO_x) BAM (PM_{10}) DIGITEL(PAH)	Y(20m)	3m	Y

2.1.2 Non-Automatic Monitoring Sites

During the monitoring period in 2024 Armagh Banbridge Craigavon Borough Council extended the monitoring network of nitrogen dioxide by diffusion tube exposure at from 25 sites in the borough to 35 sites using 38 tubes.

New monitoring locations have been introduced for both roadside and urban background for all villages and towns within the borough, and so represent the population exposure across the borough.

Details of diffusion tube sites are included within Appendix 2 of this report.

Non-automatic monitoring sites are selected as risk based exposure assessment of nitrogen dioxide levels and how they vary at main road locations and background locations across the borough.

Full details of diffusion tube monitoring sites are included within Appendix 2 of this report.

Diffusion tubes are placed in accordance with Government Technical guidance for Ambient NO_2 monitoring.

Armagh Banbridge Craigavon Borough Council's diffusion tubes are exposed for successive four or five week periods, in approximate accordance with the DEFRA Diffusion Tube Monitoring Calendar and, as a result, they provide a good general indication of average nitrogen dioxide concentrations, thereby allowing a comparison with the annual mean objective.

In 2024 monitoring year, Socotec (Didcot) was the contractor used for supply and analysis of diffusion tubes.

Socotec follow the requirements of Government Technical guidance for Ambient NO_2 monitoring. Tubes are prepared with a 20% triethanolamine solution (TEA) for monitoring ambient nitrogen dioxide. Analysis is by UV spectrophotometry.

Laboratory performance regarding NO_2 Proficiency Testing Scheme is assessed under AIR. AIR is an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Executive (HSE). AIR PT is a new scheme, started in April 2014, which combined two long running PT schemes: LGC Standards STACKS PT scheme and HSE WASP PT scheme.

Performance documentation for Socotec can be found : https://laqm.defra.gov.uk/wp-content/uploads/2021/02/AIR-PT-Rounds-55-to-68-January-2023-to-February-2025.pdf

In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, Socotec for survey year 2024, holds the highest rank of a Satisfactory laboratory.

Table 2-2: AIR-PT Rounds Performance documentation for Socotec Rounds-50-to-63-January-2023-to-February-2025

Table 1: Laboratory summary performance for AIR NO_2 PT rounds AR055, 56, 58, 59, 62, 63, 65, 66 and 68

The following table lists those UK laboratories undertaking LAQM activities that have participated in recent AIR NO_2 PT rounds and the percentage (%) of results submitted which were subsequently determined to be **satisfactory** based upon a z-score of ≤ ± 2 as defined above.

AIR PT Round	AIR PT AR055	AIR PT AR056	AIR PT AR058	AIR PT AR059	AIR PT AR062	AIR PT AR063	AIR PT AR065	AIR PT AR066	AIR PT AR068
Round conducted in the period	January – February 2023	May – June 2023	July – August 2023	September – October 2023	January – February 2024	April – June 2024	July – August 2024	September – October 2024	January – February 2025
Aberdeen Scientific Services	0 %	100 %	100 %	75 %	100 %	100 %	100 %	100 %	100 %
Cardiff Scientific Services	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Edinburgh Scientific Services	100 %	75 %	100 %	50 %	100 %	100 %	100 %	100 %	100 %
SOCOTEC	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	87.5 % [1]
Exova (formerly Clyde Analytical)	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Glasgow Scientific Services	100 %	100 %	100 %	100 %	75 %	100 %	100 %	100 %	100 %
Gradko International	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	50 %
Kent Scientific Services	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Kirklees MBC	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Lambeth Scientific Services	0 %	75 %	50 %	0 %	50 %	50 %	50 %	50 %	100 %
Milton Keynes Council	50 %	75 %	100 %	100 %	100 %	NR [2]	50 %	100 %	100 %
Northampton Borough Council	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Somerset Scientific Services	100 %	75 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
South Yorkshire Air Quality Samplers	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]	NR [2]
Staffordshire County Council, Scientific Services	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Tayside Scientific Services (formerly Dundee CC)	NR [2]	100 %	NR [2]	NR [2]	NR [2]	NR [2]	100 %	NR [2]	NR [2]
West Yorkshire Analytical Services	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]

[1] Participant subscribed to two sets of test results (2 x 4 test samples) in each AIR PT round.
[2] NR, No results reported.
[3] Cardiff Scientific Services, Exova (formerly Clyde Analytical), Kent Scientific Services, Kirklees MBC, Northampton Borough Council and West Yorkshire Analytical Services; no longer carry out NO2 diffusion tube monitoring and therefore did not submit results.

To further ensure that diffusion tube monitoring data is as accurate as possible tubes are co-located at the Armagh Lonsdale Road continuous monitoring station (chemiluminescent).

This allows a bias adjustment factor (with a 95% confidence interval as an estimate of the uncertainty on the bias adjustment factor) to be calculated that can be used to correct the diffusion tube monitoring data.

For the purposes of reporting, and in accordance with Government technical guidance all diffusion tube data is presented with a national bias adjustment factor. In 2024 for Socotec the national diffusion tube bias adjustment factor of 0.76 has been utilised.

Figure 2-2: Map of Non-Automatic Monitoring Sites

Table 2.2 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
ABCNO2DIF001, ABCNO2DIF002, ABCNO2DIF003	Lonsdale Road, Armagh 3	Roadside	287527	345839	NO2	Yes	15.0	4.6	Yes	2.3
ABCNO2DIF004	Mall West, Armagh	Roadside	287834	345152	NO2	Yes	1.0	5.5	No	2.7
ABCNO2DIF005	Railway Street, Armagh	Roadside	287456	345963	NO2	Yes	1.0	3.2	No	2.6
ABCNO2DIF006	Greenpark Terrace, Armagh	Roadside	287336	344775	NO2	Yes	1.0	2.4	No	2.6
ABCNO2DIF007	Greenfield Way, Armagh	Urban Background	288792	344257	NO2	Yes	5.0		No	2.8
ABCNO2DIF008	Desart Lane, Armagh	Urban Background	286786	345752	NO2	Yes	5.0		No	2.7

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
ABCNO2DIF009, ABCNO2DIF010	Mill Street Tandragee 2	Roadside	303319	345870	NO2	Yes	1.0	1.5	No	2.7
ABCNO2DIF012	Barrack Street, Armagh	Roadside	287888	345054	NO2	Yes	1.0	4.9	No	3.0
ABCNO2DIF015	Church Street, Tandragee	Roadside	303118	346311	NO2	Yes	2.0	3.6	No	2.7
ABCNO2DIF017	Irish Street, Armagh	Roadside	287288	344628	NO2	Yes	2.0	4.1	No	2.7
ABCNO2DIF018	Upper Irish Street, Armagh	Roadside	287385	344856	NO2	Yes	1.0	1.3	No	2.7
ABCNO2DIF019	Bridge Street, Portadown	Roadside	301548	354231	NO2	Yes	1.0	1.9	No	2.6
ABCNO2DIF020	Ardboe Drive, Lurgan	Urban Background	308128	357820	NO2	Yes	1.0		No	2.5

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
ABCNO2DIF021	Ballyhannon Road, Portadown	Urban Background	303172	354283	NO2	Yes	5.0		No	1.8
ABCNO2DIF022	Flush Place, Lurgan	Roadside	308824	357773	NO2	Yes	1.0	2.0	No	2.7
ABCNO2DIF023	Springfields, Banbridge	Urban Background	311938	344065	NO2	Yes	5.0		No	2.7
ABCNO2DIF024	Fortfield, Dromore	Urban Background	319804	353510	NO2	Yes	5.0		No	2.7
ABCNO2DIF025	Church Street, Dromore	Roadside	320014	353392	NO2	Yes	1.0	2.8	No	2.6
ABCNO2DIF026	Mill Street, Gilford	Roadside	306679	348352	NO2	Yes	2.2	2.2	No	2.9
ABCNO2DIF029	William Street, Lurgan	Roadside	307798	358835	NO2	Yes	1.0	2.5	No	2.6

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
ABCNO2DIF030	Church Street, Pyntzpass	Roadside	305841	339460	NO2	Yes	1.0	5.4	No	2.7
ABCNO2DIF031	Cardinal Dalton Park	Urban Background	284787	334662	NO2	Yes	1.0		No	2.7
ABCNO2DIF032	Davis Street, Keady	Roadside	284455	334044	NO2	Yes	1.0	3.4	No	2.7
ABCNO2DIF033	Dean Swift Mews, Markethill	Roadside	296591	339695	NO2	Yes	4.0	1.4	No	2.7
ABCNO2DIF034	Ashgrove, Markethill	Urban Background	296033	339671	NO2	Yes	1.0		No	2.7
ABCNO2DIF035	Main Street, Loughbrickland	Roadside	310480	342041	NO2	Yes	1.0	3.5	No	2.7
ABCNO2DIF036	Newry Street, Banbridge	Roadside	312444	345557	NO2	Yes	2.4	4.0	No	2.7

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
ABCNO2DIF037	Dromore Street, Banbridge	Roadside	313228	346445	NO2	Yes	5.0	2.8	No	2.7
ABCNO2DIF038	Edward Street, Lurgan	Roadside	307739	358372	NO2	Yes	4.7	3.4	No	2.7
ABCNO2DIF039	Main Street, Donaghcloney	Roadside	313020	353735	NO2	Yes	1.0	2.8	No	2.7
ABCNO2DIF041	Bracken Road, Craigavon	Urban Background	303337	355514	NO2	Yes	1.0		No	2.7
ABCNO2DIF042	Armagh Road, Portadown	Roadside	300459	352787	NO2	Yes	10.0	2.7	No	2.7
ABCNO2DIF044	Downpatrick St, Rathfriland	Roadside	320065	333671	NO2	Yes	1.0	4.2	No	2.7
ABCNO2DIF045	Main Street, Charlesmont	Roadside	285274	355752	NO2	Yes	1.0	8.7	No	2.7

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA? Which AQMA?	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Site Height (m)
ABCNO2DIF046	Moypark, Seago	Industrial	288528	360873	NO2	Yes	1.0	1.4	No	2.7

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide (NO_2)

Automatic Monitoring Data

Tables 2.3 and 2.4 summarise recent monitoring data from the Armagh Lonsdale Road Continuous analyser for nitrogen dioxide for 2022 and preceding years from 2018.

During this time there have been no exceedences of the Air Quality Strategy Objectives for nitrogen dioxide.

Trends in annual mean monitoring data for nitrogen dioxide are summarised in Figure 2.3.

Table 2-3: Results of Automatic Monitoring for NO_2: Comparison with Annual Mean Objective

Site ID	X OS Grid Ref	Y OS Grid Ref	Site Type	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Annual Mean Concentration (µg/m^3)				
						2020* [c]	2021* [c]	2022* [c]	2023* [c]	2024 [c]
Armagh Roadside	287517	345826	Roadside	96	96	20	21	21	21	22

In bold, exceedance of the NO_2 annual mean AQS objective of 40µg/m^3

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

[c] Means should be "annualised" as in Boxes 7.9 and 7.10 of LAQM.TG22, if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional

Figure 2-3: Trends in Annual Mean NO_2 Concentrations Measured at Automatic Monitoring Sites

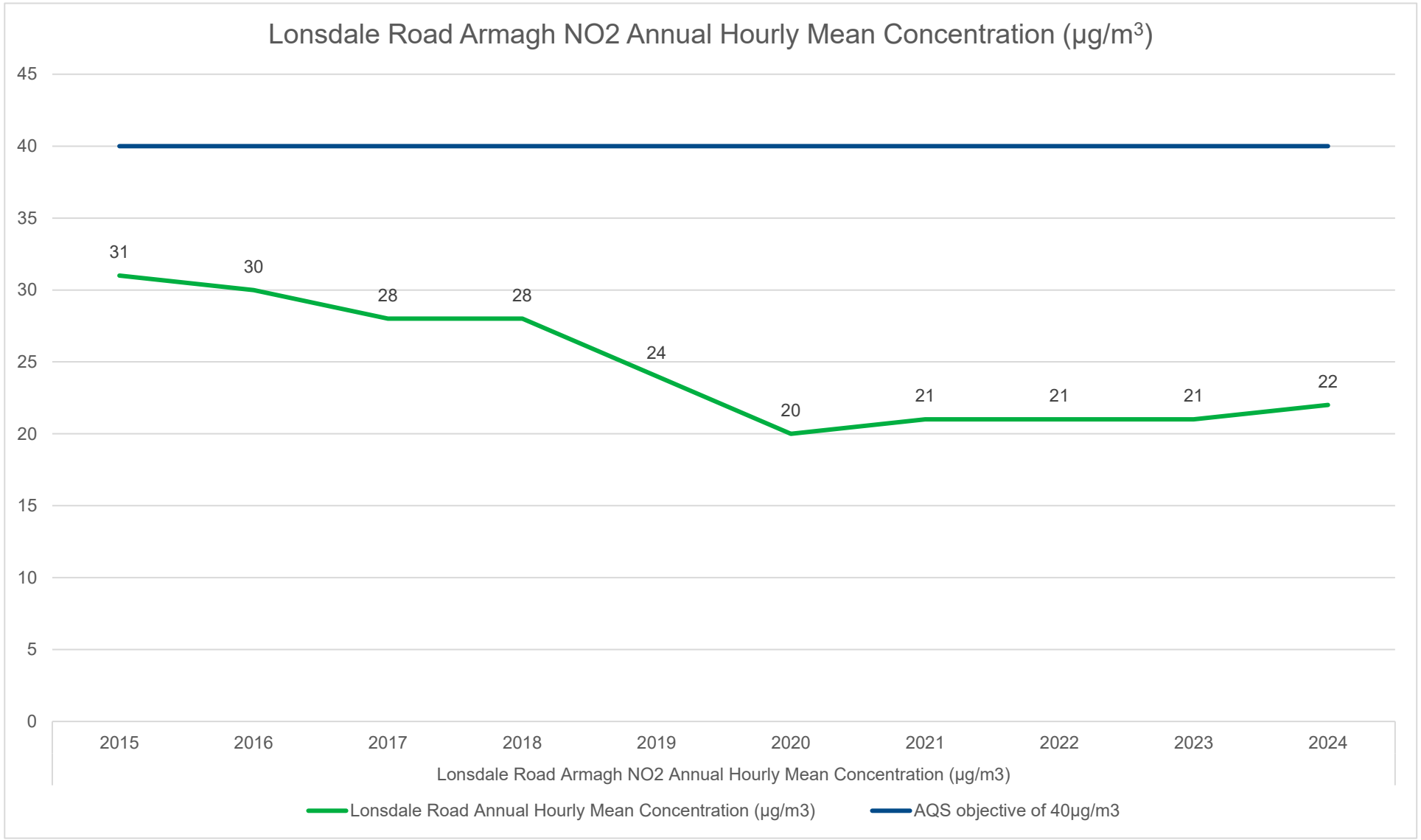


Table 2-4: Results of Automatic Monitoring for NO_2: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Number of Hourly Means > 200µg/m^3				
					2020* [c]	2021* [c]	2022* [c]	2023* [c]	2024 [c]
Armagh Roadside	Roadside	Y	95	95	20	21	21	21	22

In bold, exceedance of the NO_2 hourly mean AQS objective (200µg/m^3 – not to be exceeded more than 18 times per year)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

[c] If the data capture for full calendar year is less than 85%, include the 99.8th percentile of hourly means in brackets

* Number of exceedances for previous years is optional

Diffusion Tube Monitoring Data

Armagh Banbridge Craigavon Borough Council carried out a review of diffusion tube monitoring across the borough with a rationalisation of sites and the addition of 15 new monitoring sites now having has 37 diffusion tube monitoring locations across the borough, situated on arterial borough, diffusion tubes are located at 34 locations.

The general trend in nitrogen dioxide concentrations is downward without any large scale, local public sector investment.

During 2024 there have been no exceedences of the Air Quality Strategy Objectives for nitrogen dioxide.

Annual average mean concentrations at all diffusion tube monitoring locations are below the 40µ/gm-3 annual mean objective for nitrogen dioxide .

