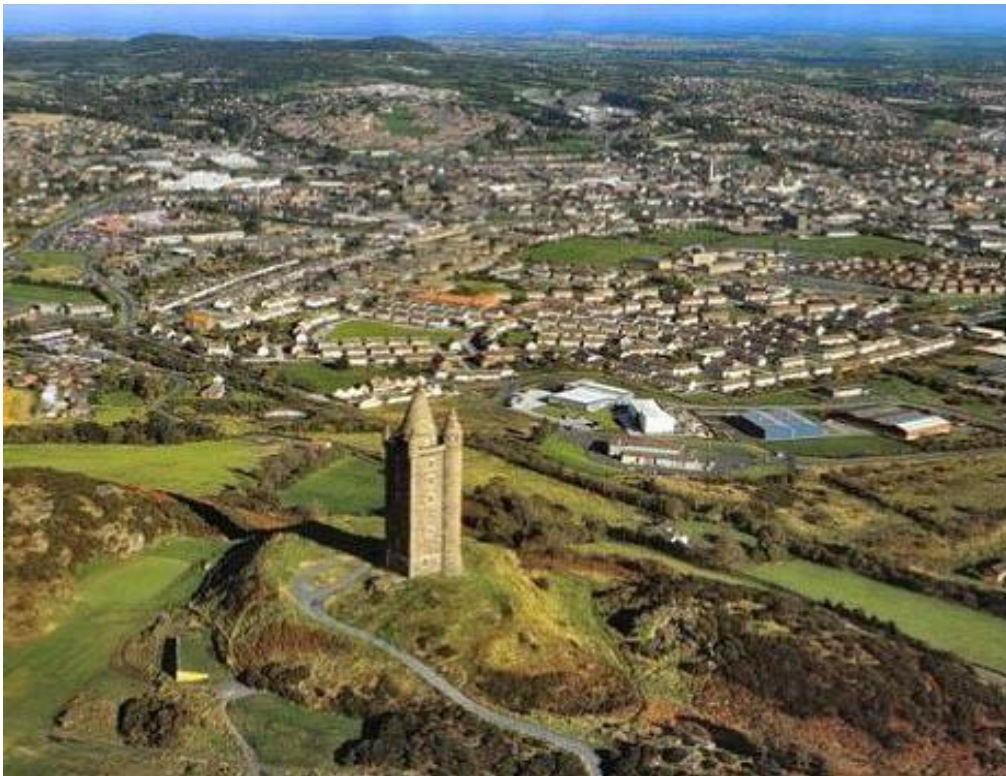


2021 Updating and Screening Assessment for

Ards and North Down Borough Council

In fulfillment of Environment (Northern Ireland)
Order 2002
Local Air Quality Management

December 2021



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Executive Summary

The Air Quality Strategy has established the framework for air quality management in the UK. Local Authorities have a duty under the Environment Act 1995 and subsequent regulations to review and assess air quality in their areas on a periodic basis to identify all areas where the air quality objectives are being or are likely to be exceeded. A phased approach has been adopted for the review and assessment process so that the level of assessment undertaken is commensurate with the risk of an exceedance of an air quality objective.

An updating and screening assessment (USA) is required to be prepared every three years by all local authorities in the UK. The last updating and screening assessment of air quality was undertaken in 2018 with two progress reports carried out in 2019 and 2020.

This report is the 2021 (USA) for Ards and North Down Borough Council (ANDBC) and has been completed using the recommended template. The assessment is fully compliant with the applicable policy and technical guidance. This Report identified no exceedances of the Air Quality Strategy objectives for 2020 for any of the pollutants assessed with relevant exposure, planning applications have been examined by ANDBC Environmental Health, Protection and Development Department to assess if an air quality impact assessment is required.

NO₂ levels due to vehicle emissions remain the main source of concern within ANDBC, it is a popular residential area due to the easy commute to Belfast city centre. The automatic monitoring site in Holywood is positioned on the A2 Bangor to Belfast main route to the city centre where there are also roadside apartment blocks. The NO₂ results in the Borough have not shown a trend in reduction, any variation in results is more likely to have been climatic. In 2020 there was a significant reduction in the results at all monitoring locations for NO₂, this was more likely to have been a result of the low traffic flows during the COVID pandemic.

Monitoring will continue in 2021 on the A2 main arterial route into Belfast City and hot spots around the Borough where traffic congestion is common at rush hour. Two large housing developments are nearing completion in the Movilla area of Newtownards and the Rathgael area of Bangor these and other smaller housing developments have been examined by the Environmental Department and were found to have no significant impact on air quality. Ards & North Down Borough

Council are actively working towards improving Air Quality within the Borough, plans to extend the Comber Green Way to Newtownards and to extend the existing coastal Green Way to Donaghadee are moving forward, these are popular cycle and pedestrian routes that connect with the Belfast cycle route and the City Centre, also giving easy access to the new Belfast Rapid Transport System from Dundonald, the Department of Infrastructure have plans to develop a Park & Ride in Newtownards. ANDBC launched a new initiative in 2019 in primary schools “Engine off Prevent the Cough”, educating pupils and parents to the harmful emissions from vehicles with the emphasis on idling engines outside schools, unfortunately it was not run in 2020 due to COVID 19, it will continue in 2021 restrictions permitting.

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QA/QC Data of automatic sites

QA/QC of Diffusion Tube Monitoring

Appendix B

Impact of COVID 19 upon LAQM

1 Introduction

1.1 Description of Local Authority Area

Ards and North Down Borough Council (ANDBC) has a population of 162,056. The Borough is of mixed urban and rural character situated east of Belfast City and the two largest towns Bangor and Newtownards are popular residential areas due to the ease of commute to Belfast City. It is an area of outstanding natural beauty and special scientific interest bounded by over 100 miles of coastline and the prevailing wind direction is south-westerly.

Air Quality in ANDBC is generally good as there is good ventilation from sea breezes. There are few industrial processes in the area that are significantly detrimental to air quality and heavy fuel oil is not widely used for heat generation, solid fuel is still very popular as a secondary fuel. However, there are a number of very busy trunk roads in the area and three main arterial routes into Belfast with a combined traffic flow of approximately 66500, the busiest being the A2 commuter route from Bangor to Belfast with average daily traffic flows of 44,000 vehicle movements per day at Hollywood

Figure 1.1 Map of the position of Ards and North Down Borough Council within Northern Ireland

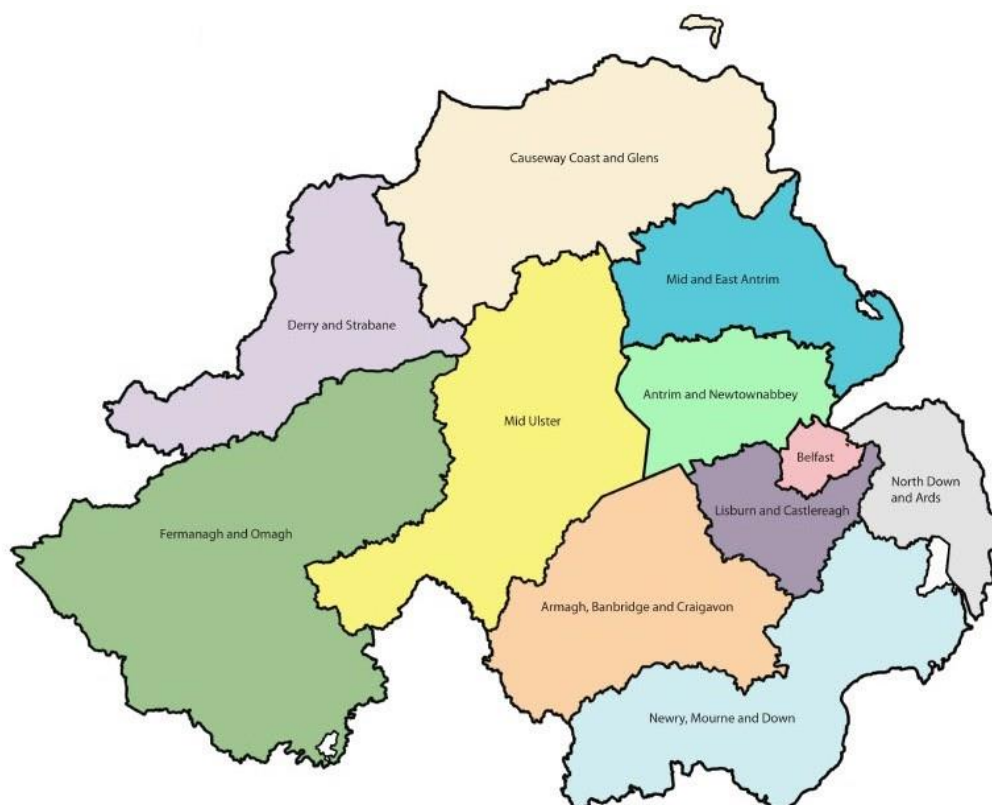


Figure 1.2 Ards and North Down Borough Council area

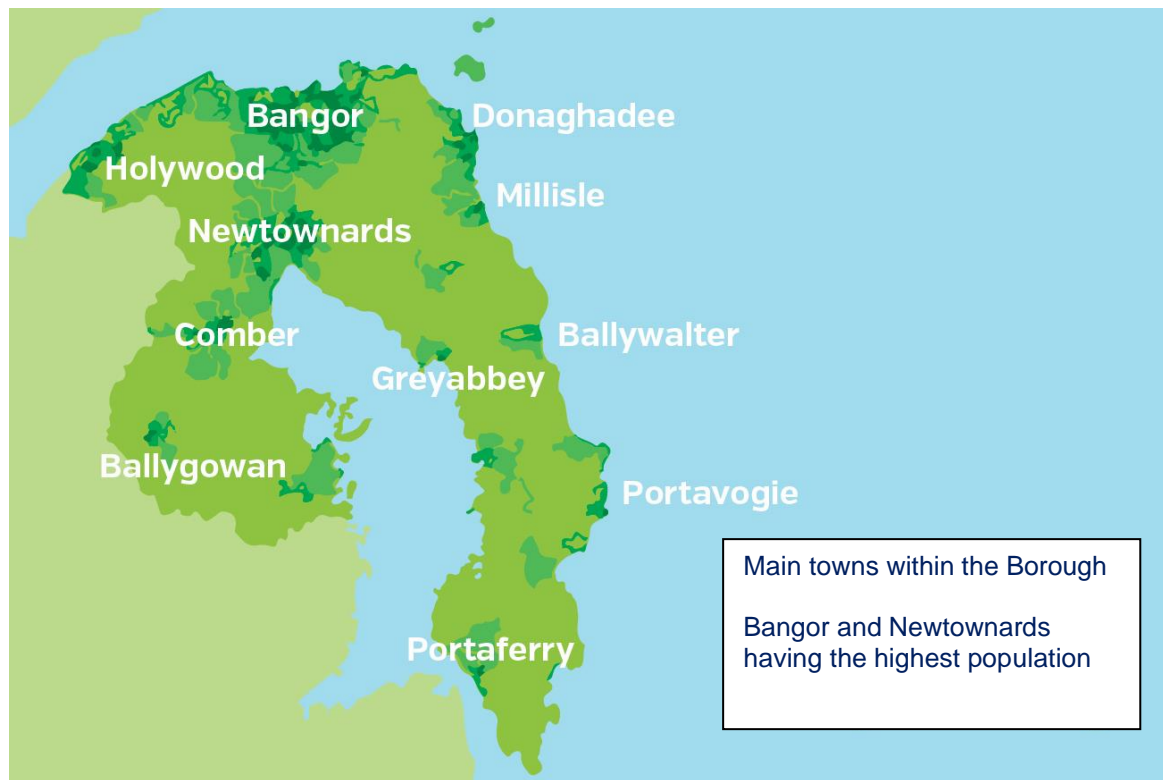


Figure 1.3 Map showing the 3 main arterial routes to Belfast City Centre



1.2 Purpose of Report

This report fulfils the requirements of the Local Air Quality Management 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.

The objective of this Updating and Screening Assessment is to identify any matters that have changed which may lead to risk of an air quality objective being exceeded. A checklist approach and screening tools are used to identify significant new sources or changes and whether there is a need for a Detailed Assessment. The USA report should provide an update of any outstanding information requested previously in Review and Assessment reports.

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 micrograms per cubic metre $\mu\text{g}/\text{m}^3$ (milligrams 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 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	3.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010

1,3-Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m ³	Running 8-hour mean	31.12.2003
Lead	0.5 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
Particles (PM₁₀) (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

Local authorities in Northern Ireland amalgamated on 1st April 2015 creating 11 new councils, the following reports have been submitted by ANDBC since the amalgamation.

2015 - Update and Screening Assessment

2016 - Progress report

2017 - Progress report

2018 - Update and Screening Assessment

2019 - Progress report

2020 - Progress report

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

ANDBC has one automatic monitoring site on the A2 Holywood, monitoring NO₂ and PM₁₀. The PM₁₀ was monitored using a TEOM instrument which require the data to be ratified using a volatile correction, in 2020 ANDBC became aware most of the TEOM instruments having been decommissioned a correction factor would no longer be available, and therefore this was replaced with a FIDAS 200 in November 2020 monitoring PM₁₀ and PM_{2.5} to ensure the continued accuracy in data. Manual calibrations are carried out every two weeks by the Local Air Quality officer. Air Quality Data Management (AQDM) are employed to ratify and validate the data. A specialist engineer is employed to service and maintain the site as required. Results and correction factors are detailed in Appendix A.

A co-location study for the NO₂ diffusion tubes is also carried out at this site. Results from this study were submitted to the national data base for 2021.

Results and correction factors are detailed in Appendix A.

Figure 2.1 Position of the automatic air monitoring site within ANDBC

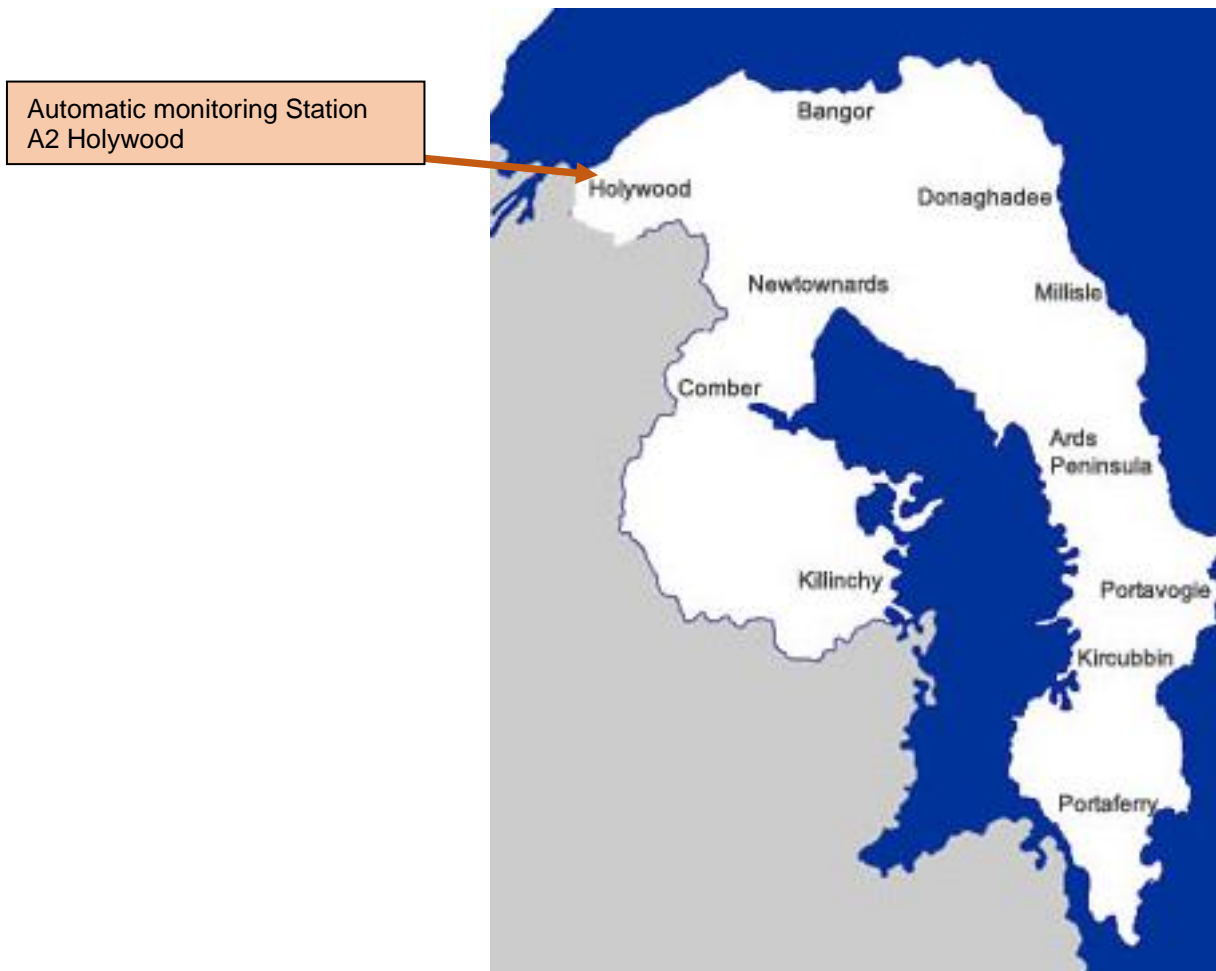


Figure 2.2 Position of Automatic Monitoring Site on the A2 Hollywood

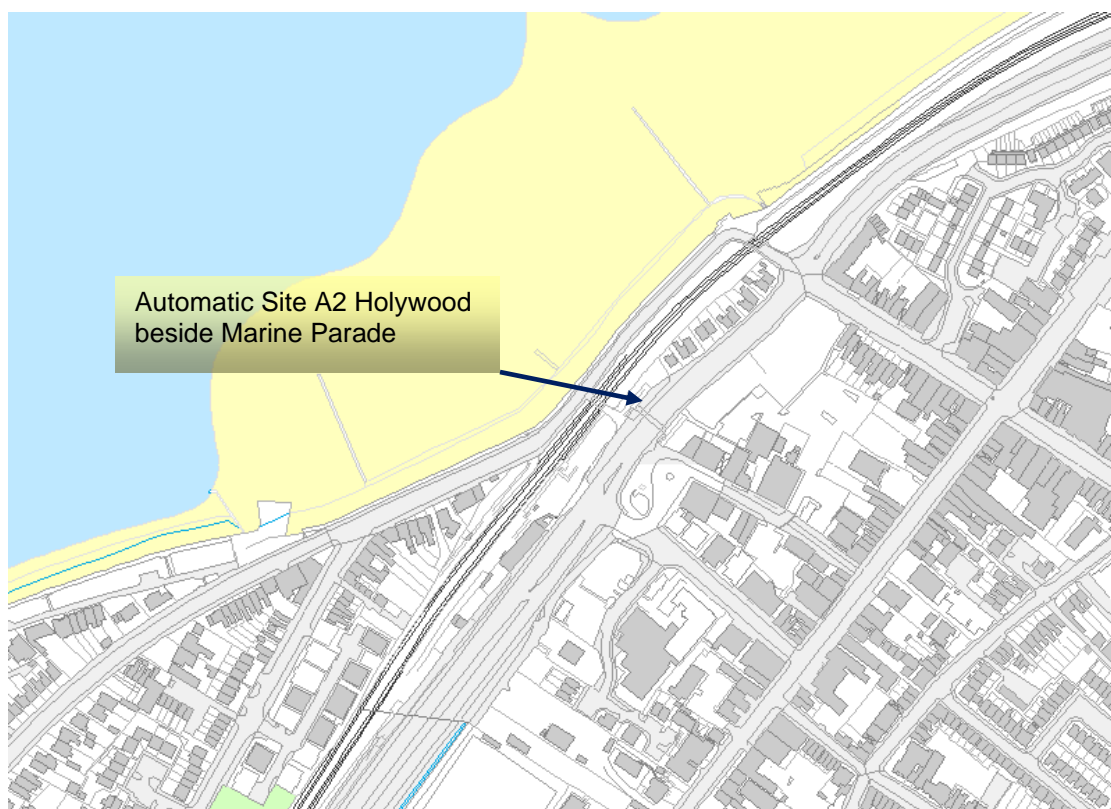


Figure 2.3 Picture of Automatic Monitoring Station A2 Holywood



Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	Irish Grid Ref	Irish Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Marine Parade Holywood A2	Roadside	X339481	Y379328	PM ₁₀ , PM _{2.5} NO ₂	NO	TEOM (1 st Jan.-15 th Nov 2020) FIDAS200 (16 th Nov-31 st Dec 2020) Chemiluminescence	YES 30m	4.6M	YES

2.1.2 Non-Automatic Monitoring Sites

ANDBC has 15 NO₂ diffusion tube sites at roadside and background sites. Seven are positioned along the A2 main arterial route into Belfast from Bangor at roadside and on facades of the closest dwellings to the roadside, the remainder of the tubes are at relevant exposure at various hotspots where there is traffic congestion at rush hour in Newtownards, Bangor, Comber and Holywood. In 2019 four of the sites with low levels were relocated to sites with planned new developments and the monitoring was extended on the A2 at Holywood on the completion of a new apartment block. In 2020 monitoring commenced on the façade of a property in Cleland Park South Bangor due to the health concerns related to air pollution from traffic congestion at rush hour. A co-location study is carried out at the automatic site in Holywood, the results of the co-located study were submitted into the national data base for 2020 to be included in the June and September 2021 data sheet. The diffusion tube studies for the past five years do not show any trends (See Fig. 2.17) In 2020 there was a significant reduction at all the NO₂ sites, however this was during the COVID 19 pandemic, during lockdown the traffic flows on all the main routes in the Borough leading to Belfast City centre were greatly reduced and this continued when lockdown was lifted as home working and schooling continued during the remainder of 2020, therefore the COVID restrictions were probably the reason for this significant reduction.

The NO₂ diffusion tubes were supplied and analysed by Gradko Environmental.

The bias adjustment factor from the co-location study is **0.75**. This was calculated using the R&A support precision and accuracy spread sheet. A decision was made to apply the national figure of **0.81** as 27 studies were included and was deemed to be a more realistic figure.

Details of the QA/QC for the diffusion tubes and the reason for the use of the bias adjustment factor can be found in Appendix A

Below are maps of the diffusion tube sites.