Table 2-5: Annual Results Summary

DT Site Name	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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Lonsdale Road, Armagh 1	ABCNO2 DIF001	287527	345839	51.1	40.2	33.7	32.5	31.8	29.0	27.9	29.2	34.0	33.1	41.5		-	-		
Lonsdale Road, Armagh 2	ABCNO 2DIF002	287527	345839	42.4	37.3	30.9	33.2	28.8	30.7	25.4	27.5	33.8	32.0	35.5		-	-		
Lonsdale Road, Armagh 3	ABCNO2 DIF003	287527	345839	43.2	38.1	36.0	25.2	32.7	30.8	25.0	31.1	33.7	32.8	39.7	38.7	**34.1**	26.6		
Mall West, Armagh	ABCNO 2DIF004	287834	345152	45.5	45.1	38.6	37.2		36.8	34.3	37.1	38.7	38.2	41.6	44.7	39.8	31.0		
Railway Street, Armagh	ABCNO 2DIF005	287456	345963		48.2	39.9	40.6	36.6	43.9	40.1	44.6	39.1	45.2	48.5	48.9	43.2	33.7		

DT Site Name	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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Greenpark Terrace, Armagh	ABCNO2 DIF006	287336	344775	65.1	49.9	44.1	46.8	44.8	45.7	42.7	43.3	45.4	39.6	52.4	30.1	45.8	35.7		
Greenfield Way, Armagh	ABCNO2 DIF007	288792	344257	13.4	9.4	8.4	6.7					5.7	7.6	13.2	11.6	9.5	7.0		
Desart Lane, Armagh	ABCNO2 DIF008	286786	345752	16.4	11.8	12.5	8.8	8.6	8.1	7.3	7.8	9.1	8.8	13.0	15.6	10.7	8.3		
Mill Street Tandragee 1	ABCNO2 DIF009	303319	345870	54.0	47.0	38.1	42.8			33.9	39.5	45.8	45.8	27.4	43.6	-	-		
Mill Street Tandragee 2	ABCNO2 DIF010	303319	345870		48.0	41.7	43.0	42.2		39.6	41.9	45.4	28.6	37.8		42.1	32.8		
Barrack Street, Armagh	ABCNO2 DIF012	287888	345054	38.8	28.8	41.3	28.5	37.1	25.0	26.7	29.4	31.4	39.2	34.5	31.3	32.7	25.5		
Church Street, Tandragee	ABCNO2 DIF015	303118	346311	39.3	35.9	32.6	26.4	29.4	27.2		28.9	34.9	30.1	38.0	32.7	32.3	25.2		
Irish Street, Armagh	ABCNO2 DIF017	287288	344628	36.4	38.8	43.5	33.6	35.2	28.6	19.0	26.7	43.6	37.6	39.3	29.7	34.3	26.8		

DT Site Name	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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Upper Irish Street, Armagh	ABCNO2 DIF018	287385	344856		39.0	40.0	34.3	31.5	25.4	25.1	23.2	37.7	34.7	37.2	34.4	33.0	25.7		
Bridge Street, Portadown	ABCNO2 DIF019	301548	354231		44.0	27.9		27.9	28.4	20.7	24.5	31.9		26.0	40.8	30.2	23.6		
Ardboe Drive, Lurgan	ABCNO2 DIF020	308128	357820	19.1	13.0	9.9	5.4	8.1	6.4	6.3	5.0	8.7	7.8	15.7	17.8	10.3	8.0		
Ballyhannon Road, Portadown	ABCNO2 DIF021	303172	354283	15.1	10.7	7.2	6.3	6.1	5.3	6.3	4.9	6.5	7.3	13.3	8.5	8.1	6.3		
Flush Place, Lurgan	ABCNO2 DIF022	308824	357773	32.6	34.5	28.6	21.7	33.6	31.8	24.4	26.1	28.8	28.6	32.6	38.1	30.1	23.5		
Springfields, Banbridge	ABCNO2 DIF023	311938	344065	18.0	16.4	15.8	11.8	10.4	8.4	11.1	8.4	14.1	14.6	18.7		13.4	10.5		
Fortfield, Dromore	ABCNO2 DIF024	319804	353510	16.3	12.7	10.0	8.8	6.9	6.7	7.1	7.0	8.3	9.9	16.0	13.4	10.3	8.0		
Church Street, Dromore	ABCNO2 DIF025	320014	353392	31.5	28.2	24.4	23.0	21.8	18.9	17.2	15.5	29.1	24.9	30.1		24.1	18.8		

DT Site Name	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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Mill Street, Gilford	ABCNO2 DIF026	306679	348352	38.4	33.3	41.5	30.0	33.4	26.5	26.5	24.1	38.8	34.9	18.1	30.9	31.4	24.5		
William Street, Lurgan	ABCNO2 DIF029	307798	358835	55.2	49.4	41.9	30.0		33.4	32.9	32.8	36.9	43.5	38.7	45.2	40.0	31.2		
Church Street, Pyntzpass	ABCNO2 DIF030	305841	339460				16.2	17.5	14.6	14.4	14.8	19.1		15.4		16.0	13.2		New Site
Cardinal Dalton Park	ABCNO2 DIF031	284787	334662				7.7	7.8	7.2	7.2	6.0	7.4	9.2	4.6	13.4	7.8	6.1		New Site
Davis Street, Keady	ABCNO2 DIF032	284455	334044				25.8	28.4	20.6	21.5		28.0	22.3		25.4	24.6	20.4		New Site
Dean Swift Mews, Markethill	ABCNO2 DIF033	296591	339695				11.5	15.7		11.4	8.1	12.1	11.5	17.4		12.5	10.1		New Site
Ashgrove, Markethill	ABCNO2 DIF034	296033	339671				6.5	7.1	5.3	6.3	5.3	6.4	8.9	9.7	9.7	7.2	5.7		New Site

DT Site Name	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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Main Street, Loughbrickland	ABCNO2 DIF035	310480	342041				17.1	18.8	13.0	14.8	11.2	20.9	19.1	21.7	17.4	17.1	13.3		New Site
Newry Street, Banbridge	ABCNO2 DIF036	312444	345557					15.8	12.8	14.7	14.0	17.6	18.8	20.2	19.9	16.7	13.7		New Site
Dromore Street, Banbridge	ABCNO2 DIF037	313228	346445				19.0	17.9	16.6	15.7	16.6	19.6	22.5	16.6	27.6	19.1	14.9		New Site
Edward Street, Lurgan	ABCNO2 DIF038	307739	358372				16.3	29.7	20.4	18.2	20.5	28.7	22.4	29.0		23.2	18.9		New Site
Main Street, Donaghcloney	ABCNO2 DIF039	313020	353735				14.4	14.6	11.4	11.9	8.9	15.2	15.2	19.0	17.6	14.2	11.1		New Site
Bracken Road, Craigavon	ABCNO2 DIF041	303337	355514				11.4	13.1	13.7	12.0	16.3	14.1	15.2	18.8	29.9	16.1	12.5		New Site
Armagh Road, Portadown	ABCNO2 DIF042	300459	352787				9.7	12.7	11.0	9.7	10.3	13.6	14.1	7.0	22.5	12.3	9.6		New Site

DT Site Name	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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
Downpatrick St, Rathfriland	ABCNO2 DIF044	320065	333671				31.7		36.1	28.7	28.3	23.7	28.1	25.6	36.9	29.9	24.7		New Site
Main Street, Charlesmont	ABCNO2 DIF045	285274	355752				23.2	23.2	24.1	19.6	23.4	24.2	22.2	29.3	28.1	24.1	18.8		New Site
Moypark, Seago	ABCNO2 DIF046	288528	360873				19.7	29.6	23.7	22.9	21.5	26.1	23.2	32.8	31.6	25.7	20.0		New Site

In bold, exceedance of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedance of the NO_2 hourly mean AQS objective

[a] Means should be “annualised” as in Boxes 7.9 and 7.10 of LAQM.TG22, if full calendar year data capture is less than 75%

[b] If an exceedance is measured at a monitoring site not representative of public exposure, NO_2 concentration at the nearest relevant exposure should be estimated based on the NO_2 fall-off with distance calculator, and results should be discussed in a specific section. The procedure is also explained in paragraphs 7.82 to 7.85 of LAQM.TG22.

Table 2-6: Results of NO_2 Diffusion Tubes (2020 to 2024)

	Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m³) - Adjusted for Bias [a]				
				2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.76)	2023 (Bias Adjustment Factor = 0.76)	2024 (Bias Adjustment Factor = 0.78)
Lonsdale Road, Armagh 3	ABCNO2DIF001,2,3	Roadside	Yes	25.06	26.20	25.88	24.82	26.34
Mall West, Armagh	ABCNO2DIF004	Roadside	Yes	29.03	28.55	29.60	30.63	31.04
Railway Street, Armagh	ABCNO2DIF005	Roadside	Yes	32.59	34.17	32.98	33.97	33.72
Greenpark Terrace, Armagh	ABCNO2DIF006	Roadside	Yes	32.58	33.91	34.36	33.26	35.74
Greenfield Way, Armagh	ABCNO2DIF007	Urban_Background	Yes	6.34	6.77	6.56	5.75	7.41
Desart Lane, Armagh	ABCNO2DIF008	Urban_Background	Yes	9.94	12.43	9.79	8.77	8.31
Mill Street Tandragee	ABCNO2DIF009,100,11	Roadside	Yes	32.25	32.93	33.44	32.34	32.25

	Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
				2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.76)	2023 (Bias Adjustment Factor = 0.76)	2024 (Bias Adjustment Factor = 0.78)
Barrack Street, Armagh	ABCNO2DIF012	Roadside	Yes	24.36	27.60	26.35	25.27	25.48
Scarva St, Tandragee	ABCNO2DIF013	Roadside	Yes	13.37	14.65	14.14	13.01	Site no longer monitored
Market St, Tandragee	ABCNO2DIF014	Roadside	Yes	14.93	14.60	13.73	12.71	Site no longer monitored
Church Street, Tandragee	ABCNO2DIF015	Roadside	Yes	25.64	26.74	25.91	25.53	25.20
Portadown Road, Tandragee	ABCNO2DIF016	Roadside	Yes	24.09	24.95	25.39	24.80	Site no longer monitored
Irish Street, Armagh	ABCNO2DIF017	Roadside	Yes	25.97	29.01	27.47	26.61	26.78
Upper Irish Street, Armagh	ABCNO2DIF018	Roadside	Yes	26.73	28.05	26.48	26.66	25.70

	Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
				2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.76)	2023 (Bias Adjustment Factor = 0.76)	2024 (Bias Adjustment Factor = 0.78)
Bridge Street, Portadown	ABCNO2DIF019	Roadside	Yes	26.30	24.97	26.16	24.37	23.58
Ardboe Drive, Lurgan	ABCNO2DIF020	Urban_Background	Yes	7.48	7.75	8.29	7.92	8.01
Ballyhannon Road, Portadown	ABCNO2DIF021	Urban_Background	Yes	6.55	9.56	8.29	6.06	6.34
Flush Place, Lurgan	ABCNO2DIF022	Roadside	Yes	24.16	22.22	25.06	23.22	23.49
Springfields, Banbridge	ABCNO2DIF023	Urban_Background	Yes	8.80	10.70	10.28	10.12	10.47
Fortfield, Dromore	ABCNO2DIF024	Urban_Background	Yes	8.09	9.40	9.72	7.73	8.00
Church Street, Dromore	ABCNO2DIF025	Roadside	Yes	17.91	19.18	19.92	18.92	18.76

	Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
				2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.76)	2023 (Bias Adjustment Factor = 0.76)	2024 (Bias Adjustment Factor = 0.78)
Mill Street, Gilford	ABCNO2DIF026	Roadside	Yes	23.09	25.03	24.46	23.55	24.47
High Street, Gilford	ABCNO2DIF027	Roadside	Yes	17.10	18.94	17.81	16.16	Site no longer monitored
Castle Street, Gilford	ABCNO2DIF028	Roadside	Yes	19.53	24.08	19.71	19.22	Site no Longer monitored
William Street, Lurgan	ABCNO2DIF029	Roadside	Yes				31.69	31.19
Church Street, Pyntzpass	ABCNO2DIF030	Roadside	Yes					12.48
Cardinal Dalton Park	ABCNO2DIF031	Urban Background	Yes					6.11
Davis Street, Keady	ABCNO2DIF032	Roadside	Yes					19.17

	Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
				2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.76)	2023 (Bias Adjustment Factor = 0.76)	2024 (Bias Adjustment Factor = 0.78)
Dean Swift Mews, Markethill	ABCNO2DIF033	Roadside	Yes					9.77
Ashgrove, Markethill	ABCNO2DIF034	Urban Background	Yes					5.65
Main Street, Loughbrickland	ABCNO2DIF035	Roadside	Yes					13.35
Newry Street, Banbridge	ABCNO2DIF036	Roadside	Yes					13.05
Dromore Street, Banbridge	ABCNO2DIF037	Roadside	Yes					14.92
Edward Street, Lurgan	ABCNO2DIF038	Roadside	Yes					18.06
Main Street, Donaghcloney	ABCNO2DIF039	Roadside	Yes					11.11

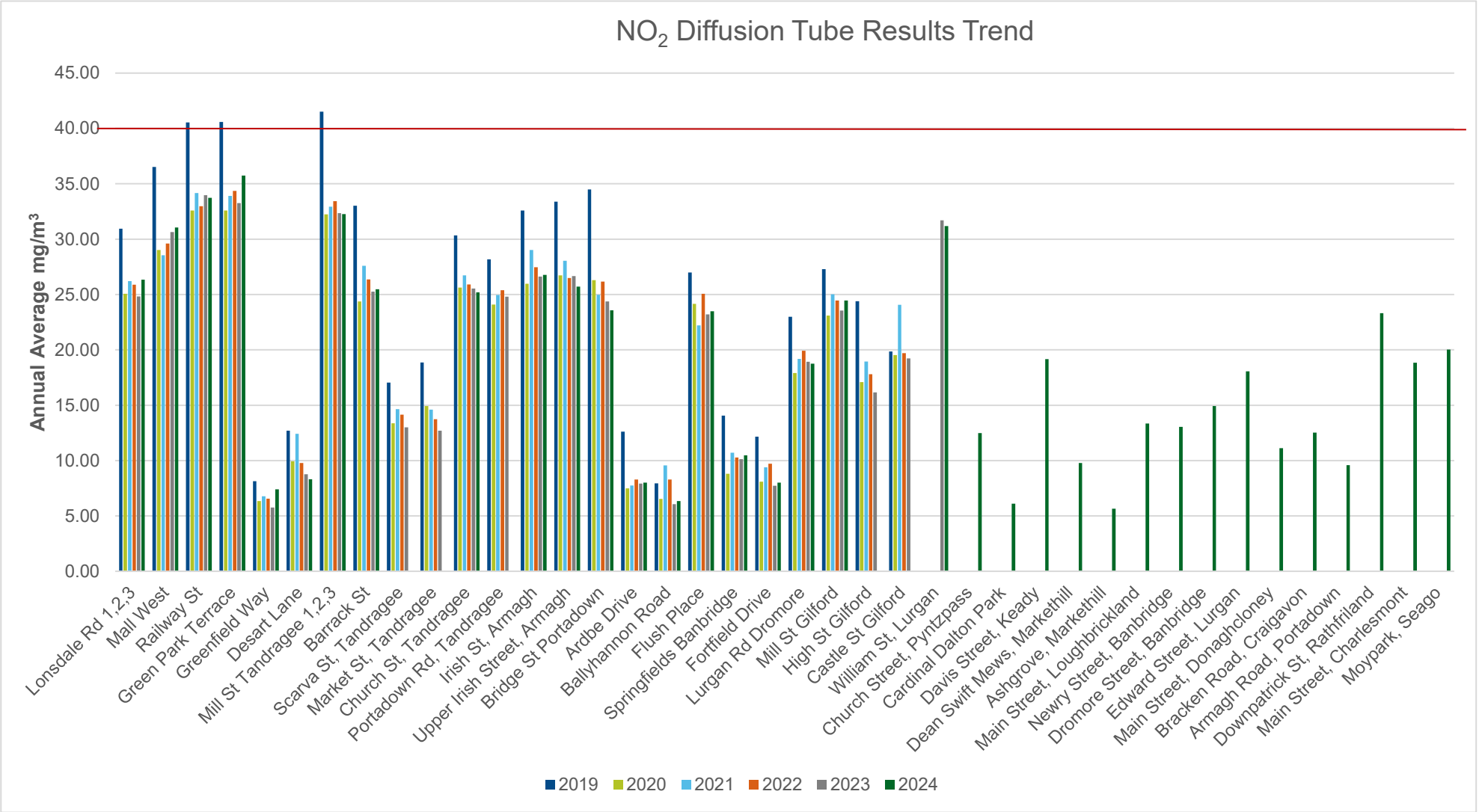
	Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
				2020 (Bias Adjustment Factor = 0.81)	2021 (Bias Adjustment Factor = 0.84)	2022 (Bias Adjustment Factor = 0.76)	2023 (Bias Adjustment Factor = 0.76)	2024 (Bias Adjustment Factor = 0.78)
Bracken Road, Craigavon	ABCNO2DIF041	Urban Background	Yes					12.52
Armagh Road, Portadown	ABCNO2DIF042	Roadside	Yes					9.59
Downpatrick St, Rathfriland	ABCNO2DIF044	Roadside	Yes					23.31
Main Street, Charlesmont	ABCNO2DIF045	Roadside	Yes					18.83
Moypark, Seago	ABCNO2DIF046	Industrial	Yes					20.03

In bold, exceedance of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedance of the NO_2 hourly mean AQS objective

[a] Means should be "annualised" as in Boxes 7.9 and 7.10 of LAQM.TG22, if full calendar year data capture is less than 75%

Figure 2-4: Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites



2.2.2 Particulate Matter (PM_{10})

Particulate matter is monitored at the Lonsdale Road AURN station wholly for the purposes of DAERA / DEFRA data collection.

PM10 concentrations have never exceeded the objectives at this location despite its situation within an AQMA declared for traffic source NO2

The following tables provide information on particulate matter which is monitored at the automatic station on Lonsdale Road, Armagh.

Table 2-7: Results of Automatic Monitoring for PM_{10}: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Confirm Gravimetric Equivalent (Y or N/A)	Annual Mean Concentration (µg/m^3)				
						2020* [c]	2021* [c]	2022* [c]	2023* [c]	2024 [c]
Armagh Lonsdale Road	Roadside	Y	95	95	Y	17	16	16	14	13

In bold, exceedance of the PM_{10} annual mean AQS objective of 40µg/m^3

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

[c] Means should be "annualised" as in Boxes 7.9 and 7.10 of LAQM.TG22, if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional

Figure 2-5: Trends in Annual Mean PM_{10} Concentrations

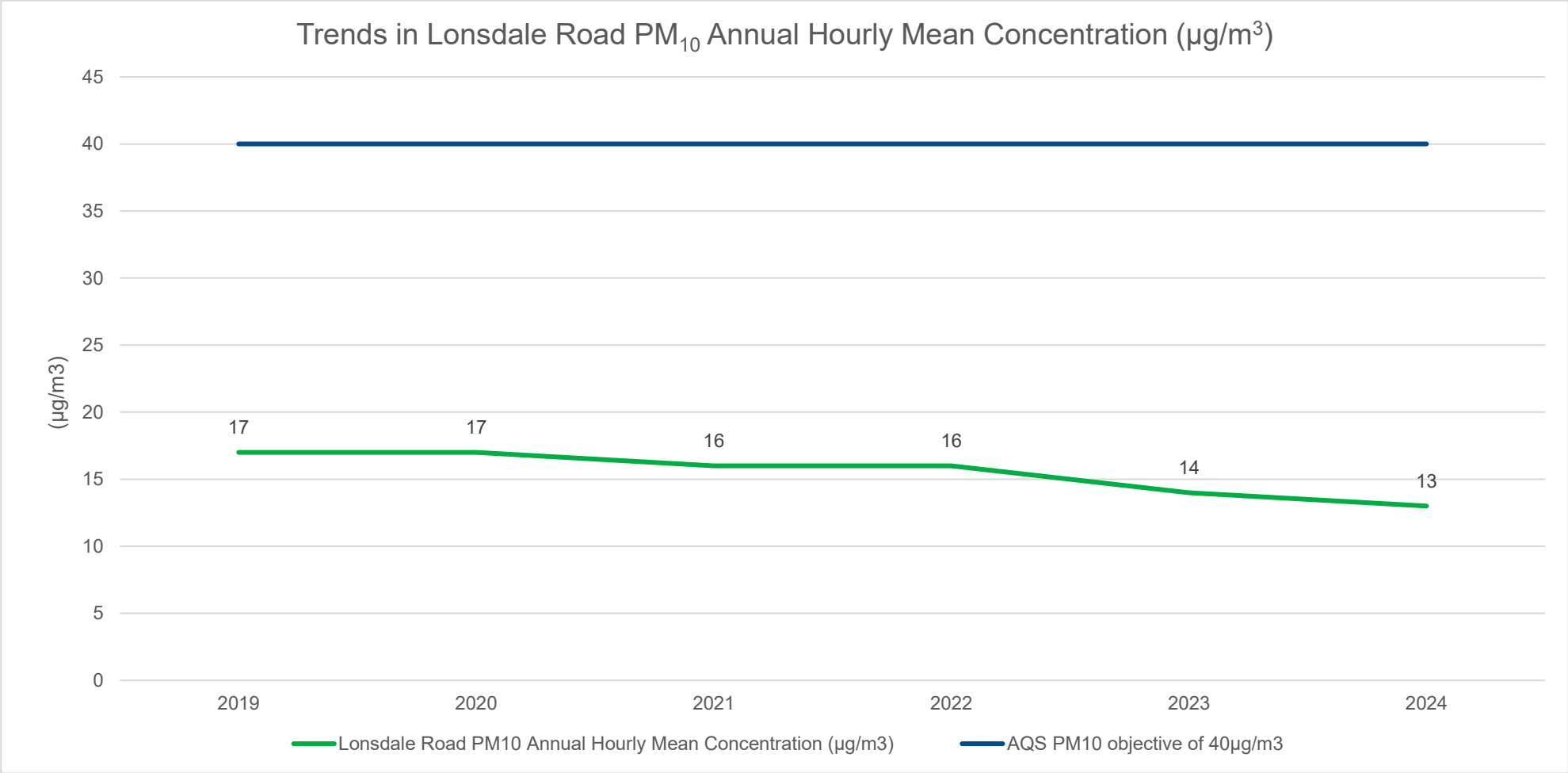


Table 2-8: Results of Automatic Monitoring for PM_{10}: Comparison with 24-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Confirm Gravimetric Equivalent (Y or N/A)	Number of Daily Means > 50µg/m^3				
						2020* [c]	2021* [c]	2022* [c]	2023* [c]	2024 [c]
Armagh Lonsdale Road	Roadside	Y	95	95	Y	0	0	0	**0**	0

In bold, exceedance of the PM10 daily mean AQS objective (50µg/m3 – not to be exceeded more than 35 times per year)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

[c] if data capture for full calendar year is less than 85%, include the 90.4th percentile of 24-hour means in brackets

* Number of exceedances for previous years is optiona

2.2.3 Benzene

Benzo(a)Pyrene is monitored at the Lonsdale Road station as part of the Polycyclic Aromatic Hydrocarbon Network

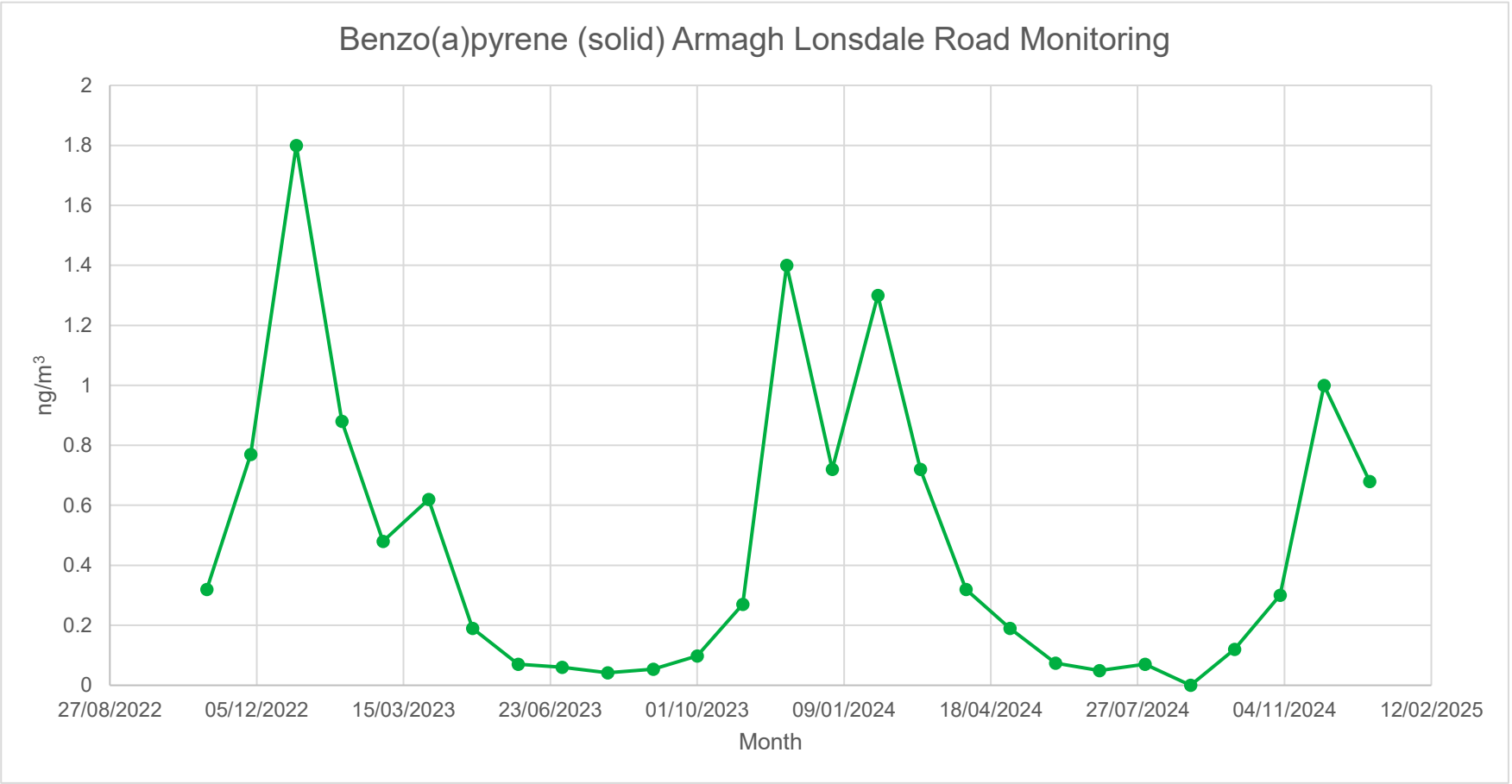
Benzo(a)Pyrene concentrations have never exceeded the objectives at this location.

The following tables provide information on Benzo(a)Pyrene which is monitored at the automatic station on Lonsdale Road, Armagh.

Table 2-9: Results of Automatic Monitoring for Benzo(a)Pyrene: Comparison with Annual Means

Site ID	Site Type	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2024 % [b]	Number of Annual Means > 1 ngm-3	
				2023* [c]	2024 [c]
Armagh Lonsdale Road	Roadside	100	100	0	0

Figure 2-6: Trends in Benzo(a)Pyrene 2023 - 2024



2.2.4 Summary of Compliance with AQS Objectives

Armagh City, Banbridge and Craigavon Borough Council has examined the results from monitoring in the Borough.

Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

This Borough takes an exposure reduction approach to Local Air Quality Management

3 New Local Developments

Any Planning Application for development of infrastructure with potential to impact air quality is screened and assessment requested as part of the consultation process by Environmental Health Department and Planning Departments.

3.1 Road Traffic Sources

No New road sources

3.2 Other Transport Sources

No New transport sources

3.3 Industrial Sources

No significant air quality impacting industrial developments

3.4 Commercial and Domestic Sources

No significant air quality impacting commercial or domestic developments

3.5 New Developments with Fugitive or Uncontrolled Sources

No new relevant developments

Armagh Banbridge Craigavon Borough Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Armagh Banbridge Craigavon Borough Council confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

4 Local / Regional Air Quality Strategy

The Council is aware that Government intends to produce an Air Quality Strategy for Northern Ireland – we would strongly welcome such a strategy. This should sit along with an Energy Strategy and lead to a replacement for the Clean Air (NI) Order 1981 which takes the focus of enforcement away from furnaces and chimney heights to ensuring that biomass plant and transport emissions can be adequately considered.

PEACE-Air

Armagh City, Banbridge and Craigavon Borough Council are a lead partner in a cross-border strategic partnership on clean air which - whilst having a different focus and aims to the Council's Local Air Quality Management role – will align on several aspects of our action plan, particularly monitoring evidence on local traffic pollution and citizen engagement.

The Partnership for Evidence and Action on Clean Air (PEACE-Air) is funded under the EU PEACEPLUS Programme.

Donegal County Council are acting as a lead partner for a number of Councils in the Republic of Ireland.

This focus of the PEACEPLUS Project is - Cross-Border Strategic Planning and Engagement on the Issue of Clean Air. Further details of the scheme can be found at:

https://www.seupb.eu/peaceplus/overview/themes-and-investment-areas/theme-6/61-strategic-planning-and-engagement-0

PEACE-Air will deal with 4 work areas within which there are multiple cross-overs.

Area 1. Air pollution from solid fuel burning

This will address some concerns regarding the remaining solid fuel use within Northern Ireland and the cross-border trade with the Republic of Ireland. Potential non-compliant fuels may be leading to higher concentrations of pollutants being present in the local environment than would be predicted based upon the modelling of compliant fuel use.

Area 2. Transport-related air pollution

Area 2 will look at transport-related air pollution and particularly the concentrations of particulate matter in the environment. Additional datasets will be generated in towns and

cities in Northern Ireland and the Republic of Ireland and these will be used to consider the impact of various sources and potential policy amendments.

Area 3. Ammonia pollution in agriculture and effects on biodiversity/sensitive ecosystems

Whilst this work area will have a largely agricultural and environmental impact focus, there remains a concern about the human health effects of large scale ammonia deposition from industrial agriculture activities. Ammonia can also have an effect within the complex mixture of anthropogenic air pollutants increasing the wider burden on Local Air Quality Management.

Area 4. Citizen engagement and networking

Area 4 will provide opportunities to engage local groups and citizens on local air quality impacts through information and technology. It will also allow for the development of professional networks and the sharing of knowledge and expertise amongst officers working in this field within both jurisdictions.

The PEACE-Air programme will be lead amongst Councils in Northern Ireland until 2029. During the programme duration it is hoped that additional evidence will be made available for policy development options to address local air pollution. Several aspects of the Council's current Air Quality Action Plan (subject to forth-coming review) will be complemented by the work under PEACE-Air and it is hoped that this work can bring forth improvements in technology, legislation, evidence and enforcement which ultimately improves the health of our residents and citizens which remains a Corporate Priority for the Council.

5 Planning Applications

All relevant planning applications are screened by the Environmental Health Department and control measures are included to mitigate adverse impacts on local air quality following EPUK guidance.

6 Air Quality Planning Policies

The Council does not have any local planning policies related to air quality. Air quality gets some reference in the Strategic Planning Policy Statement for NI. The Council does not yet have a Local Development Plan.

7 Local Transport Plans and Strategies

Transport Plans and Strategies are a matter for central Government. The Council are aware of the Regional Development Strategy for Northern Ireland 2035 and its daughter strategies. The Council have responded to numerous consultations over recent years highlighting the need for greater public transport investment – including the re-establishment of rail links – as well as new roads and electric vehicle infrastructure. The Armagh rail link remains closed. The Armagh ring-road has not yet been planned. Development of electric vehicle infrastructure is slow.

8 Climate Change Strategies

Armagh City, Banbridge and Craigavon Borough Council has declared a ‘Climate Emergency’. As an organisation the Council has long-established environmental management systems.

The Council currently has climate and sustainability working groups, with aim of achieving net zero from Council facilities and functions. There is also a strategy in ongoing development to address the climate change impact of activities throughout the Borough. Local Air Quality Management is recognised as congruent with the aims of the net zero strategy under development and the health benefits that can be realised through a reduction in fossil fuel combustions in local areas will be a positive selling point for any measures that may emerge.