Figure 2.4 Map(s) of Non-Automatic Monitoring Sites



Figure 2.5 Position of Diffusion tube sites 1-5 Newtownards

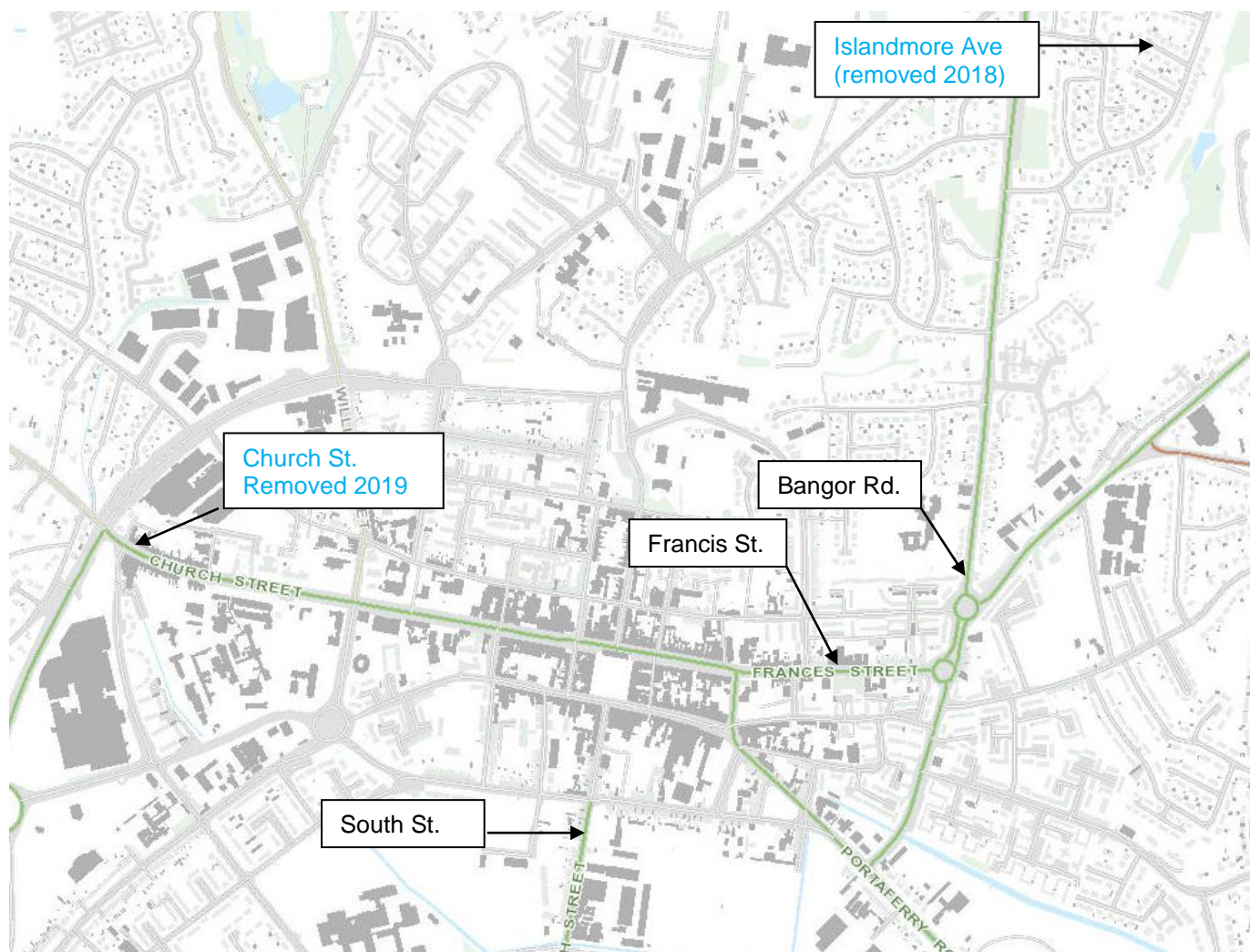
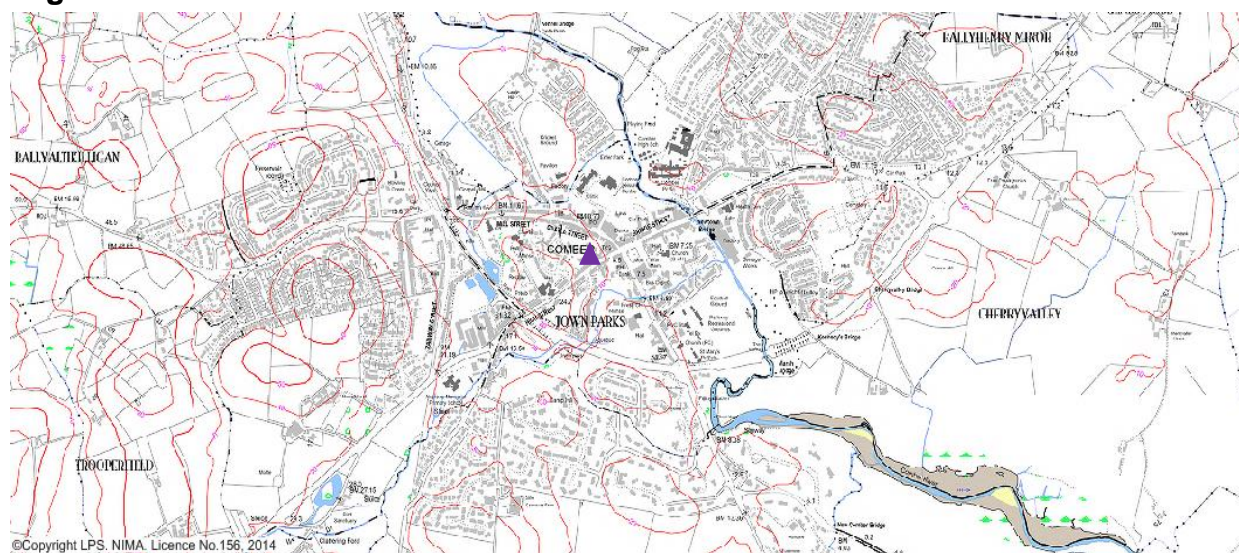


Figure 2.6 Diffusion tube 6 in Comber



▲ Position of diffusion tube in Comber Village Centre

Figure 2.7 Position of Diffusion tube 6 in Comber Village

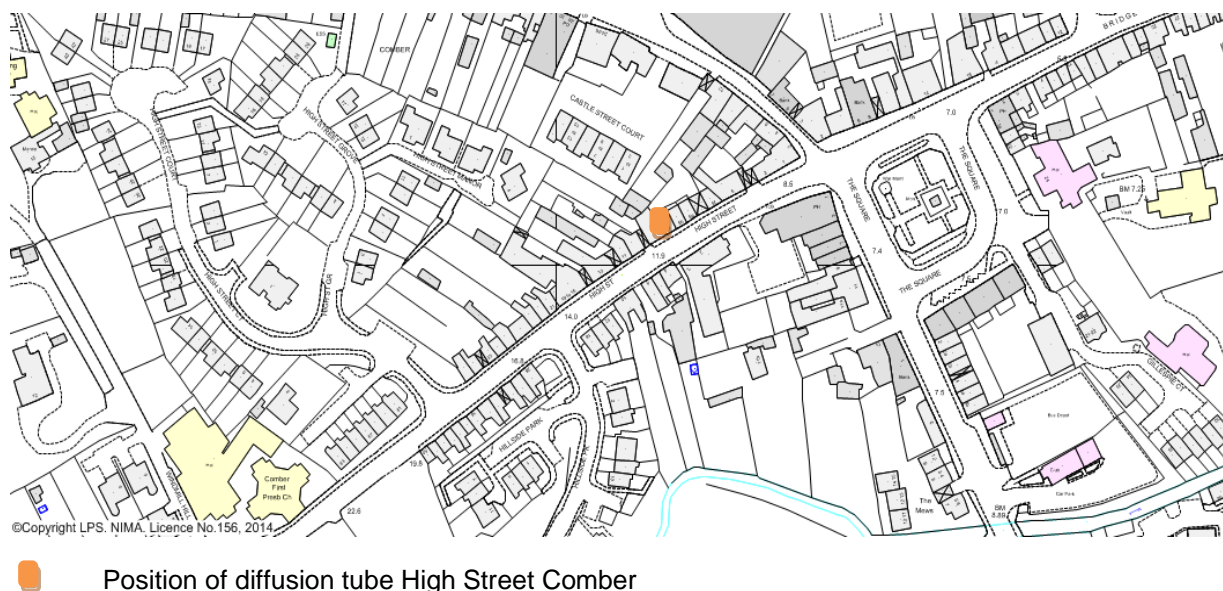
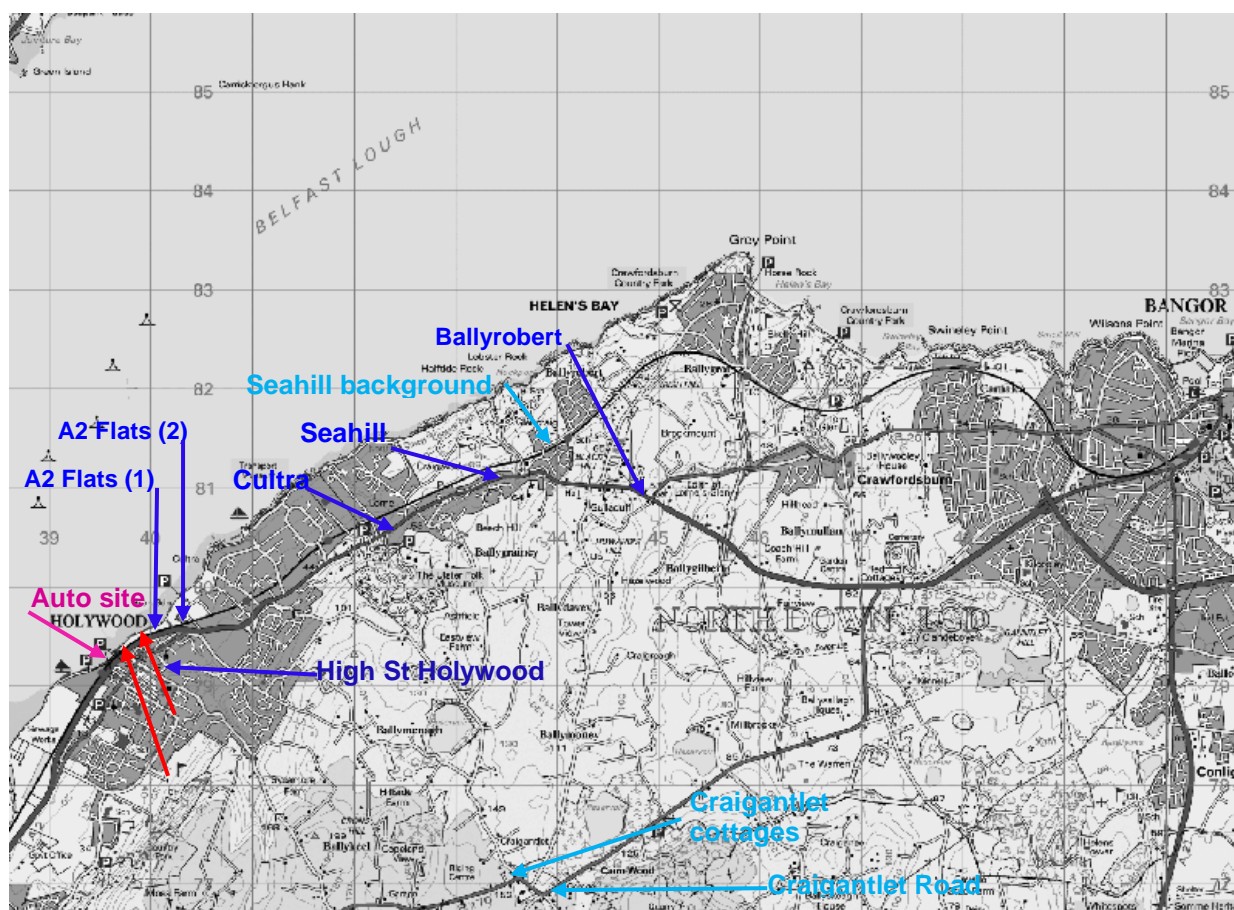


Figure 2.8 Position of Diffusion tube sites 7-15 on the A2



Sites discontinued in 2018, 2019

New sites in 2019

Figure 2.9 Position of Diffusion tube sites 7-9 on A2

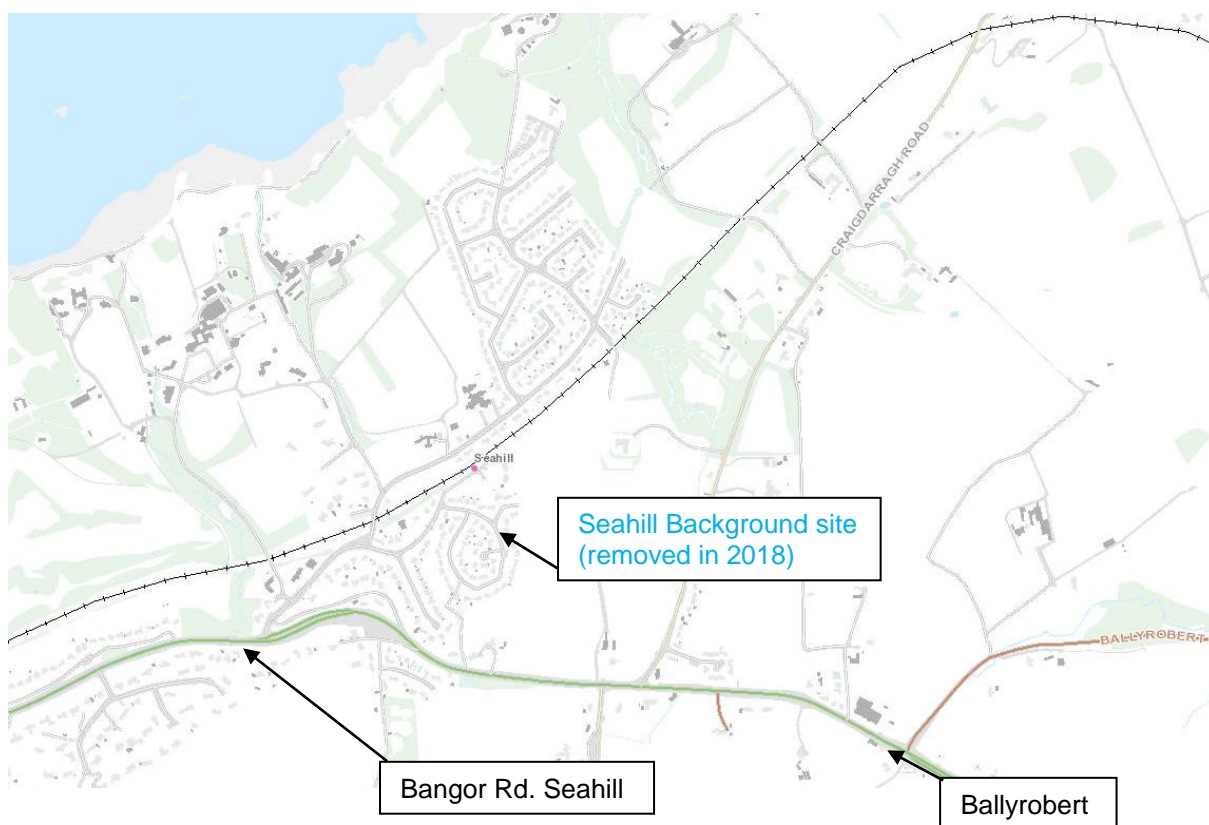


Figure 2.10 Position of Diffusion tube site 10 & 10a Cultra on A2



Figure 2.11 Position of Diffusion tube sites 11,12 in Craigantlet

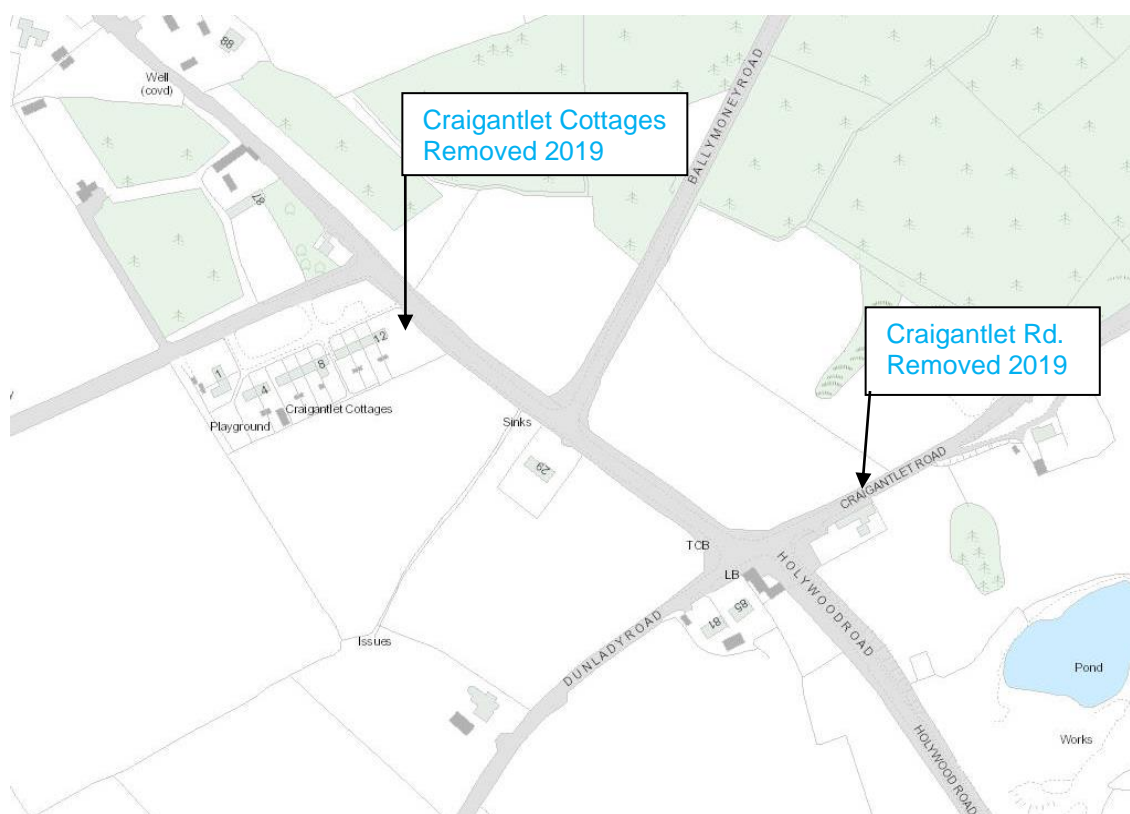


Figure 2.12 Position of Diffusion tube sites 13-15 and the two new sites 18-19 in 2019 at Apartments 36 Shore Road Hollywood on the A2