9 Implementation of Action Plans

Details of Air quality action plan by Armagh Banbridge Craigavon Borough Council included below.

Table 9.1 highlights the top three air quality actions to be progressed by Council.

Table 9-1: Armagh Banbridge Air Quality Action Plan Top Three Priorities

No.	Measure	Focus	Lead Authority	Organisations Involved	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months	Estimated Completion Date	Comments Relating to Emission Reductions
1	Expanded NO2 monitoring	Expansion and build up of localised NO2 monitoring with smaller towns and Villages throughout the Borough	Armagh Banbridge Craigavon Borough Council	Local Authority Environmental Health	2023	2024 – onwards	Long term monitoring data for residential development throughout the borough		Introduced	One full year data capture of NO2 results obtained in 2024	Ongoing	

No.	Measure	Focus	Lead Authority	Organisations Involved	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months	Estimated Completion Date	Comments Relating to Emission Reductions
2	Implementation of PEACE-Air Program		Armagh Banbridge Craigavon Borough Council	Over 17 delivery partners across 4 work areas Armagh Banbridge Craigavon Borough Council, Donegal County Council. University of Ulster,	2024	2025 - 2029	Achievement of PEACE-Air		Program to start December 2025	Workplan for 4 areas of work developed: Area 1. Air pollution from solid fuel burning Area 2. Transport-related air pollution Area 3. Ammonia pollution in agriculture and effects on biodiversity/sensitive ecosystems Area 4. Citizen engagement and networking	PEACE Air Program Completion date 2029	

No.	Measure	Focus	Lead Authority	Organisations Involved	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months	Estimated Completion Date	Comments Relating to Emission Reductions
3	Implement Permitting requirement of Medium Scale Combustion Plant	Regulate emissions from all relevant medium-scale combustion plant and generators in the Borough	Armagh Banbridge Craigavon Borough Council	Local Authority Environmental Health	2023 onwards	2023 onward	Register of Medium Scale Combustion Plant	Bring Medium Scale Combustion Plants to within Emission Limit Values by 2030	Register of Existing MSCP being developed	Register of Existing MSCP being developed. Engagement with Business Owners operating Medium Scale Combustion Plants to implement Permits	2030	

Table 9-2 Armagh Banbridge Air Quality Action Plan Progress

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
1	Undertake sampling and analysis of solid fuel for sale within the Borough to address suspected non-compliance with the Sulphur Content of Solid Fuels Regulations	Armagh City Banbridge and Craigavon Borough Council	Participate in regional exercise to address suspected non-compliance. Advisory messages to import, supply and retail sectors. Test-purchasing to follow.	June 2023

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
2	Build a consensus for action to improve air quality throughout the Borough and nationally	Armagh City, Banbridge and Craigavon Borough Council	Annual reporting to Members Liaison with other Council Departments Liaison with central Government. Liaison with professional bodies and academics. Use of media requests/publicity to highlight air quality issues	2023 and annually thereafter
3	Road infrastructure development in Armagh and improved rail connectivity for the Borough	HM Treasury & DfI. Mid South West region Growth Deal	Support and lobby for same Infrastructure development included in Regional Growth Deal.	On-going
4	Provision of new efficient public transport services for NI	HM Treasury & DfI	Support and lobby for same	On-going

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
5	New Clean Air Order to address new emission sources including road traffic	UK Government & DAERA	Lobby for same	On-going
6	New Air Quality Strategy for Northern Ireland	NI Executive & DAERA & Councils	Lobby for same	On-going
7	New legislation to facilitate domestic users away from solid fuel heating where affordable and supported by other measures	NI Executive & DfE	Lobby for same	On-going
8	Air pollution monitoring to provide evidence-base for policy change	Councils & DAERA	Deliver high quality monitoring and reporting	On-going
9	Maintenance of AURN monitoring station within the Borough for the purposes of UK compliance with Air Quality Standards	Councils & DAERA	Deliver high quality monitoring and reporting	On-going
10	Seek to expand monitoring network to include Poly Aromatic Hydrocarbon monitoring in Armagh as an indicator of household solid fuel emissions	Councils & DAERA	Deliver high quality monitoring and reporting	PAH Analyser installed at Armagh Lonsdale 2022

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
11	Emerging actions to support UK Government move to zero emission by 2030	HM Treasury, UK Government, NI Executive & Councils	Assist in development and implementation of same	Awaited from UK Government
12	Measures to achieve Indicator 37 in the NI Executive draft PfG – or its successor from a newly formed administration	NI Executive, HM Treasury & Councils	Assist in the development and implementation of same	Awaited from NI Executive
13	Incorporate air quality considerations into Local Development Plan	Armagh City, Banbridge and Craigavon Borough Council	Have regard to the improvement in air quality with the Local Development Plan	By 2023
14	Regulate emissions from all Part C prescribed industrial processes in the Borough	Armagh City, Banbridge and Craigavon Borough Council	Ensure emissions within compliance	Annually
15	Regulate emissions from all relevant medium-scale combustion plant and generators in the Borough	Armagh City, Banbridge and	Ensure emissions within compliance	2023 onwards

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
		Craigavon Borough Council		
16	Have regard to air quality impacts in all development control applications within the Borough	Armagh City, Banbridge and Craigavon Borough Council	Have regard to planning policy and best practice in minimising adverse impact	On-going
17	Enforce all smoke control provisions within the Borough	Armagh City, Banbridge and Craigavon Borough Council	Minimise emissions	On-going
18	Prevent smoke or other air quality nuisances within the Borough	Armagh City, Banbridge and Craigavon Borough Council	Minimise emissions	On-going
19	Adhere to regulatory requirements and have regard to guidance and best practice in minimising emissions from Council-owned fleet	Armagh City, Banbridge and Craigavon Borough Council	Adhere to purchasing requirements and vehicle maintenance and emissions standards	On-going

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
20	Ensure the phasing-out and control of use of Ozone-Depleting Substances and Fluorinated Gases in accordance with Council's statutory duties.	Armagh City, Banbridge and Craigavon Borough Council	Minimise release of powerful climate change gases into the atmosphere	On-going
21	Armagh City, Banbridge and Craigavon Borough Council are a lead partner in a cross-border strategic partnership on clean air which - whilst having a different focus and aims to the Council's Local Air Quality Management role – will align on several aspects of our action plan, particularly monitoring evidence on local traffic pollution and citizen engagement. The Partnership for Evidence and Action on Clean Air (PEACE-Air) is funded under the EU PEACEPLUS Programme.	Armagh City, Banbridge and Craigavon Borough Council	Area 1. Air pollution from solid fuel burning Undertake studies of solid fuels for sale within the Borough, as part of Cross Border study of the effects of smokey coal Area 2. Transport-related air pollution Area 2 will look at transport-related air pollution and particularly the concentrations of particulate matter in the environment. Additional datasets will be generated in towns and cities in Northern Ireland and the Republic of Ireland and these will be used to consider the impact of various sources and potential policy amendments. Area 3. Ammonia pollution in agriculture and effects on biodiversity/sensitive ecosystems	Starting December 2025 onward

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
			Whilst this work area will have a largely agricultural and environmental impact focus, there remains a concern about the human health effects of large scale ammonia deposition from industrial agriculture activities. Ammonia can also have an effect within the complex mixture of anthropogenic air pollutants increasing the wider burden on Local Air Quality Management. Area 4. Citizen engagement and networking Area 4 will provide opportunities to engage local groups and citizens on local air quality impacts through information and technology. It will also allow for the development of professional networks and the sharing of knowledge and expertise amongst officers working in this field within both jurisdictions.	

No.	ACTION	LEAD	COUNCIL ACTION	WHEN
22	Complete and update Council Air Quality Action Plan	Armagh City, Banbridge and Craigavon Borough Council	Develop a revised air quality action plan, and achieve Council Agreement	2026

10 Conclusions and Proposed Actions

10.1 Conclusions from New Monitoring Data

New monitoring data indicates that nitrogen dioxide concentrations have decreased post-covid-19 restrictions but are rising. It is unclear what the extent of increase will be but the Council are optimistic that new ways of working and a less-polluting vehicle fleet will mean that objective values for NO2 are no longer exceeded. However we note and retain concerns regarding potential adverse health impacts at concentrations below the objective value and will continue to monitor throughout our Borough with an increased focus on centres of population (alongside existing sites based on roadside exposure).

10.2 Conclusions relating to New Local Developments

No new local developments require a Detailed Assessment.

10.3 Other Conclusions

Northern Ireland is in significant need of a Clean Air Strategy and Energy Strategy to address air pollution issues – both in terms of an update to Local Air Quality Management but also in relation to the way people heat their homes and power their vehicles. Armagh City, Banbridge and Craigavon Borough Council retain concerns regards the impact of solid fuel burning in domestic settings and have commenced PAH monitoring to provide additional details. Armagh City, Banbridge and Craigavon Borough Council are firmly committed to the reduction of unnecessary uses of fossil fuel combustion anywhere throughout the Borough with the aim of reducing pollution to the lowest practicable level.

10.4 Proposed Actions

Armagh City, Banbridge and Craigavon Borough Council will continue to monitor nitrogen dioxide levels throughout the Borough, now with an extended monitoring network to gain a better understanding of the exposure in local towns and villages. Focus will also be given

to PAH concentrations to try to understand why the levels modelled by Ricardo for DAERA are disproportionately high in NI. Action Plan measures will be progressed throughout the year and are reported upon annually to the Environmental Services Committee of the Council. Solid fuel sampling is proposed to be undertaken this year to determine the impact of that fuel upon emissions.

11 References

- Local Air Quality Management Guidance – TG22

  https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf

- Department for Infrastructure (DfI) – Regional Development Strategy for NI 2035

  https://www.infrastructure-ni.gov.uk/publications/regional-development-strategy-2035

- DAERA – Environment Strategy

  https://www.daera-ni.gov.uk/news/poots-approves-finalised-environment-strategy

- DfI – Strategic Planning Policy Statement

  https://www.infrastructure-ni.gov.uk/publications/strategic-planning-policy-statement

- Environment (Northern Ireland) Order 2002.
  http://www.legislation.gov.uk/nisi/2002/3153/contents/made
- Northern Ireland Air – Air Quality in Northern Ireland website
- http://www.airqualityni.co.uk/

12 Appendices

Appendix A: Quality Assurance / Quality Control (QA/QC) Data

Appendix B: Nitrogen Dioxide Diffusion Tube Site Locations

Appendix A: QA/QC Data

QA/QC Diffusion Tube Monitoring

In 2024 Council utilised SOCOTEC to supply and analyse diffusion tubes. SOCOTEC follows the requirements Government Technical guidance for Ambient NO2 monitoring. Tubes are prepared with a 20% triethanolamine solution (TEA) for monitoring ambient nitrogen dioxide. Analysis is by UV spectrophotometry.

Laboratory performance regarding NO2 Proficiency Testing Scheme (January 2023 – February 2025) is assessed under AIR. AIR is an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Executive (HSE). AIR PT is a new scheme, started in April 2014, which combined two long running PT schemes: LGC Standards STACKS PT scheme and HSE WASP PT scheme.

Performance documentation for Socotec can be found :

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

To further ensure that diffusion tube monitoring data is as accurate as possible,Tubes are co-located at the Armagh Lonsdale Road continuous monitoring station (chemiluminescent).

Diffusion Tube exposure periods were completed in adherence with the 2024 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

Annualisation was required for 7 monitoring sites within 2024. Annualisation calculation method was undertaken utilising the calculation methodology of Diffusion Tube Data processing tool v5.3.

Diffusion Tube Bias Adjustment Factors

Armagh Banbridge Craigavon Borough Council have applied a national bias adjustment factor of 0.78 to the 2024 monitoring data.. A summary of bias adjustment factors used by Armagh Banbridge Craigavon Borough Council over the past five years is presented in Table A.1.

The continued use of National Adjustment factor allows for data validity of the long term trend in diffusion tube analysis across the borough

Table A.1 - Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	03/25	0.78 (Socotec Didcot 20% TEA)
2023	National	09/24	0.76 (Socotec Didcot 20% TEA)
2022	National	06/23	0.76 0.76 (Socotec Didcot 20% TEA)
2021	National	03/22	0.84 (Gradko 20% TEA)
2020	National	03/22	0.81 (Gradko 20% TEA)

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within Armagh Banbridge Craigavon Borough Council required distance correction during 2024.

QA/QC of Automatic Monitoring

In 2024 Air Quality Data Management for the Automatic Analyser was carried out

by Bureau Veritas). The measured data was ratified using

the techniques developed for the AURN and AEA Calibration Club as specified in

LAQM TG(22). Bi-annual Quality Control audits were carried out by Ricardo.

Routine calibration of the NOx analyser is undertaken by Armagh Banbridge Craigavon Council every 2 weeks, using on-site certified calibration gas cylinders traceable to National Calibration Standards. The data capture was 96% in 2024

Ratified realtime monitoring data is available through airqualityni.co.uk website

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

The type of PM_{10} monitor utilised within Armagh, Banbridge Craigavon Borough Council do not required the application of a correction factor.

Automatic Monitoring Annualisation

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

NO_2 Fall-off with Distance from the Road

No automatic NO_2 monitoring locations within Armagh, Banbridge, Craigavon Borough Council required distance correction during 2024.

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

Diffusion Tube ID	Diffusion Tube Name	Annualisation Factor Armagh Lonsdale Road	Annualisation Factor Newtownabbey Antrim Road	Annualisation Factor Newry Canal Street	Annualisation Factor Site 4 Name	Average Annualisation Factor	Raw Data Simple Annual Mean (µg/m^3)	Annualised Data Simple Annual Mean (µg/m3)
ABCNO2DIF007	Greenfield Way, Armagh	0.9008	0.9907	0.9282		0.9399	9.5	8.9
ABCNO2DIF030	Church Street, Pyntzpass	1.1048	1.0204	1.0446		1.0566	16.0	16.9
ABCNO2DIF032	Davis Street, Keady	1.1003	1.0422	1.0430		1.0618	24.6	26.1
ABCNO2DIF033	Dean Swift Mews, Markethill	1.0644	1.0037	1.0319		1.0333	12.5	12.9
ABCNO2DIF036	Newry Street, Banbridge	1.0527	0.9948	1.0959		1.0478	16.7	17.5
ABCNO2DIF038	Edward Street, Lurgan	1.0859	1.0030	1.0541		1.0477	23.2	24.3
ABCNO2DIF044	Downpatrick St, Rathfriland	1.0526	1.0131	1.1088		1.0582	29.9	31.6

Appendix B: Diffusion Tube Monitoring Locations

Armagh Banbridge Craigavon Borough Council has currently 35 NO2 diffusion monitoring locations throughout the borough. Specific location of each site is detailed below.