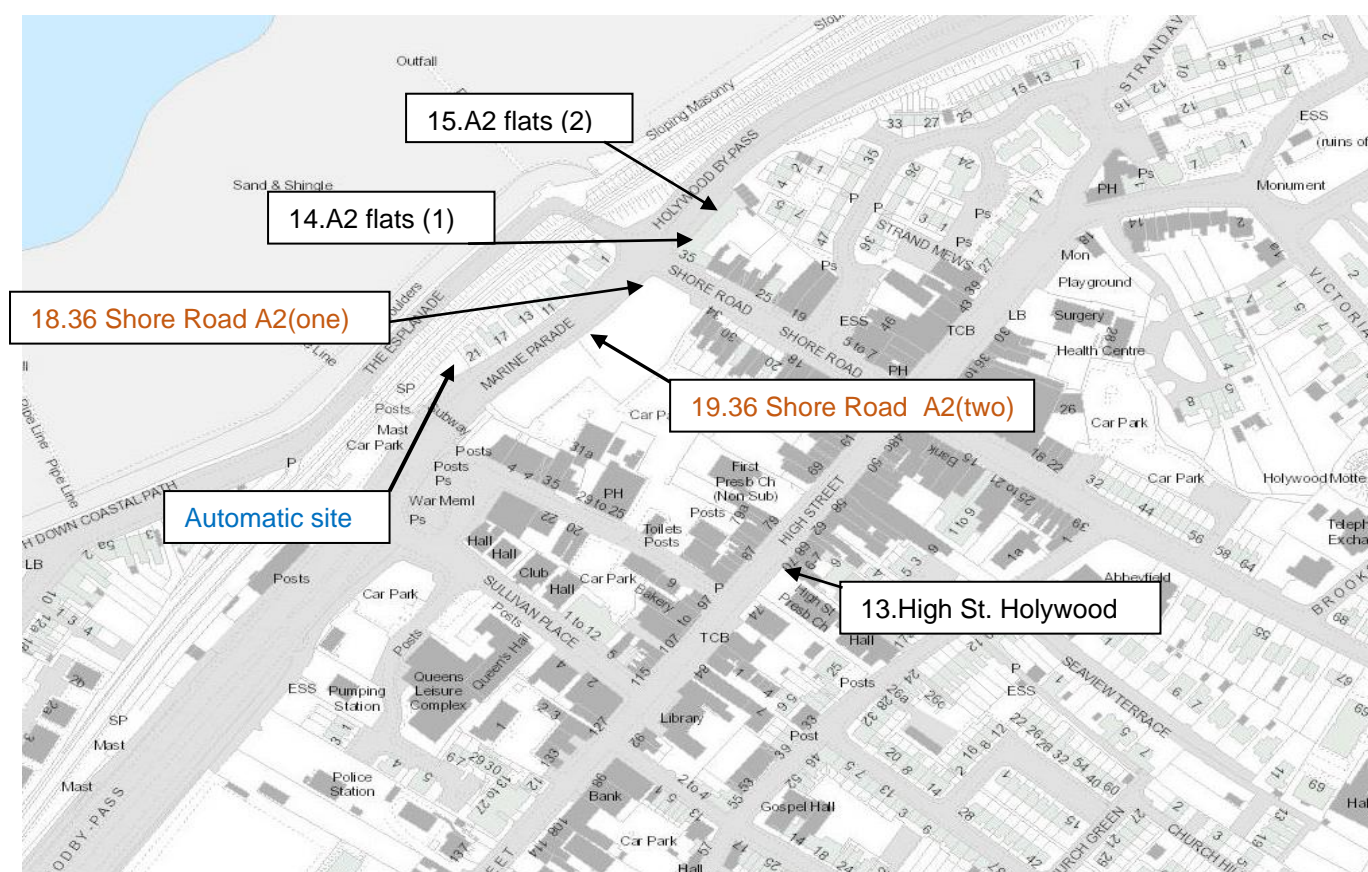
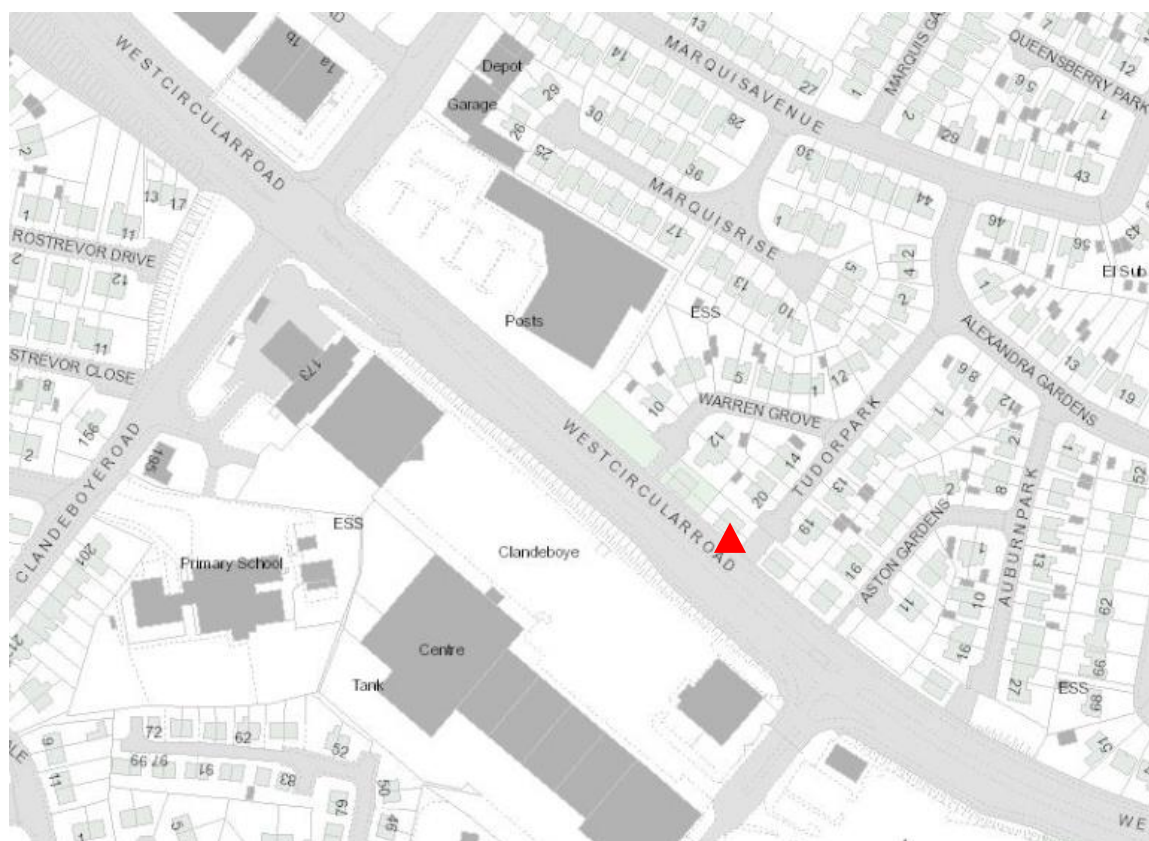


Figure 2.13 Picture of existing and new tubes apartment blocks A2 Hollywood



▲ Tubes 14,15 ▲ Tubes 18,19 at 36 Shore Road

Figure 2.14 Position of Diffusion Tube site 16 Outer Ring Bangor (new tube 2018)



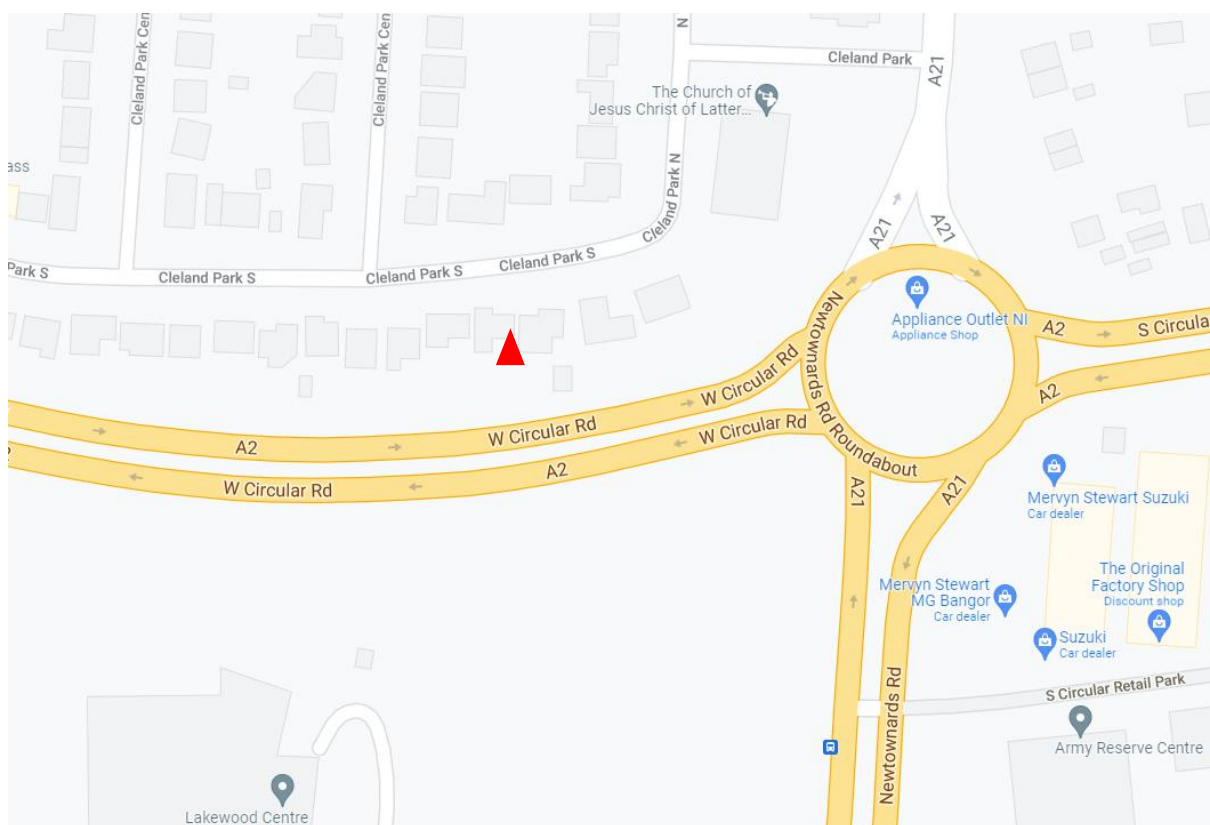
▲ Position of new tube

Figure 2.15 Position of Diffusion Tube site 17 Grays Hill Bangor (new tube 2018)



▲ Position of new tube

Figure 2.16 Position of Diffusion Tube site Cleland Park South Bangor (new tube 2020)



▲ Position of new tube

Table 2.2 Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Site Height (m)	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	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?
1	19 Islandmore Avenue Newtownards	Background	349847	375132	2.5	NO ₂	No	No	N/A	>50m from busy road	N
2	19 Bangor Rd Newtownards	Roadside	349687	374267	2.5	NO ₂	No	No	Y (1.5m)	1.5m	Y
3	103 Church St Newtownards	Roadside	348994	374364	2	NO ₂	No	No	Y (2.5m)	1.5m	Y
4	67 South St. Newtownards (b)	Roadside	348238	373590	2.5	NO ₂	No	No	Y (0.5m)	1.5m	Y
5	82 Frances St. Newtownards	Roadside	349324	369201	2	NO ₂	No	No	Y (0.5)	1.5m	Y
6	11 High St Comber	Roadside	345827	369201	2.5	NO ₂	No	No	Y (0.5)	1.5m	Y
7	Seahill Background site	Background	344128	381294	2	NO ₂	No	No	N/A	250m	N

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Site Height (m)	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	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?
8	A2 Ballyrobert	Roadside	345002	380823	2	NO ₂	No	No	Y (<1m)	3m	Y
9	A2 Seahill	Roadside	343545	381102	2	NO ₂	No	No	Y (<1m)	10m	Y
10	A2 Station Rd Cultra facade	Roadside	342475	380672	2	NO ₂	No	No	Y (<1m)	6.3m	Y
10a	A2 Station Rd Cultra roadside	Roadside	342461	380656	2	NO ₂	No	No	Y (5m)	1.3m	Y
11	1 Craigantlet Road	Roadside	343929	376920	2	NO ₂	No	No	Y (<1m)	1.5m	Y
12	Craigantlet Cottages	Roadside	343632	377049	2	NO ₂	No	No	Y (20m)	0.5m	Y
13	High Street Hollywood	Roadside	339785	379119	2.5	NO ₂	No	No	Y (20m)	1.5	Y
14	A2 Flats Hollywood(1)	Roadside	339756	379330	2	NO ₂	No	No	Y (0.5m)	2.9m	Y
15	A2 Flats Hollywood(1)	Roadside	339774	379351	2	NO ₂	No	No	Y (0.5m)	2.9m	Y
16	Outer Ring Bangor	Roadside	349578	380087	2	NO ₂	No	No	Y (2m)	2m	Y
17	Grays Hill Bangor	Roadside	350195	381781	2	NO ₂	No	No	Y (11m)	2m	Y

Site ID	Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Site Height (m)	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	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?
18	Apartment 36 A2 one	Roadside	339729	379277	2	NO ₂	No	No	Y (5.1)	2.9m	Y
19	Apartment 36 A2 two	Roadside	339691	379264	2	NO ₂	No	No	Y (5.1)	2.9m	Y
20	Cleland Park South	Roadside	349954	379980	2	NO ₂	No	No	Y (0)	25m	Y

The sites in green were new in 2018

The sites in blue were discontinued in 2018,2019 and 2020

The sites in orange were new in 2019, 2020

2.2 Comparison of Monitoring Results with Air Quality Objectives

No exceedances of the AQS objectives have been identified from the monitoring data collected since the last Update and Screening Assessment. All monitored pollutant concentrations have been below their respective air quality objective limits at relevant exposure. In the following section results are presented for the NO₂ diffusion tube sites and the automatic site in Holywood which monitors NO₂ and PM₁₀ and providing real-time data on the NI Air Quality web site.

2.2.1 Nitrogen Dioxide

In the following section results are presented for NO₂ at the automatic and diffusion tube sites and compared with the objective.

All sites are well below the objective at relevant exposure in 2020.

2.2.2 Automatic Monitoring Data

Table 2.3 presents the annual mean concentrations of NO₂ determined at the automatic site in 2020 from the hourly measurements.