Figure 0-1: Lonsdale Road, Colocated Triplicate Site

Figure 0-2: Mall West, Armagh

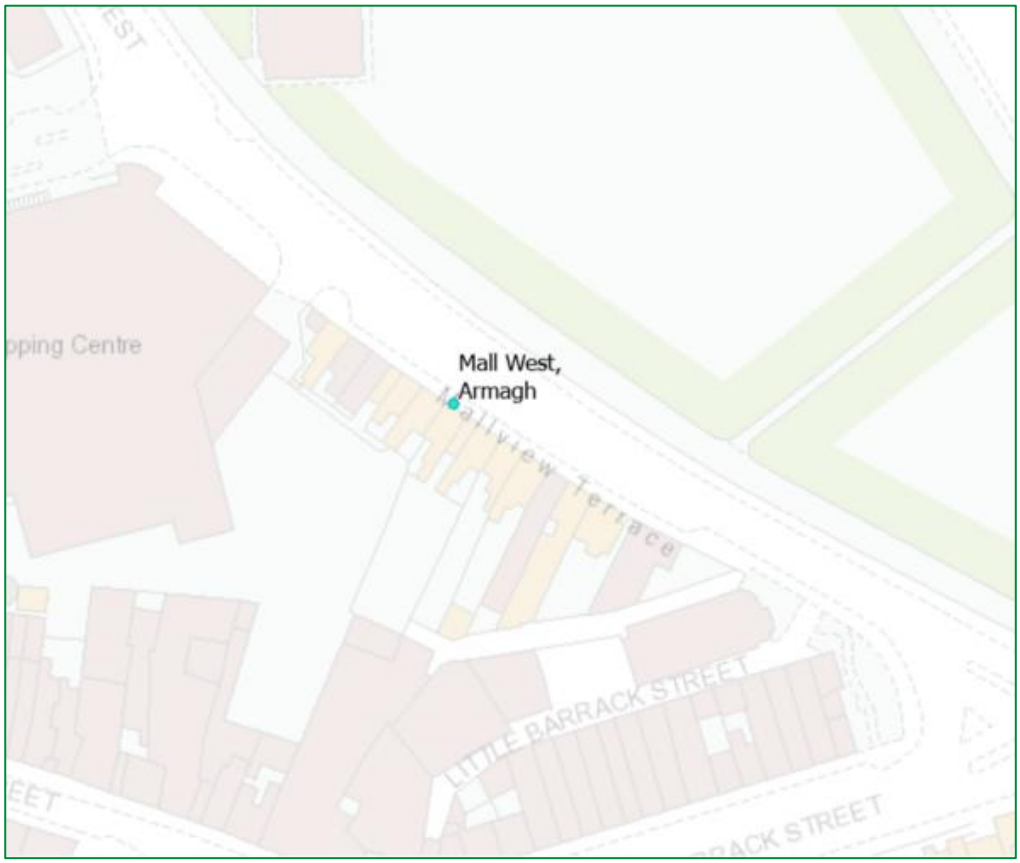


Figure 0-3: Railway Street, Armagh

Figure 0-4: Greenpark Terrace, Armagh

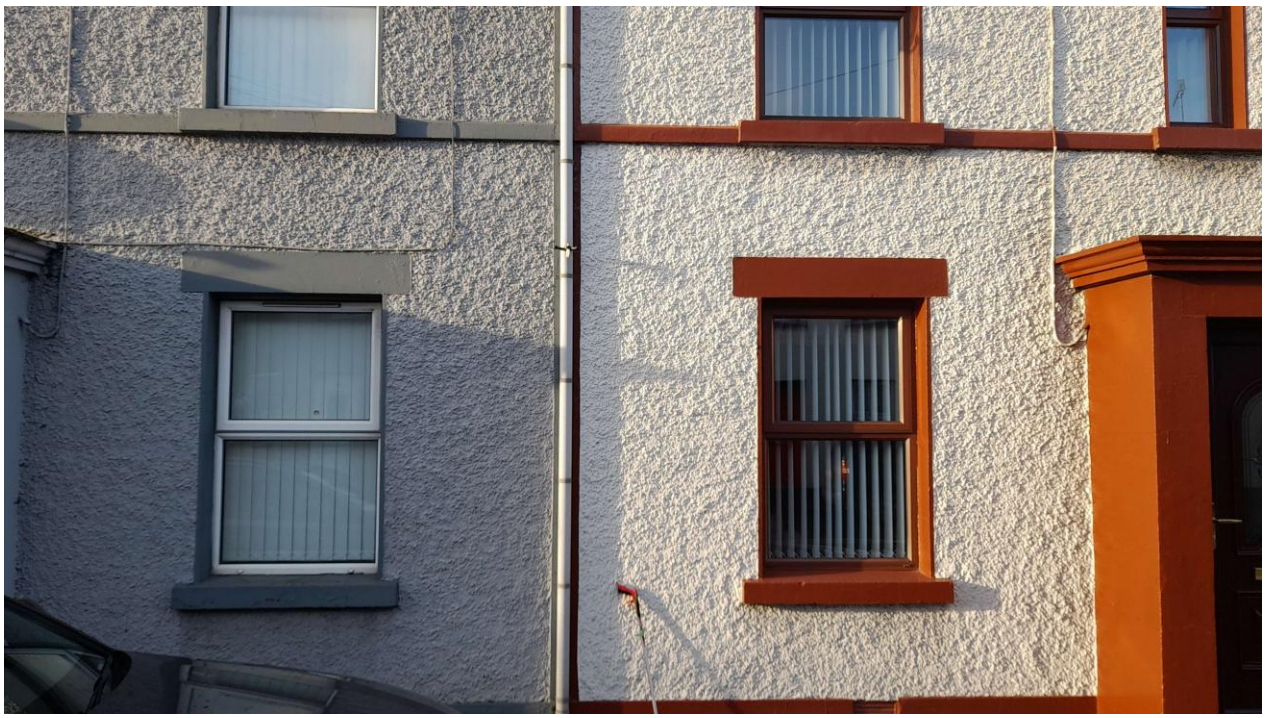


Figure 0-5: Greenfield Way, Armagh

Figure 0-6: Desart Lane, Armagh

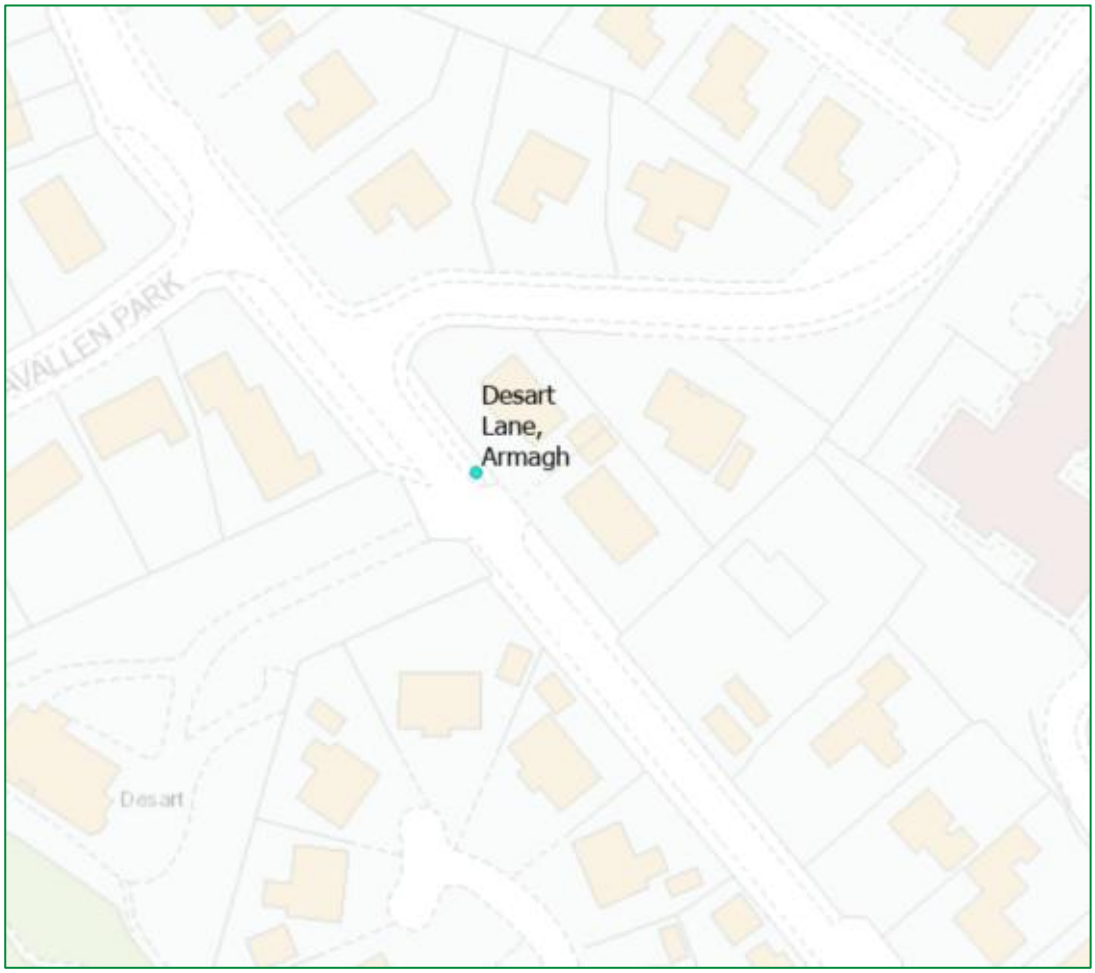


Figure 0-7: Mill Street1 and Mill Street 2, Tandragee

Figure 0-8: Barrack Street, Armagh

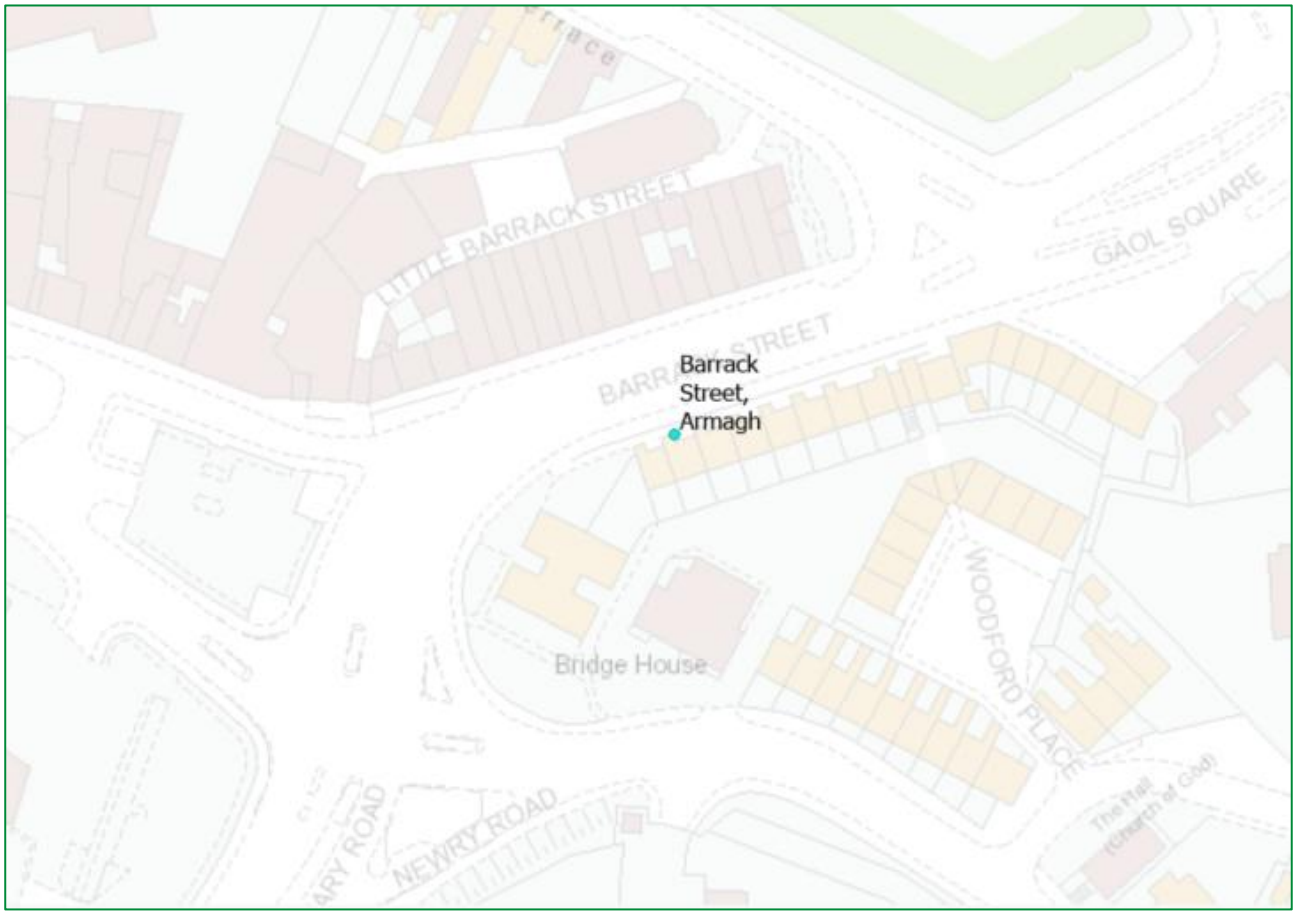


Figure 0-9: Church Street, Tandragee

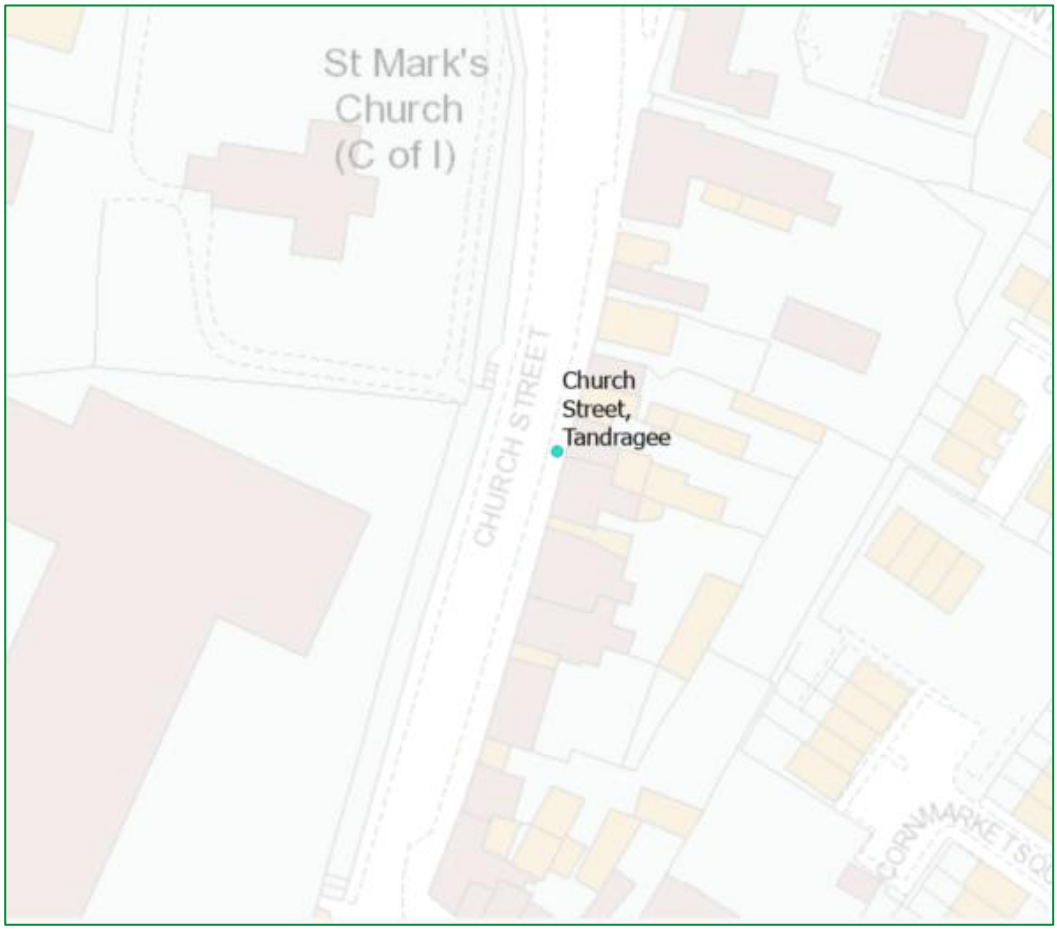


Figure 0-10: Irish Street, Armagh

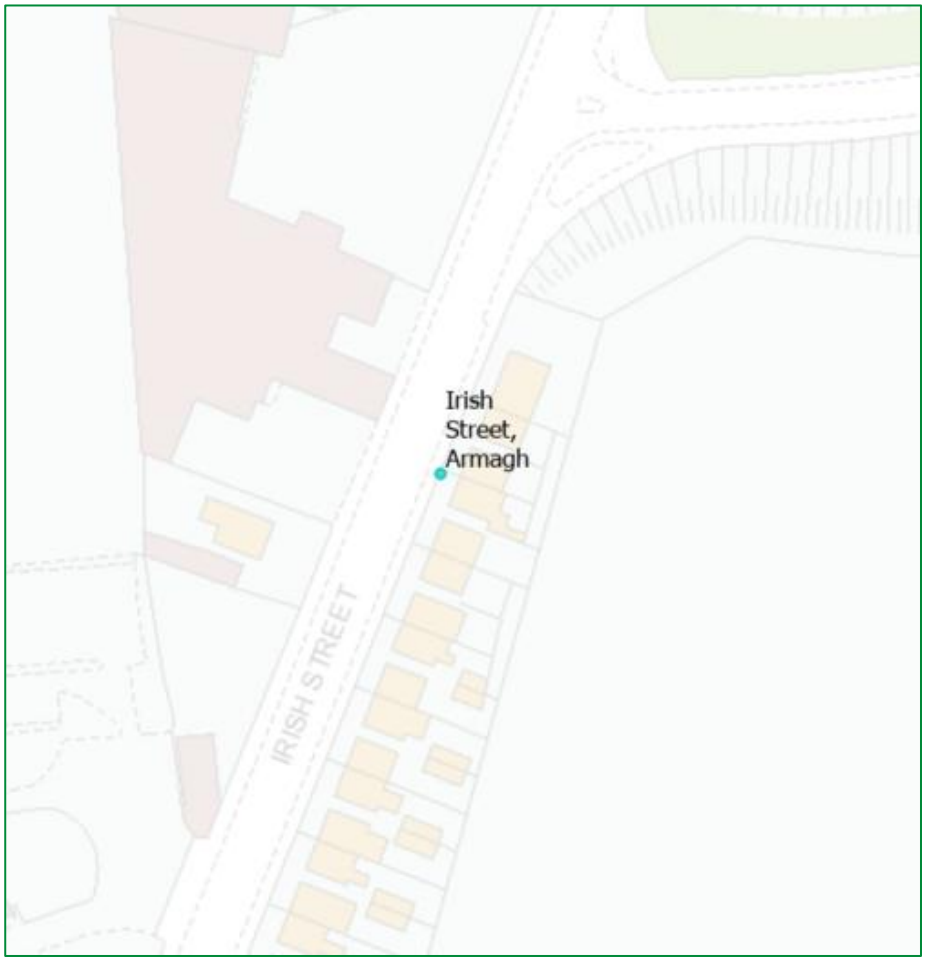


Figure 0-11: Upper Irish Street, Armagh

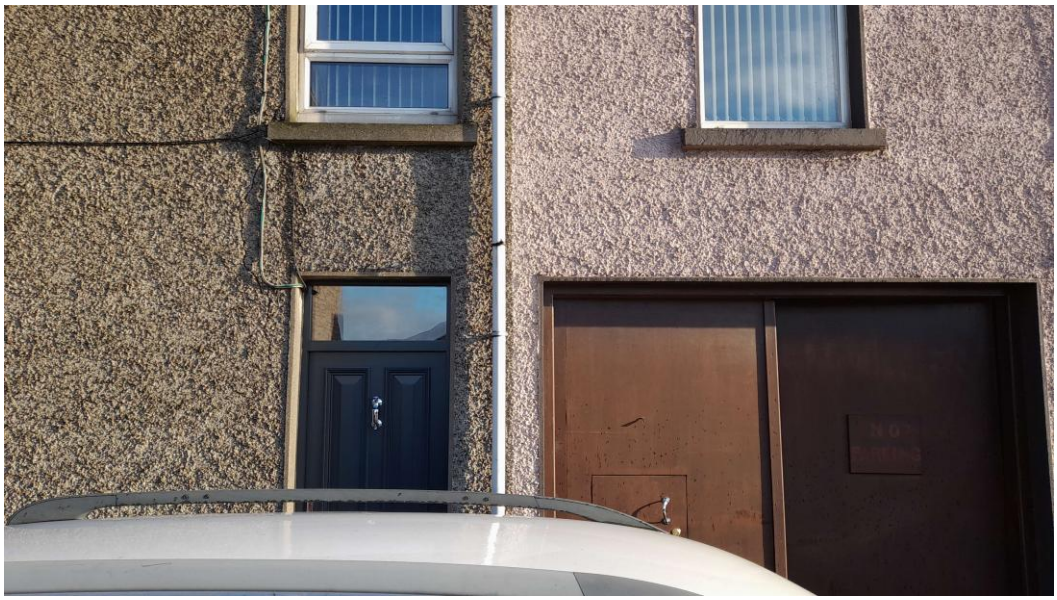


Figure 0-12: Bridge Street, Portadown

Figure 0-13: Ardboe Drive, Lurgan

Figure 0-14: Ballyhannon Road, Portadown

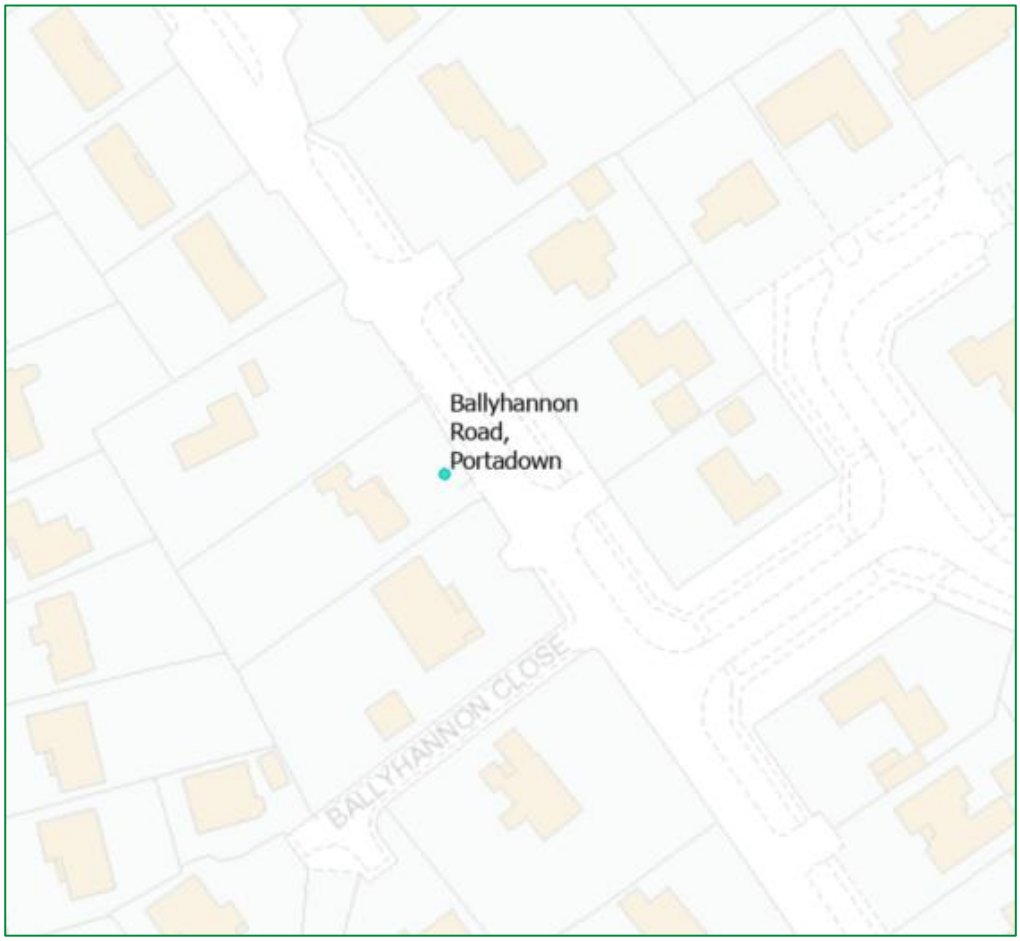


Figure 0-15: Flush Place Lurgan

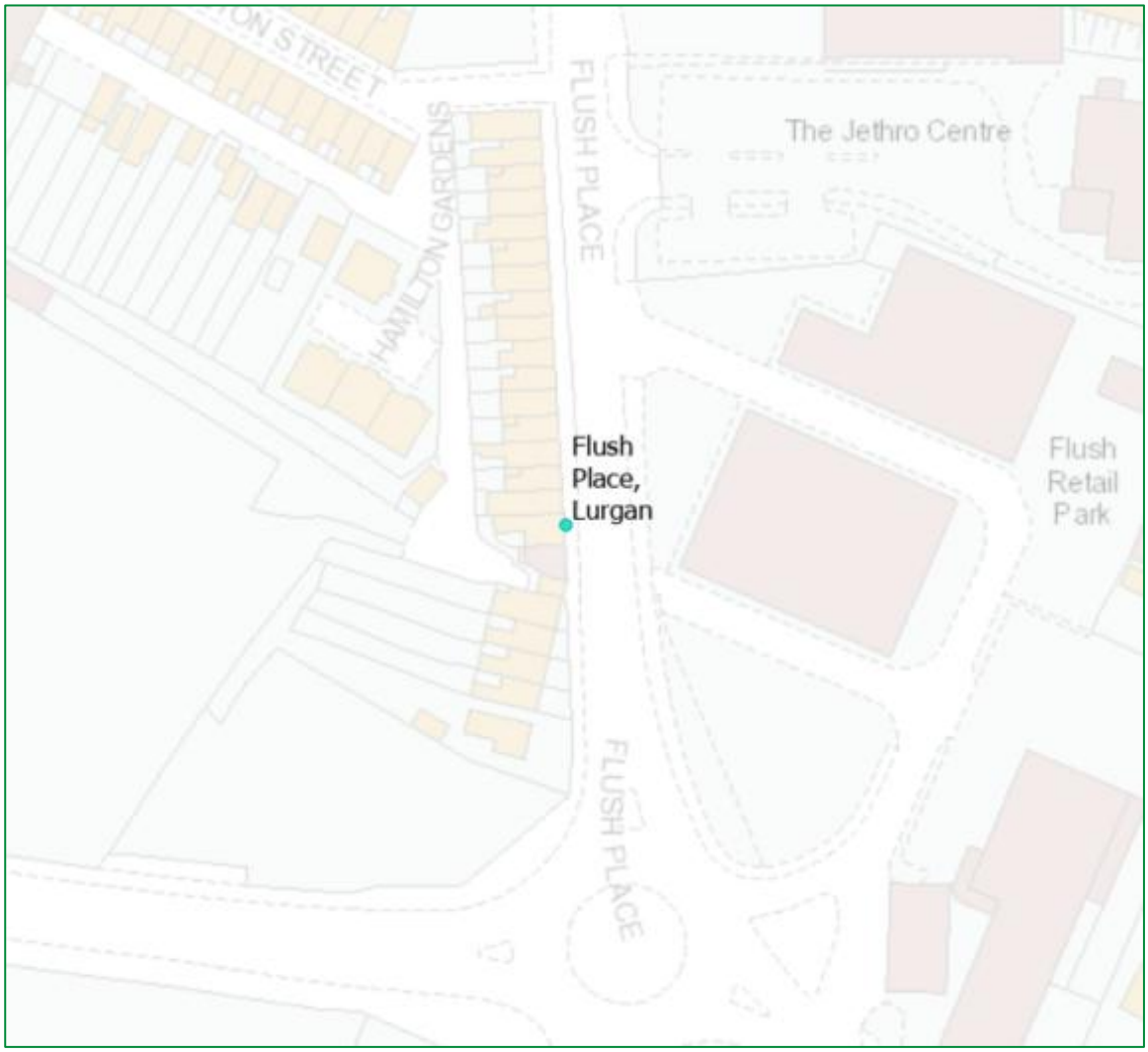


Figure 0-16: Springfields, Banbridge

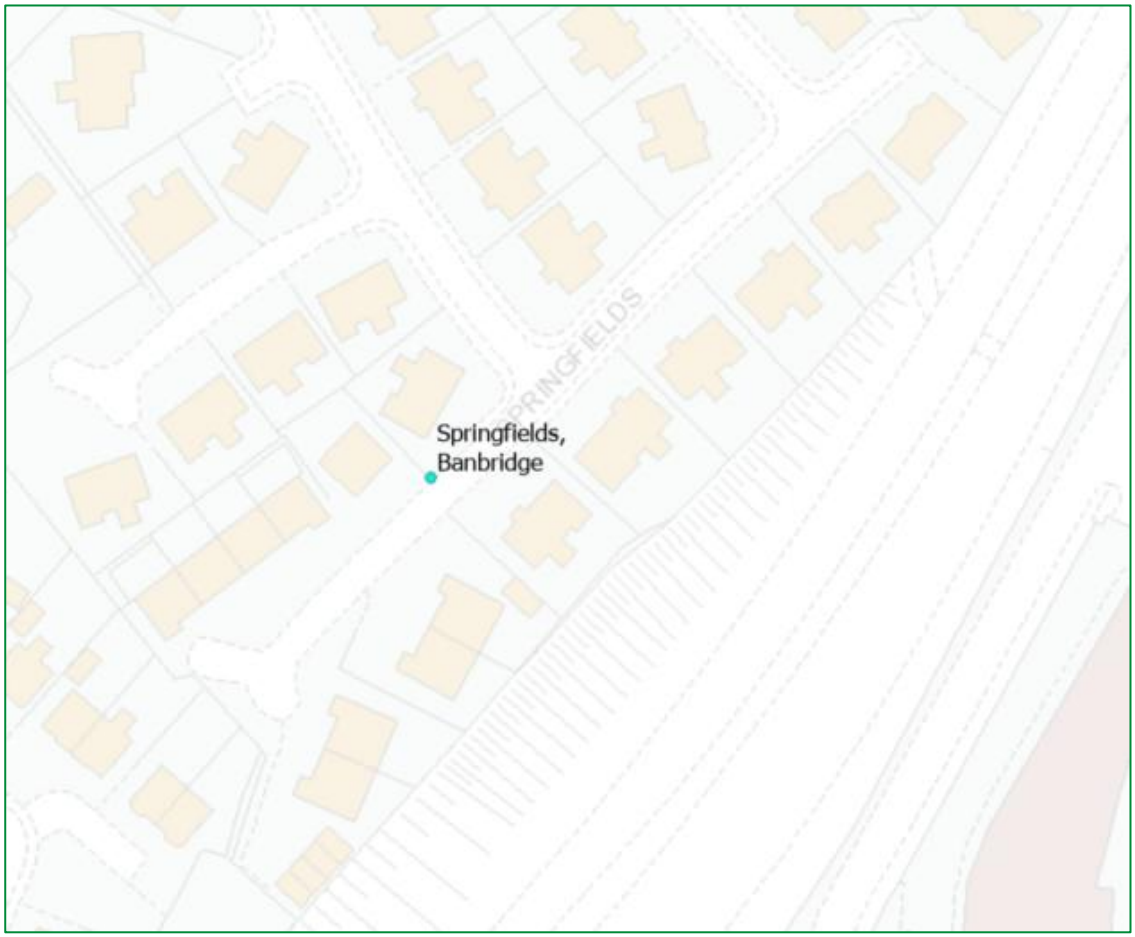


Figure 0-17: Fortfield, Dromore

Figure 0-18: Church Street, Dromore