Table 2.3 Results of Automatic Monitoring of Nitrogen Dioxide: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % ^a	Valid Data Capture 2020 % ^b	Annual Mean Concentration (µg/m ³)				
					2016* ^c	2017* ^c	2018* ^c	2019* ^c	2020 ^c
A2 Hollywood	Roadside	NO	N/A	97.7	30	25	29	26	20

In bold, exceedence of the NO₂ annual mean AQS objective of 40µg/m³

^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.TG16, if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional

Trends in Annual Mean NO₂ Concentrations Measured at Automatic Monitoring Sites

Results have been consistent since the installation of the automatic station, any slight variation is more probably due to climatic conditions rather than increased traffic emissions, the 2020 low figure is reflective of the large reduction in traffic on the A2 during the COVID lockdown restrictions. There have been no exceedances of the hourly mean.

Table 2.4 – Results of Automatic Monitoring for NO₂: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % ^a	Valid Data Capture 2020 % ^b	Number of Hourly Means > 200µg/m ³				
					2016* ^c	2017* ^c	2018* ^c	2019* ^c	2020 ^c
A2 Hollywood	Roadside	NO	N/A	97.7	0	0	0	0	0

In bold, exceedence of the NO₂ hourly mean AQS objective (200µg/m³ – 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 exceedences for previous years is optional

Diffusion Tube Monitoring Data

Results of the NO₂ diffusion tube sites for 2020 situated within the Borough are shown below in Table 2.5.

They are sited in accordance with the technical guidance LAQM.TG (16)

A diffusion tube co-location study in 2020 was carried out at the Holywood automatic site, the results of this study were submitted into the national data base, the 2020 local bias was **0.75.**, as in previous years a decision has been made to apply the national bias adjustment factor of **0.81**, as this is based on 27 studies and therefore deemed to be a more realistic figure.

The A2 Holywood junction continues to be a source of concern as this is where the highest traffic flows can normally be found on this main arterial route to the City Centre also at this roadside location a second large residential apartment block was completed in 2018 (Apartments 36 Shore road Holywood), monitoring was extended in 2019 and there are now four diffusion tubes positioned here, all the A2 roadside sites have been distance calculated to the nearest relevant exposure. The automatic real time NO₂ monitor positioned across from the Holywood junction results are much lower, however its location benefits from sea breezes as the diffusion tubes at the apartment blocks are sheltered, a picture of these sites can be found in figures 2.12 and 2.13.

Details of the QA/QC for the diffusion tubes and the reason for the use of the bias adjustment factor **0.81** can be found in Appendix A

Trends for the 15 diffusion tube sites within the Council area are shown in figure 2.17

Table 2.5 Results of Nitrogen Dioxide Diffusion Tubes in 2020

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Full Calendar Year Data Capture 2020 (Number of Months)	2020 Annual Mean Concentration ($\mu\text{g}/\text{m}^3$) - Bias Adjustment factor = 0.81
1	19 Islandmore Av Newtownards	Background	N	single		
2	19 Bangor Rd Newtownards	Roadside	N	single	10	22
3	103 Church St Newtownards	Roadside	N	single		
4	67 South St. Newtownards (b)	Roadside	N	single	10	19
5	82 Frances St. Newtownards	Roadside	N	single	10	18
6	11 High St Comber	Roadside	N	single	10	24
7	Background site Seahill	Roadside	N	single		
8	A2 Ballyrobert	Background	N	single	10	19
9	A2 Seahill	Roadside	N	single	8	9
10	A2 Station Rd Cultra facade	Roadside	N	single		
10a	A2 Station rd Cultra roadside	Roadside	N	single	9	26
11	1 Craigantlet Road Craigantlet	Roadside	N	single		
12	The Cottages Craigantlet	Roadside	N	single		
13	High Street Hollywood	Roadside	N	single	9	17

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Full Calendar Year Data Capture 2020 (Number of Months)	2020 Annual Mean Concentration ($\mu\text{g}/\text{m}^3$) - Bias Adjustment factor = 0.81
14	A2 Flats (1) Hollywood	Roadside	N	single	10	24
15	A2 Flats (2) Hollywood	Roadside	N	single	9	24
16	Outer Ring Bangor	Roadside	N	single	8	16
17	Grays Hill Bangor	Roadside	N	single	10	15
18	Apartment 36 shore Road A2 one	Roadside	N	single	10	29
19	Apartment 36 Shore Road A2 two	Roadside	N	single	10	25
20	19 Cleland Park South Bangor	Roadside	N	single	9	11

These sites were new in 2018, 2019, 2020

These sites were discontinued in 2018, 2019, 2020

In bold, exceedence of the NO₂ annual mean AQS objective of 40 $\mu\text{g}/\text{m}^3$

Underlined, annual mean > 60 $\mu\text{g}/\text{m}^3$, indicating a potential exceedence of the NO₂ hourly mean AQS objective

^a Means should be “annualised” as in Boxes 7.9 and 7.10 of LAQM.TG16, if full calendar year data capture is less than 75%

^b If an exceedence is measured at a monitoring site not representative of public exposure, NO₂ concentration at the nearest relevant exposure should be estimated based on the “[NO₂ fall-off with distance](http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html)” calculator (<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html>), and results should be discussed in a specific section. The procedure is also explained in paragraphs 7.77 to 7.79 of LAQM.TG16.

Table 2.6 – Results of NO₂ Diffusion Tubes (2016 to 2020)

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m ³) - Adjusted for Bias ^a				
			2016 (Bias Adjustment Factor = 0.92)	2017 (Bias Adjustment Factor = 0.89)	2018 (Bias Adjustment Factor = 0.93)	2019 (Bias Adjustment Factor = 0.92)	2020 (Bias Adjustment Factor = 0.81)
1	19 Islandmore Av Newtownards	N	11	12			
2	19 Bangor Rd Newtownards	N	28	28	29	28	22
3	103 Church St Newtownards	N	23	24	23	23	
4	67 South St. Newtownards (b)	N	26	26	25	26	19
5	82 Frances St. Newtownards	N	24	25	24	25	18
6	11 High St Comber	N	32	32	31	31	24
7	Background site Seahill	N	11	11			
8	A2 Ballyrobert	N	31	28	29	28	19
9	A2 Seahill	N	15	13	13	11	9
10	A2 Cultra	N	23	21	22		
10a	A2 Station rd Cultra roadside					29 ^b	17.7 ^b
11	1 Craigantlet Road Craigantlet	N	25	25	20		
12	The Cottages Craigantlet	N	19	19	25		

Site ID	Site Type	Within AQMA?	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$) - Adjusted for Bias ^a				
			2016 (Bias Adjustment Factor = 0.92)	2017 (Bias Adjustment Factor = 0.89)	2018 (Bias Adjustment Factor = 0.93)	2019 (Bias Adjustment Factor = 0.92)	2020 (Bias Adjustment Factor = 0.81)
13	High Street Hollywood	N	21	21	21	26	17
14	A2 Flats (1) Hollywood	N	36 ^b	35 ^b	37 ^b	34 ^b	23.5 ^b
15	A2 Flats (2) Hollywood	N	32 ^b	36 ^b	36 ^b	31 ^b	23.6 ^b
16	Outer Ring Bangor	N			23	22	16
17	Grays Hill Bangor	N			19	19	15
18	Apartment 36 shore Road A2 one	N				34 ^b	26.8 ^b
19	Apartment 36 Shore Road A2 two	N				27 ^b	16.8 ^b
20	19 Cleland Park South Bangor						11

These sites were new in 2018, 2019, 2020

These sites were discontinued in 2018, 2019, 2020

In bold, exceedance of the NO₂ annual mean AQS objective of 40 $\mu\text{g}/\text{m}^3$

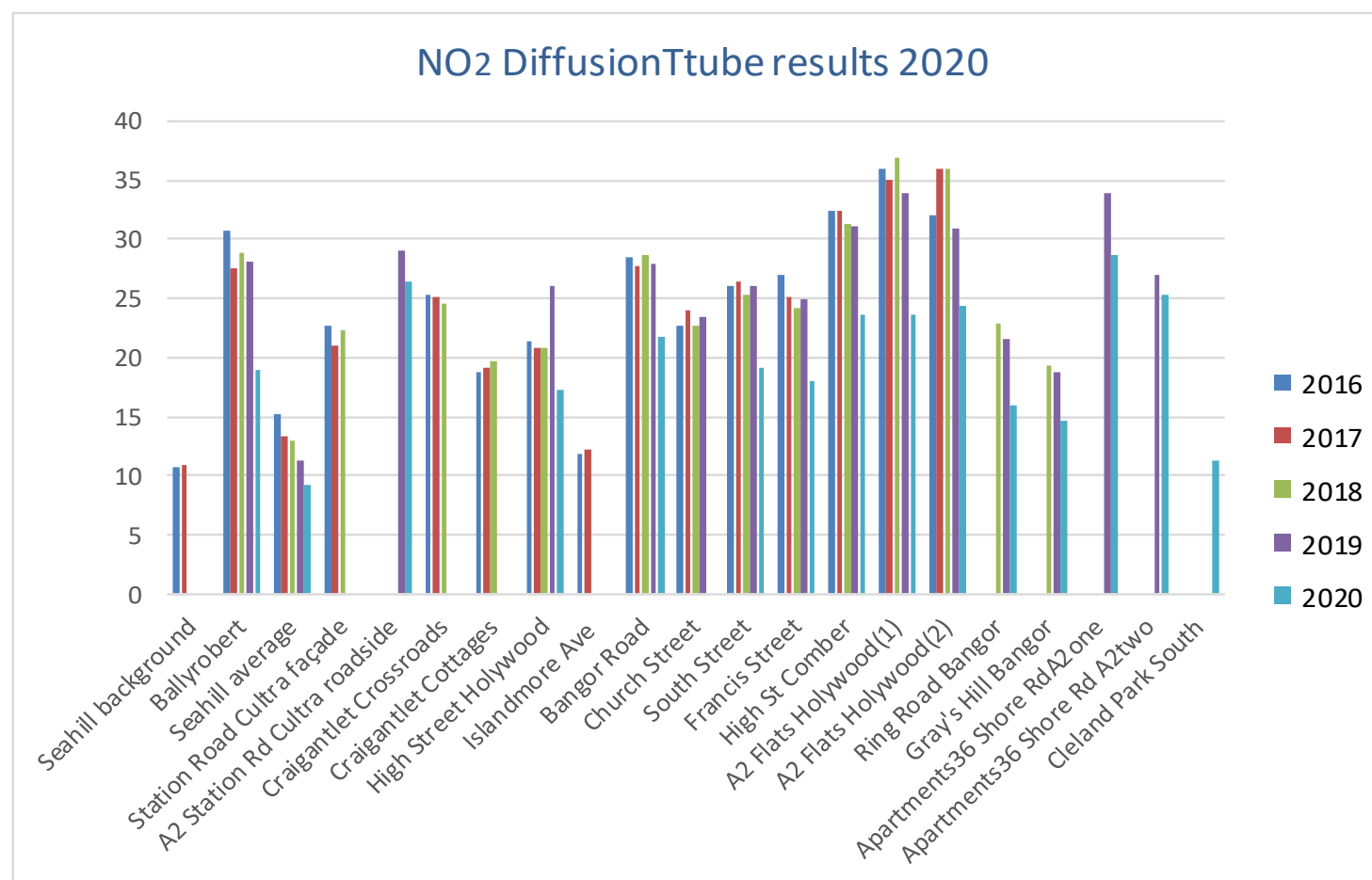
Underlined, annual mean > 60 $\mu\text{g}/\text{m}^3$, indicating a potential exceedance of the NO₂ hourly mean AQS objective

^a Means should be “annualised” as in Boxes 7.9 and 7.10 of LAQM.TG16, 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, NO₂ concentration at the nearest relevant exposure should be estimated based on the “[NO₂ fall-off with distance](http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html)” calculator (<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html>), and results should be discussed in a specific section. The procedure is also explained in paragraphs 7.77 to 7.79 of LAQM.TG16.