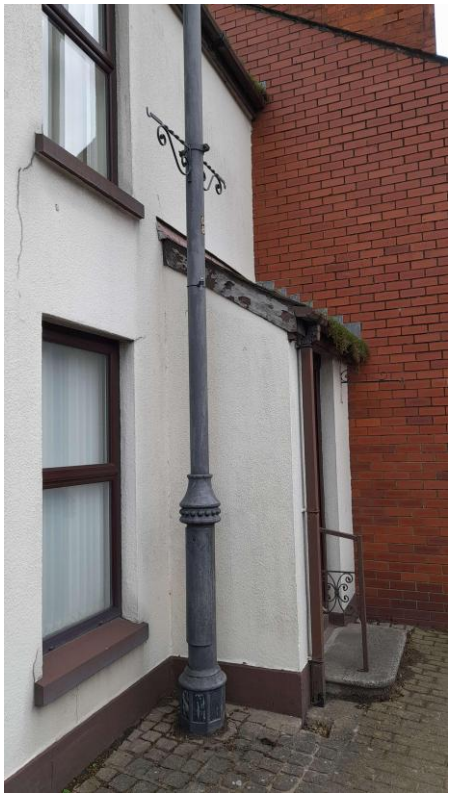


Figure 0-19: Mill Street, Gilford

Figure 0-20: William Street, Lurgan

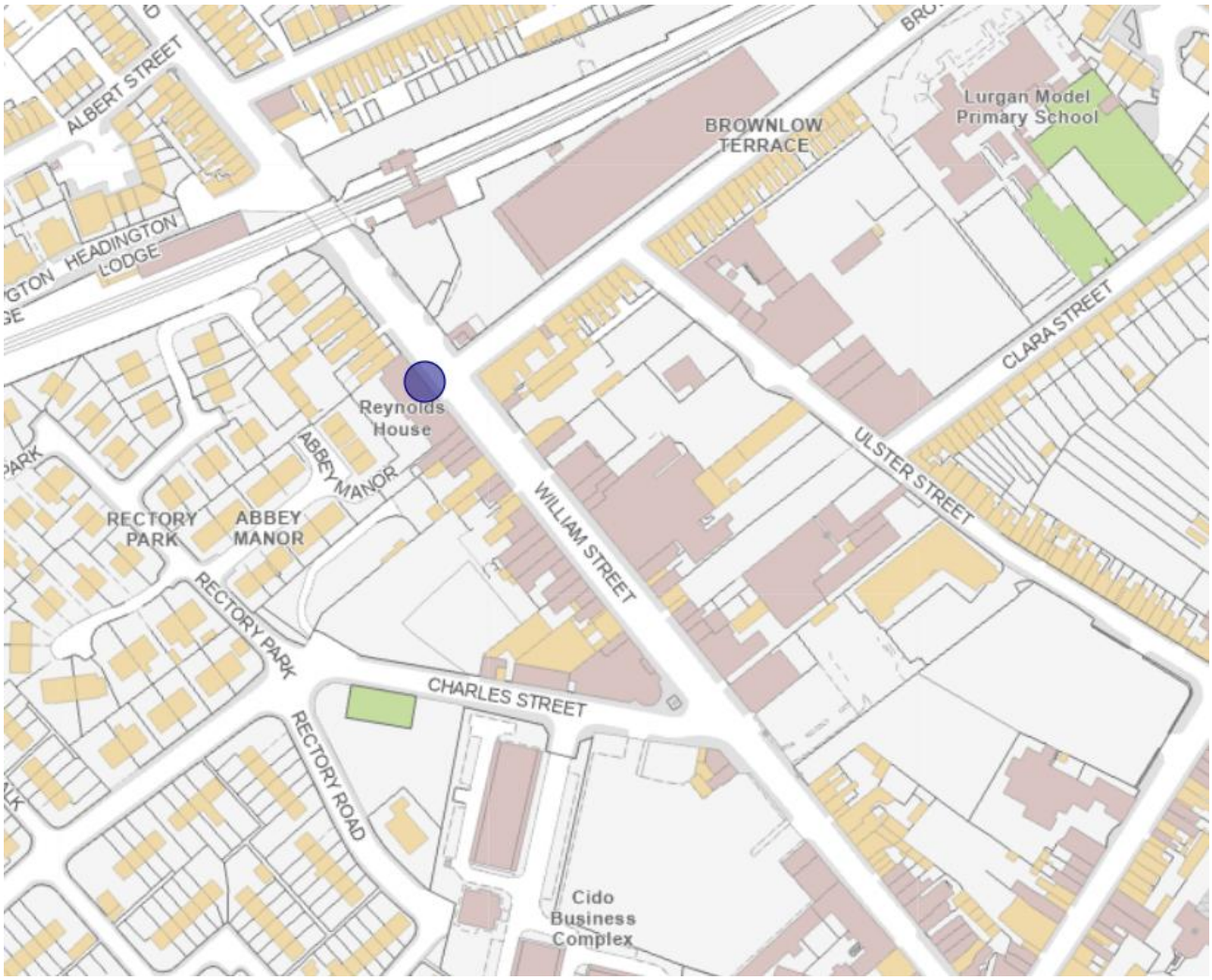


Figure 0-21: Main Street, Poyntzpass

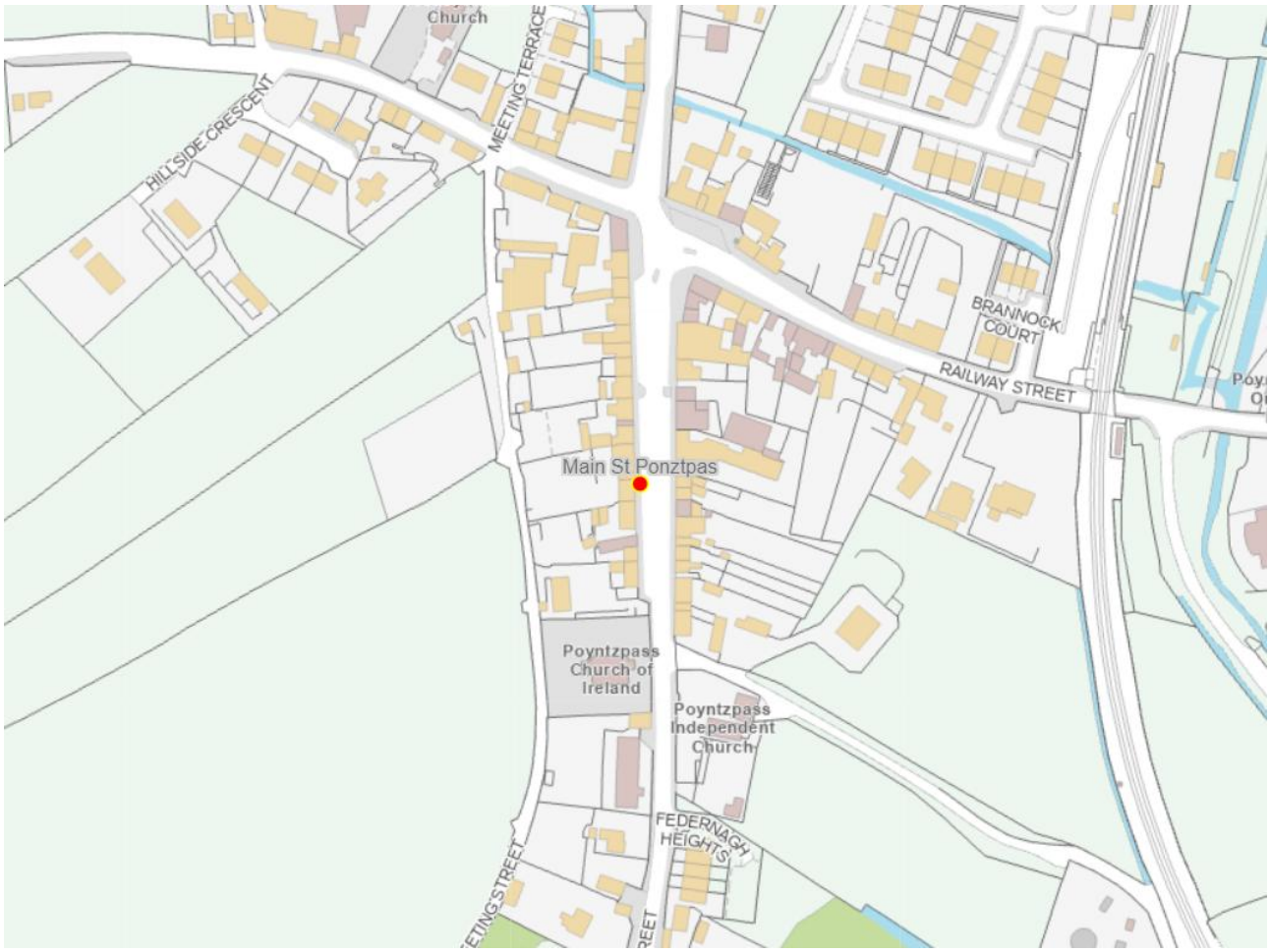


Figure 0-22: Cardinal Dalton Park, Keady

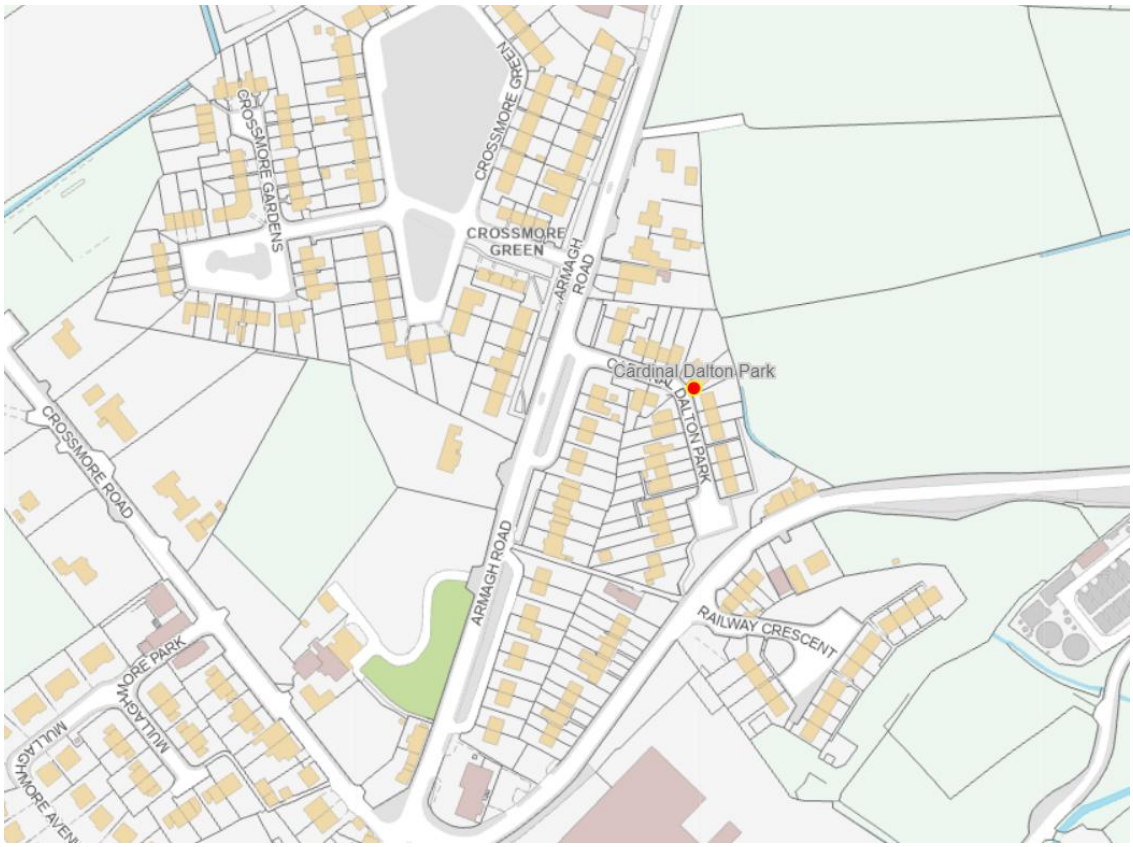


Figure 0-23: Davis Street, Keady

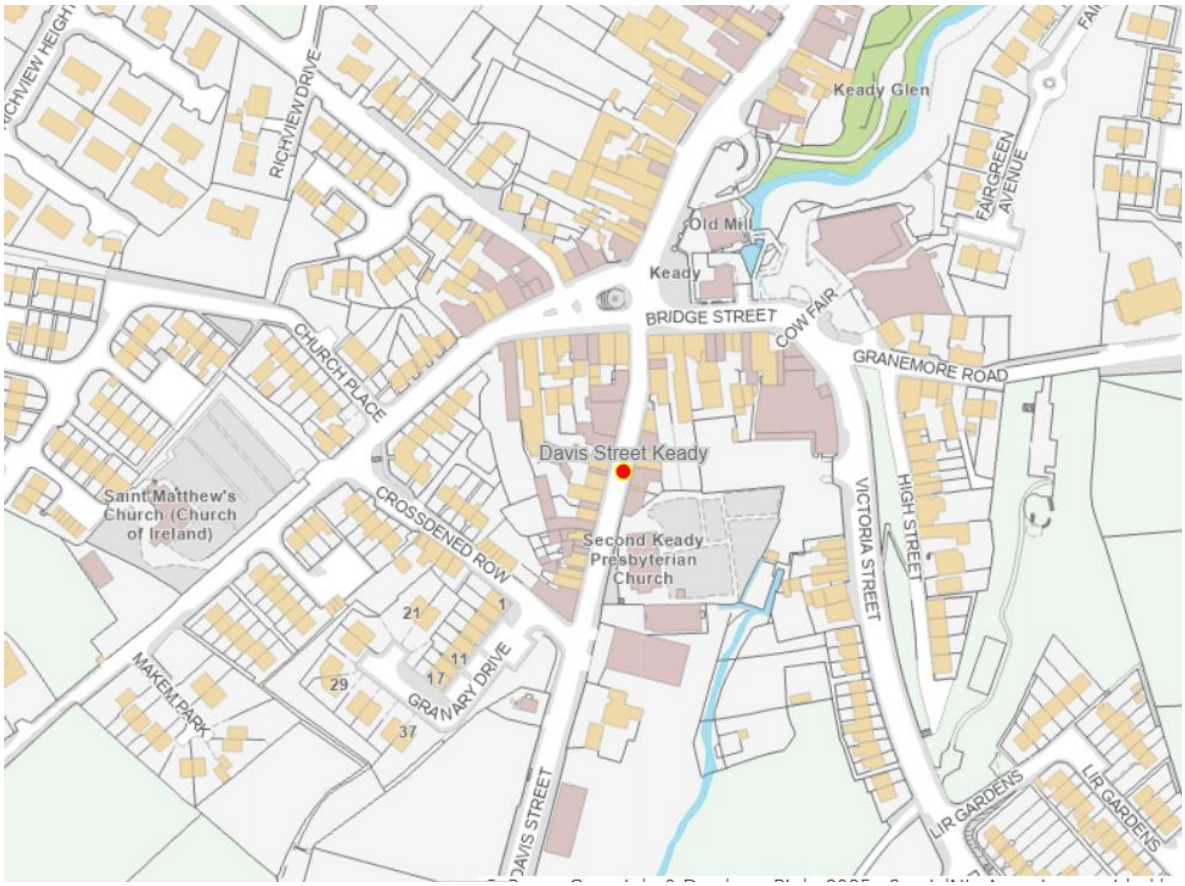


Figure 0-24: Dean Swift Mews, Markethill

Figure 0-25: Ashgrove, Markethill

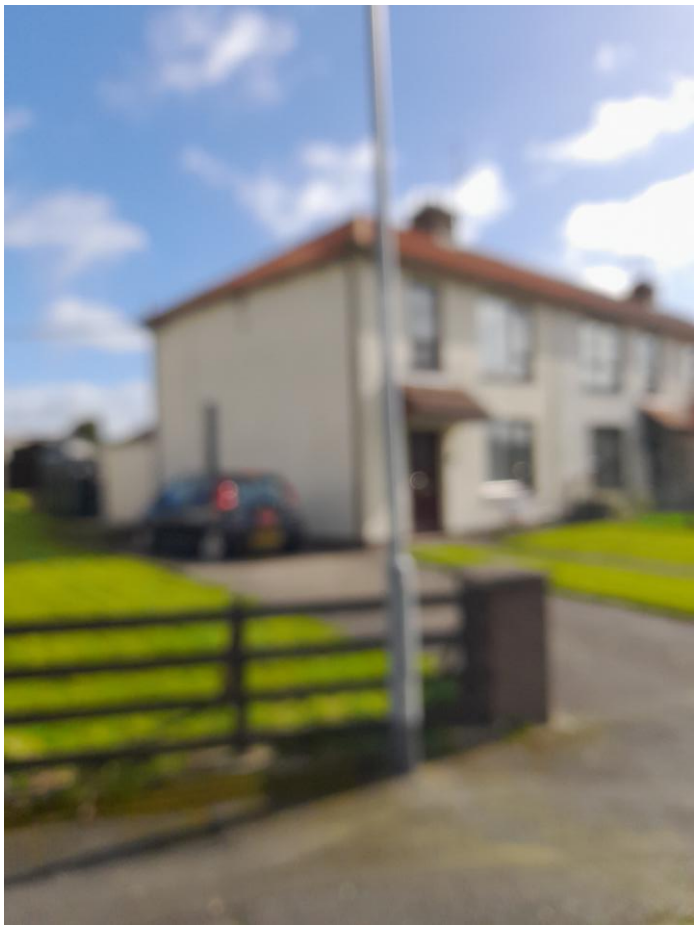


Figure 0-26: Main Street, Loughbrickland

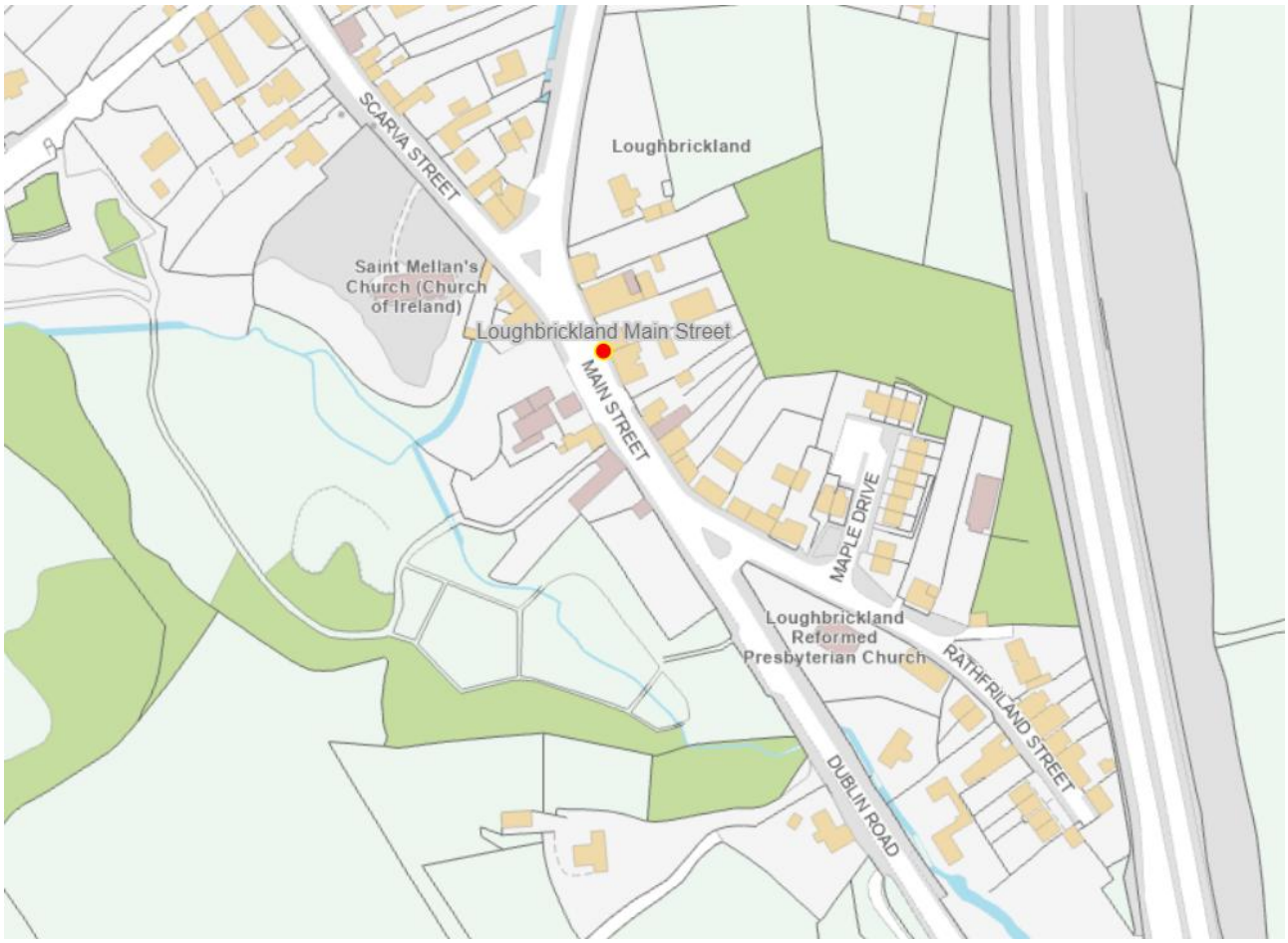


Figure 0-27: Newry Street, Banbridge

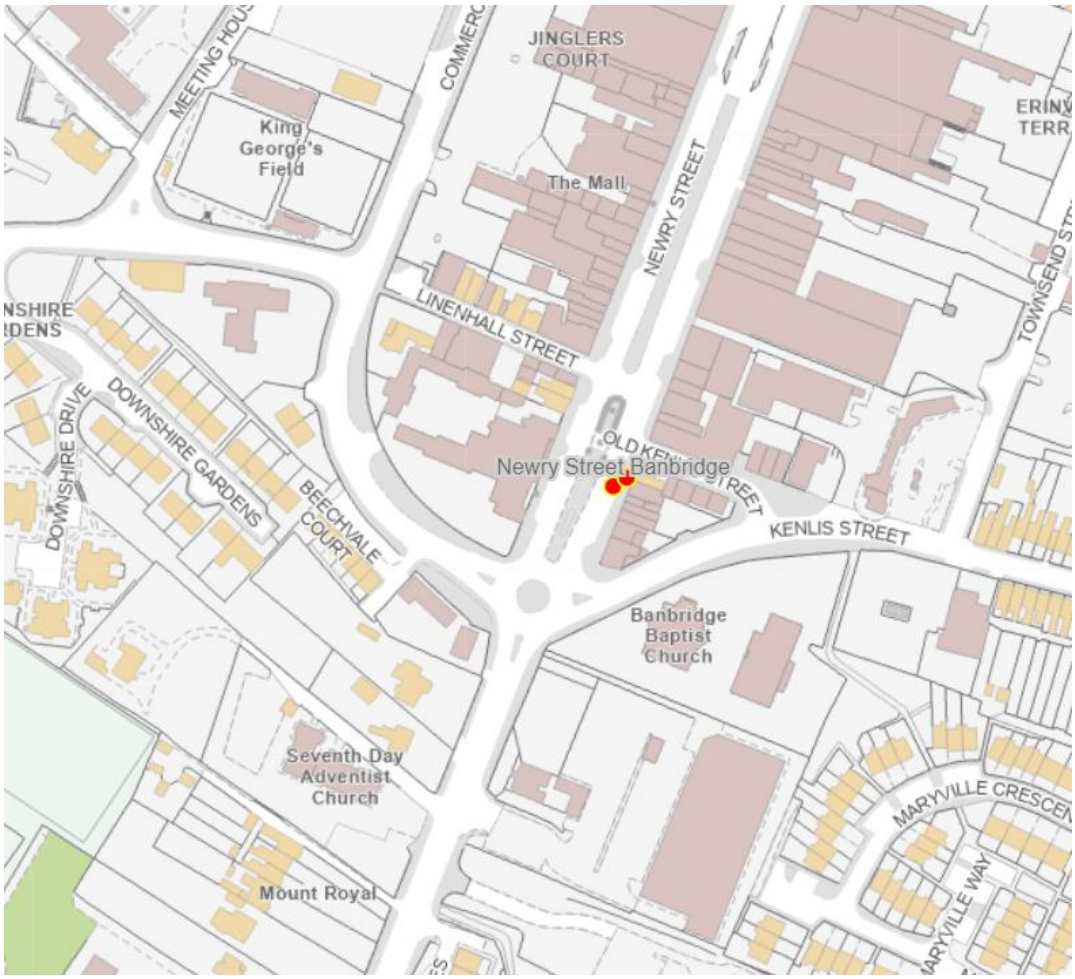


Figure 0-28: Dromore Street, Banbridge

Figure 0-29: Edward Street, Lurgan

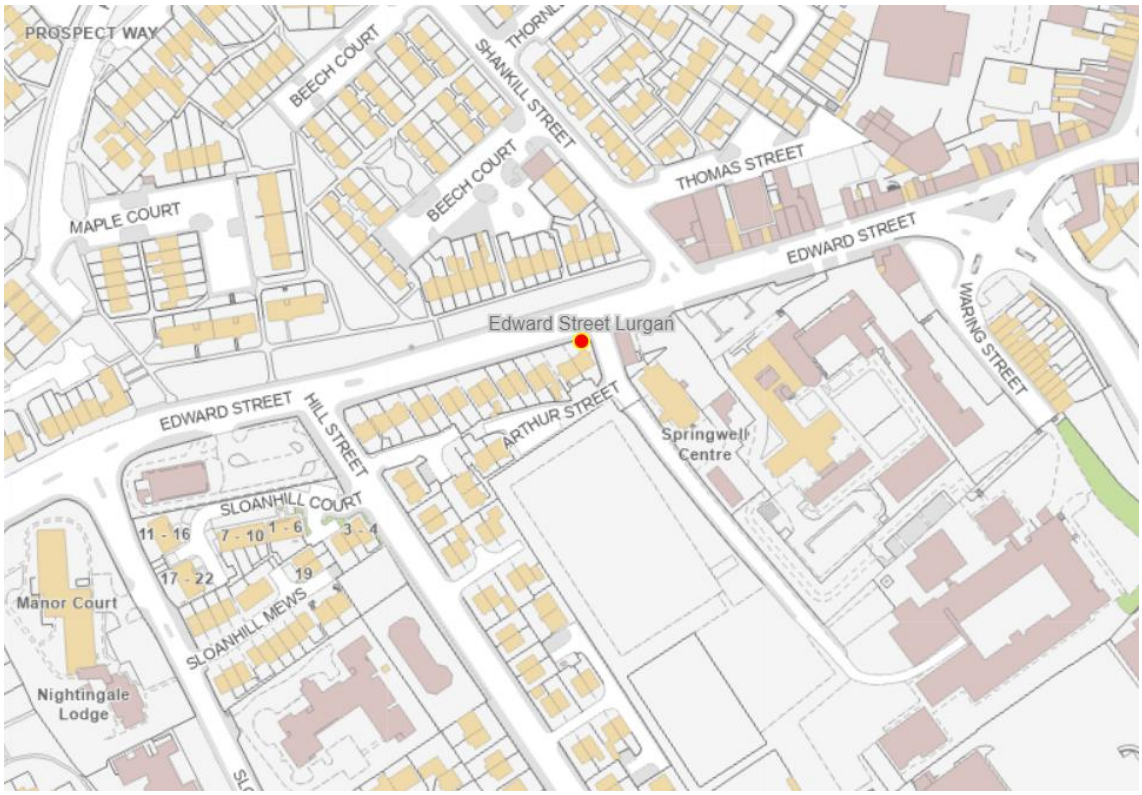


Figure 0-30: Main Street, Donaghcloney

Figure 0-31: Bracken Road, Craigavon

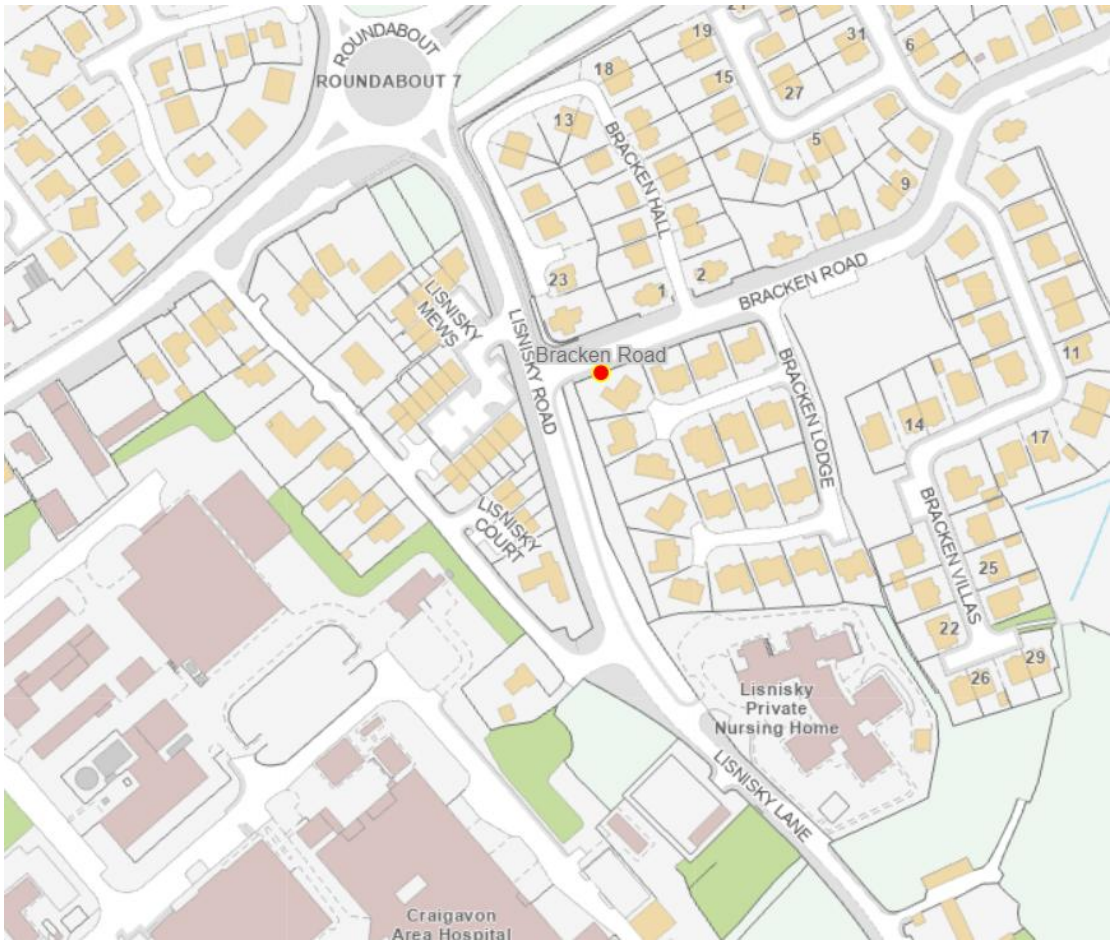


Figure 0-32: Armagh Road, Portadown

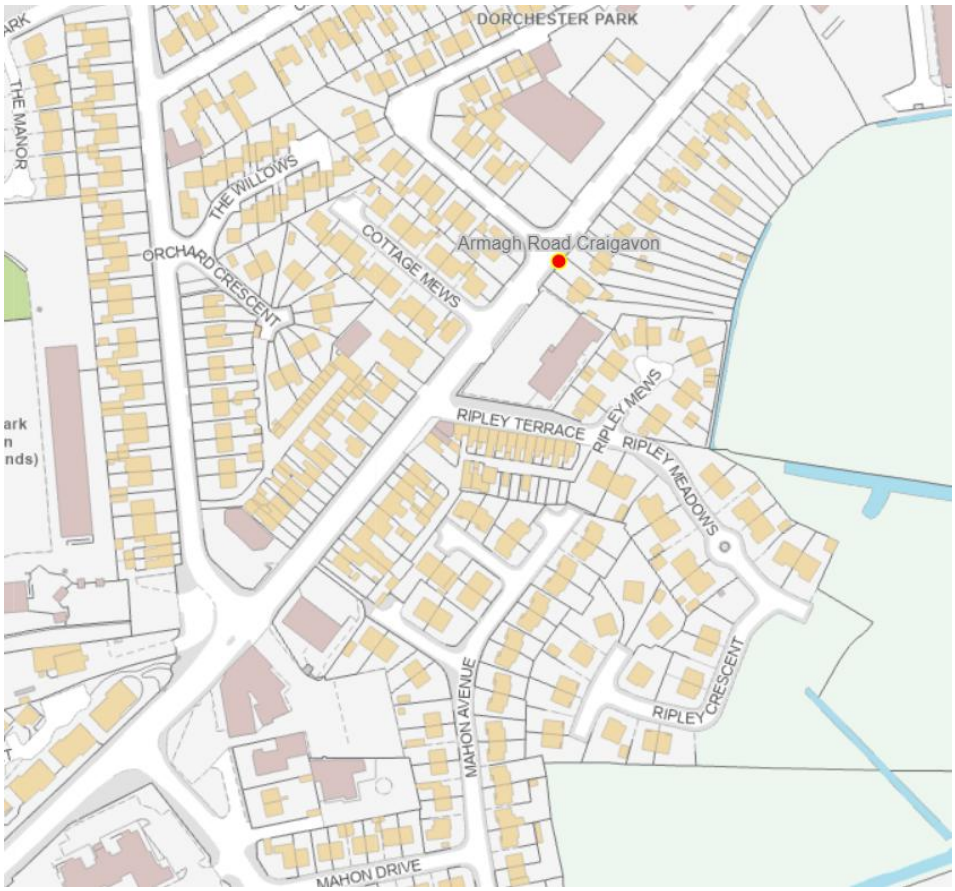


Figure 0-33: Downpatrick Street, Rathfriland

Figure 0-34: Main Street, Charlesmont

Figure 0-35: Moyark, Seago