Figure 2.17 – Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites

NO₂ diffusion tube results have remained consistent and below the annual mean 40ug/m³ any annual variation is more likely to be as a result of climatic conditions rather than changes in emissions, the significant reduction in 2020 is most probably due to the COVID pandemic and the large reduction in traffic flows.



2.2.3 Particulate Matter (PM₁₀)

Automatic monitoring of PM₁₀ using a TEOM was carried out at the Holywood site, results continued in 2020 to be below the air quality objective. AQDM were contracted to carry out the QA/QC for the site and ratify the data. ESU1 were employed to service and maintain the site. Summaries of this data, with regard to annual and hourly mean objectives, are presented below in Table 2.7. The TEOM data has been corrected using Volatile Correction Model

The data was downloaded onto the NI Air Quality web site, providing real-time data for the Daily Air Quality Index (DAQI) which has been developed to provide advice on expected levels of air pollution. www.airqualityni.co.uk

Reports from the ratified data and the QA/QC applied can be found in appendix A.

Table 2.7 Results of Automatic Monitoring of PM₁₀: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2020 % ^b	Confirm Gravimetric Equivalent (Y or NA)	Annual Mean Concentration 50 µg/m ³				
						2016	2017	2018	2019	2020
A2 Holywood	Roadside	N	99.6%	99.6%	Y	16	14	18	17	14

Table 2.8 Results of Automatic Monitoring for PM₁₀: Comparison with 24-hour mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for monitoring Period % ^a	Valid Data Capture 2020 % ^b	Confirm Gravimetric Equivalent	Number of Daily Means > 50µg/m ³				
						2016	2017	2018	2019	2020
A2 Holywood	Roadside	N	99.6%	99.6%	Y	0	1	0	4	0

In bold, exceedence of the PM₁₀ annual mean AQS objective of 40µg/m³

^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.TG16, if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional

Trends in Annual Mean PM₁₀ Concentrations

PM₁₀ has remained consistently low in Holywood

2.2.4 Sulphur Dioxide

Ards and North Down Borough Council did not carry out any monitoring of SO₂ in 2020

2.2.5 Benzene

No monitoring of Benzene was carried out in 2020.

2.2.6 Other pollutants monitored

In 2020 Nitrogen Dioxide and PM₁₀ were the only pollutants monitored

2.2.7 Summary of Compliance with AQS Objectives

Ards and North Down Borough Council has examined the results from monitoring in the area. Concentrations are all below the objectives; therefore there is no need to proceed to a Detailed Assessment.

3 Road Traffic Sources

3.1 Narrow Congested Streets with Residential Properties Close to the Kerb

Ards and North Down Borough Council confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

3.2 Busy Streets Where People May Spend 1-hour or More Close to Traffic

Ards and North Down Borough Council confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

3.3 Roads with a High Flow of Buses and/or HGVs.

Ards and North Down Borough Council confirms that there are no new/newly identified roads with high flows of buses/HDVs.

3.4 Junctions

Ards and North Down Borough Council confirms that there are no new/newly identified busy junctions/busy roads meeting the specified criteria.

3.5 New Roads Constructed or Proposed Since the Last Round of Review and Assessment

Ards and North Down Borough that there are no new/proposed roads meeting the specified criteria.

3.6 Roads with Significantly Changed Traffic Flows

Ards and North Down Borough Council confirms that there are no new/newly identified roads with significantly changed traffic flows.

3.7 Bus and Coach Stations

Ards and North Down Borough confirms that there are no relevant bus stations in the Local Authority area.

4 Other Transport Sources

4.1 Airports

Ards and North Down Borough confirms that there are no airports in the Local Authority area.

4.2 Railways (Diesel and Steam Trains)

4.2.1 Stationary Trains

Ards and North Down Borough Council confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

4.2.2 Moving Trains

Ards and North Down Borough Council confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

4.3 Ports (Shipping)

Ards and North Down Borough Council confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.

5 Industrial Sources

5.1 Industrial Installations

5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out

Ards and North Down Borough Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been introduced

Ards and North Down Borough Council confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment

Ards and North Down Borough Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.2 Major Fuel (Petrol) Storage Depots

There are no major fuel (petrol) storage depots within the Local Authority area.

5.3 Petrol Stations

Ards and North Down Borough Council confirms that there are no petrol stations meeting the specified criteria.

5.4 Poultry Farms

Ards and North Down Borough Council confirms that there are no poultry farms meeting the specified criteria.

6 Commercial and Domestic Sources

6.1 Biomass Combustion – Individual Installations

Ards and North Down Borough Council confirms that there are no biomass combustion plant in the Local Authority area.

6.2 Biomass Combustion – Combined Impacts

Ards and North Down Borough Council confirms that there are no biomass combustion plant in the Local Authority area.

6.3 Domestic Solid-Fuel Burning

Ards and North Down Borough Council confirms that there are no areas of significant domestic fuel use in the Local Authority area.

7 Fugitive or Uncontrolled Sources

Ards and North Down Borough confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

No monitoring sites at relevant exposure within the Council Area have shown exceedances of the air quality objectives. The NO₂ diffusion tube sites in Holywood established in 2015 at an apartment block on the A2 (tubes 14,15) and monitoring extended in 2019 as a further apartment block was completed remain an area of concern, there was a reduction in the results in 2019 but a trend could not be established in 2020 as due to the COVID restriction all NO₂ levels were greatly reduced as shown in Appendix B. The automatic real time NO₂ monitor positioned across from the Holywood junction results are much lower, however its location benefits from sea breezes as the diffusion tubes at the apartment blocks are sheltered, a picture of these sites can be found in figures 2.12 and 2.13.

8.2 Conclusions from Assessment of Sources

No new sources were identified.

8.3 Proposed Actions

This 2021 Update and Screening Report for Ards and North Down Borough Council has identified there is no need to proceed to a detailed assessment for any of the pollutants.

Due to the impact of COVIC 19 restrictions during 2020, all existing monitoring sites shall remain in 2021 until a more normal living trend can be established. ANDBC is focused upon improving air quality as a whole, a no idling outside schools campaign launched in 2019 although paused in 2020 due to COVID restrictions shall continue in 2021 and expand in the future.

Ards and North Down Borough Council welcomed DAERA's Public Discussion Documents

[A Clean Air Strategy for Northern Ireland – Public Discussion Document | Department of Agriculture, Environment and Rural Affairs \(daera-ni.gov.uk\)](#)

[Environment Strategy for Northern Ireland – Public Discussion Document | Department of Agriculture, Environment and Rural Affairs \(daera-ni.gov.uk\)](#)

9 References

TG (2003) Part IV of the Environment Act 1995. Local Air Quality Management: Technical Guidance LAQM.TG(03)). Guidance prepared by the Department for Environment, Food and Rural Affairs and the Devolved Administrations, January 2003.

TG (2009) Part IV of the Environment Act 1995. Local Air Quality Management: Technical Guidance LAQM.TG(16). Guidance prepared by the Department for Environment, Food and Rural Affairs, February 2016

Appendices

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

QA/QC Data of automatic sites

Ards and North Down Borough Council commissioned AQDM Technology to provide the QA/QC of the automatic measurements of NO₂ and PM₁₀ for the A2 Holywood site. Local authority staff act as the local site operator and visit the sites on a weekly basis carrying out any manual calibration or filter changes required. The site was repaired as necessary and ESU1 were contracted to service the sites.



Automatic station reports produced by data management company

Air Quality Report

Produced by AQDM on behalf of North Down

NORTH DOWN HOLYWOOD A2 2020

These data have been fully ratified by AQDM to the LAQM (TG16) standards

Site Environment and Description

ROADSIDE: Marine Highway

Statistical Summary Report

This 2020 report contains all the statistics required for the LAQM reporting.

The Volatile Correction Model (VCM) has been run on the TEOM data to calculate the *EU Reference Equivalent* PM₁₀ required for the LAQM reports. This uses data from nearby FDMS instruments <http://www.volatile-correction-model.info>.

First table – Air Quality Statistics

The gravimetric PM₁₀ is shown in the 2nd column. The uncorrected PM₁₀ is in the 3rd.

The top four lines show the duration within the bands of the Daily Air Quality Index (DAQI). This was introduced by Defra in January 2012 and revised April 2013. The number of occasions within each band is summarised as follows.

DAQI Pollutant	Moderate	High	Very High
Gravimetric PM ₁₀	0 days	0	0
NO ₂	0 hours	0	0

Data Captures

The annual data captures are shown on the bottom line. These were above the 85% target.

Second table – Air Quality Exceedences

Gravimetric PM₁₀ – annual data capture was 97.6 %

The maximum daily mean was 36 µg m⁻³ so the daily mean limit value of 50 µg m⁻³ was not exceeded. The annual allowance is 35 days so this Objective was not exceeded.

The annual mean was 14 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

Gravimetric PM_{2.5} – annual data capture was 12.4 %

The annual mean was 7 µg m⁻³ which did not exceed the 25 µg m⁻³ Objective. Note, however, that the PM_{2.5} standard is not set in the regulations.

There should be a 15% cut in urban background exposure (annual mean) for all Local Authorities from 2010 to 2020.

NO₂ – annual data capture was 97.7 %

The annual mean was 20 µg m⁻³ which did not exceed the 40 µg m⁻³ Objective.

The maximum hourly mean was 105 µg m⁻³ so there were no exceedences of the NO₂ hourly limit of 200 µg m⁻³. There is an annual allowance of 18 hours so this Objective was not exceeded.

Air Quality Report

NORTH DOWN HOLYWOOD A2 2020

Air Quality Statistics

Pollutant	PM ₁₀ ⁺	PM ₁₀ [*]	PM _{2.5} [~]	PM ₁ [§]	NO ₂	NO	NO _x	Wind Dir	Wind Speed
Number Very High #	0	-	0	-	0	-	-	-	-
Number High #	0	-	0	-	0	-	-	-	-
Number Moderate #	0	-	0	-	0	-	-	-	-
Number Low #	359	-	45	-	8581	-	-	-	-
Maximum 15-min mean	-	260 µg m ⁻³	-	85 µg m ⁻³	180 µg m ⁻³	390 µg m ⁻³	706 µg m ⁻³	-	10.2 m/s
Maximum hourly mean	96 µg m ⁻³	99 µg m ⁻³	67 µg m ⁻³	68 µg m ⁻³	105 µg m ⁻³	303 µg m ⁻³	562 µg m ⁻³	-	1.3 m/s
Maximum running 8-hr mean	54 µg m ⁻³	52 µg m ⁻³	43 µg m ⁻³	44 µg m ⁻³	84 µg m ⁻³	171 µg m ⁻³	340 µg m ⁻³	-	1.0 m/s
Maximum running 24-hr mean	41 µg m ⁻³	36 µg m ⁻³	29 µg m ⁻³	29 µg m ⁻³	62 µg m ⁻³	104 µg m ⁻³	214 µg m ⁻³	-	0.4 m/s
Maximum daily mean	36 µg m ⁻³	30 µg m ⁻³	24 µg m ⁻³	24 µg m ⁻³	59 µg m ⁻³	97 µg m ⁻³	209 µg m ⁻³	-	0.4 m/s
Average	14 µg m ⁻³	13 µg m ⁻³	7 µg m ⁻³	6 µg m ⁻³	20 µg m ⁻³	14 µg m ⁻³	42 µg m ⁻³	-	0.0 m/s
Data capture	97.6 %	97.6 %	12.4 %	12.4 %	97.7 %	97.7 %	97.7 %	85.8 %	85.8 %

Daily Air Quality Index (DAQI) as defined by COMEAP January 2012 and revised April 2013

+ PM₁₀ instruments:

FIDAS using 1 gravimetric factor from 16 November 2020

TEOM using the VCM for Indicative Gravimetric Equivalent from 1 January 2020 to 15 November 2020

* PM₁₀ instruments:

FIDAS from 16 November 2020

TEOM from 1 January 2020 to 15 November 2020

~ PM_{2.5} as measured by a FIDAS using 0.94 gravimetric factor

§ PM₁ as measured by a FIDAS

Mass units for the gases are at 20°C and 1013mb

NO_x mass units are NO_x as NO₂ µg m⁻³

Air Quality Exceedences

Pollutant	Air Quality Regulations (Northern Ireland) 2003	Max Conc	Number	Days	Allowed	Exceeded
PM ₁₀ Particulate Matter (Gravimetric)	Daily mean > 50 µg m ⁻³	36 µg m ⁻³	0	0	35 days	No
PM ₁₀ Particulate Matter (Gravimetric)	Annual mean > 40 µg m ⁻³	14 µg m ⁻³	0	-	-	No
PM _{2.5} Particulate Matter (Gravimetric) *	Annual mean > 25 µg m ⁻³	7 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Annual mean > 40 µg m ⁻³	20 µg m ⁻³	0	-	-	No
Nitrogen Dioxide	Hourly mean > 200 µg m ⁻³	105 µg m ⁻³	0	0	18 hours	No

* Not set in regulations

QA/QC of Diffusion Tube Monitoring

In 2020 the NO₂ tubes were prepared and supplied by Gradko International Limited, using the preparation method 20%TEA/Water.

Diffusion Tube Bias Adjustment Factors

Factor from Local Co-location Studies

A co-location study was carried out at the Hollywood site in 2020 and the data submitted to the national data base <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/national-bias/>

The local bias adjustment figure was **0.75**


A decision was made not to use the local factor as it was deemed to be low in comparison to the national figure of **0.81** and as 27 studies were included and would show the worst case scenario, as in previous years ANDBC has applied the national bias adjustment factor from the September 2021 bias adjustment sheet as shown below.

National Diffusion Tube Bias Adjustment Factor Spreadsheet							Spreadsheet Version Number: 09/21				
Follow the steps below in the correct order to show the results of relevant co-location studies							This spreadsheet will be updated at the end of March 2022 LAQM Helpdesk Website				
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 spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.							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:		Step 2:	Step 3:	Step 4:							
Select the Laboratory that Analyses Your Tubes from the Drop-Down List		Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	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 ² shown in blue at the foot of the final column.							
If a laboratory is not shown, we have no data for this laboratory.		If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data.	If you have your own co-location study then see footnote ¹ . If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953							
Analysed By ¹		Method <small>To do your selection, choose (M) from the pop-up list</small>	Year ² <small>To do your selection, choose (All)</small>	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m ³)	Automatic Monitor Mean Conc. (Cm) (µg/m ³)	Bias (B)	Tube Precision ²	Bias Adjustment Factor (A) (Cm/Dm)
Gradko		20% TEA in water	2020	R	Fareham Borough Council	10	25	14	77.4%	G	0.56
Gradko		20% TEA in water	2020	R	Fareham Borough Council	12	30	22	35.1%	G	0.74
Gradko		20% TEA in water	2020	R	Fareham Borough Council	10	22	17	26.5%	G	0.79
Gradko		20% TEA in water	2020	R	SOUTHAMPTON CITY COUNCIL	11	32	31	4.9%	G	0.95
Gradko		20% TEA in water	2020	KS	Marlybone Road Intercomparison	12	57	43	33.3%	G	0.75
Gradko		20% TEA in water	2020	R	Bath & North East Somerset	11	32	29	13.0%	G	0.89
Gradko		20% TEA in water	2020	R	Gateshead Council	12	22	17	28.1%	G	0.78
Gradko		20% TEA in water	2020	R	Gateshead Council	12	23	21	11.6%	G	0.90
Gradko		20% TEA in water	2020	R	Gateshead Council	10	26	25	6.5%	G	0.94
Gradko		20% TEA in water	2020	R	Gateshead Council	12	28	21	30.5%	G	0.77
Gradko		20% TEA in water	2020	R	Gateshead Council	12	31	32	-3.4%	G	1.03
Gradko		20% TEA in water	2020	R	Luton Borough Council	9	38	28	33.8%	G	0.75
Gradko		20% TEA in water	2020	R	Nottingham City Council	12	31	34	-8.5%	G	1.09
Gradko		20% TEA in water	2020	R	Dudley MBC	13	33	28	19.3%	G	0.83
Gradko		20% TEA in water	2020	UB	Dudley MBC	13	23	14	61.2%	G	0.62
Gradko		20% TEA in water	2020	R	Dudley MBC	13	44	34	30.6%	G	0.77
Gradko		20% TEA in water	2020	R	Ards and North Down Borough Council	10	27	20	34.0%	G	0.75
Gradko		20% TEA in water	2020	R	Belfast City Council	10	26	21	22.8%	G	0.81
Gradko		20% TEA in water	2020	R	Belfast City Council	10	41	36	12.6%	G	0.89
Gradko		20% TEA in water	2020	R	Belfast City Council	10	36	25	43.9%	G	0.69
Gradko		20% TEA in water	2020	R	Lancaster City Council	11	27	23	19.3%	G	0.83
Gradko		20% TEA in water	2020	R	Lancaster City Council	10	32	28	13.0%	G	0.89
Gradko		20% TEA in water	2020	R	Eastleigh Borough Council	9	23	20	13.6%	G	0.88
Gradko		20% TEA in water	2020	UB	Eastleigh Borough Council	9	22	19	17.9%	G	0.85
Gradko		20% TEA in water	2020	R	Lisburn & Castlereagh City Council	10	23	18	32.5%	G	0.75
Gradko		20% TEA in water	2020	Overall Factor ² (27 studies)					Use	0.81	

The following tool was used to distance calculate NO₂ levels on the A2 where they were not on the façade of the nearest relevant exposure.

<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html>


A2 Flats 1 Holywood



Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	2.37	metres
Step 2	How far from the KERB is your receptor (in metres)?	2.8	metres
Step 3	What is the local annual mean background NO ₂ concentration (in µg/m ³)?	12	µg/m ³
Step 4	What is your measured annual mean NO ₂ concentration (in µg/m ³)?	24	µg/m ³
Result	The predicted annual mean NO ₂ concentration (in µg/m ³) at your receptor	23.5	µg/m ³


A2 Flats 2 Holywood



Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	3.5	metres
Step 2	How far from the KERB is your receptor (in metres)?	4	metres
Step 3	What is the local annual mean background NO ₂ concentration (in µg/m ³)?	12	µg/m ³
Step 4	What is your measured annual mean NO ₂ concentration (in µg/m ³)?	24	µg/m ³
Result	The predicted annual mean NO ₂ concentration (in µg/m ³) at your receptor	23.6	µg/m ³


Apartment36 Shore Road A2 one



Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	3	metres
Step 2	How far from the KERB is your receptor (in metres)?	5	metres
Step 3	What is the local annual mean background NO ₂ concentration (in µg/m ³)?	12	µg/m ³
Step 4	What is your measured annual mean NO ₂ concentration (in µg/m ³)?	29	µg/m ³
Result	The predicted annual mean NO ₂ concentration (in µg/m ³) at your receptor	26.8	µg/m ³

Apartment36 Shore Road A2 two




Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	2.7	metres
Step 2	How far from the KERB is your receptor (in metres)?	33	metres
Step 3	What is the local annual mean background NO ₂ concentration (in µg/m ³)?	12	µg/m ³
Step 4	What is your measured annual mean NO ₂ concentration (in µg/m ³)?	25	µg/m ³
Result	The predicted annual mean NO ₂ concentration (in µg/m ³) at your receptor	16.8	µg/m ³

Warning: your receptor is more than 20m further from the kerb than your monitor, treat result with caution

Cultra Roadside



Enter data into the pink cells

Step 1	How far from the KERB was your measurement made (in metres)?	3	metres
Step 2	How far from the KERB is your receptor (in metres)?	20	metres
Step 3	What is the local annual mean background NO ₂ concentration (in µg/m ³)?	9	µg/m ³
Step 4	What is your measured annual mean NO ₂ concentration (in µg/m ³)?	26	µg/m ³
Result	The predicted annual mean NO ₂ concentration (in µg/m ³) at your receptor	17.7	µg/m ³

Appendix B: 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.

Despite the challenges that the pandemic has given rise to, the events of 2020 have also provided Local Authorities and other organisations with an opportunity to quantify the air quality impacts associated with wide-scale and extreme intervention and changes in behaviour such as reduced road traffic and working from home.

DAERA deemed air quality to be an essential service during lockdown. The ANDBC air quality monitoring sites do not require access to any premises and therefore it was possible to continue monitoring both the automatic sites and all the NO₂ diffusion tubes sites, with the loss of only one month's data in 2020 due to a postal issue during the lockdown period. ANDBC employs a dedicated air quality officer which made restrictions easier to comply with as this was the only officer requiring permission to visit the sites, maintaining good QA/QC.

In 2020 there was a noticeable reduction in NO₂ due to the reduction in traffic flows this can be seen here <https://www.infrastructure-ni.gov.uk/publications/traffic-flow-figures> and the results of this in table 2.3 and table 2.6, there was a possibility PM₁₀ may have risen due to lockdown and home working but there was no evidence of this, which most likely was due to the unusual mild climate during this period as shown in DEARAs report <https://www.daera-ni.gov.uk/publications/effects-covid-19-restrictions-air-quality-northern-ireland>

There was a greatly reduced use of public transport and the Park & Rides were seldom used, but home working and schooling did continue throughout 2020 to keeping the traffic greatly reduced. Cycling had become very popular as a recreational activity during lockdown and on clean air day ANDBC ran a social media campaign encouraging this to continue and using cycling as a cleaner healthier mode

of transport, the Greenways became very popular with cyclists and walkers, ANDBC remained active with the plans to extend the Comber Green Way to Newtownards and to extend the existing coastal Green Way to Donaghadee enabling easier access around the Borough and linking to the City Centre.

ANDBC launched a new initiative in 2019 in primary schools “Engine off Prevent the Cough”, educating pupils and parents to the harmful emissions from vehicles with the emphasis on idling engines outside schools, unfortunately it was not run in 2020 due to COVID 19 due to school closures and COVID 19 restrictions, it will continue in 2021 restrictions permitting.