2010 Air Quality Progress Report for Dungannon and South Tyrone Borough Council

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

JUNE 2010

Local Authority Officer	Christopher Coyle

Department	Environmental Health
Address	Council Offices, Circular Road, Dungannon, Co Tyrone
Telephone	07917 133627
e-mail	c.coyle@sgehc.com

Report Reference number	DUNGANNONPR2010
Date	JUNE 2010

Executive Summary

Monitoring at 9 locations within Dungannon and South Tyrone Borough Council's area has demonstrated that there are 3 sites where NO_2 levels exceed the objective limit of 40ug/m^3. Based on the results for 2009, the council **will not** be revoking the current AQMA in Church Street, Dungannon, but will be completing a detailed assessment of NO_2 pollution at Newell Road in Dungannon and Charlemont Street in Moy due to exceedences of the objective limit at these sites during 2009.

No other pollutants were assessed to have an impact on air quality within the district at this time and therefore no AQMA's or detailed assessments are required for any other pollutants.

Dungannon and South Tyrone Borough Council has not seen any significant changes from any pollution sources since the last round of review and assessment and no other sources of pollution have been identified. Therefore the likely impact from such sources is negligible.

The next course of action to be taken by the council is to complete and submit a detailed assessment of NO_2 at Newell Road in Dungannon and Charlemont Street in Moy. This will run concurrently with the Draft Action Plan for the current AQMA and a Progress Report in 2011.

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1 Introduction

1.1 Description of Local Authority Area

Dungannon and South Tyrone Borough is located in the geographical heartland of Northern Ireland, a beautiful rural, historic area served by the main motorway network in Northern Ireland, with major road links to the business capital of Belfast, South towards Armagh City and Dublin; and west to Donegal and Sligo. The borough does not have a high level of heavy industry. The majority of the local work force is employed in the delivery of services such as local government, education authority, health and social services, minor retail, agriculture and food processing. Although there are a number of quarries provided graded stone & gravel as well as road-stone coating. The greatest contribution to air quality pollution is from road traffic. Particularly in the town centre where the road network is quickly reaching it's maximum capacity due to the increase in car ownership. Given the size of the rural hinterland surrounding the town of Dungannon, public transport resources are stretched and the reliance on the motor car is greatly exacerbated. Dungannon is regarded as a "route hub" to the border from Mid-Ulster travelling to Belfast, North-West Northern Ireland the Republic Of Ireland; and is main through-route between mid-Ulster and the south east of Northern Ireland and hence probably has a traffic flow higher than that which could be created by local traffic alone. Particulate Matter (PM10) and NO_2 would be considered as the pollutants most at risk of breaching the objective limits in Dungannon as a result of road traffic. Dungannon already has declared an AQMA in January 2008 for NO_2 on Church Street.

Domestic fuel usage throughout the Borough has historically been based on solid fuel but, as with the province generally, the use of coal is declining.

1.2 Purpose of Progress Report

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 Local Air Quality Management 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 exceedence 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 micrograms per cubic metre $\mu g/m^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

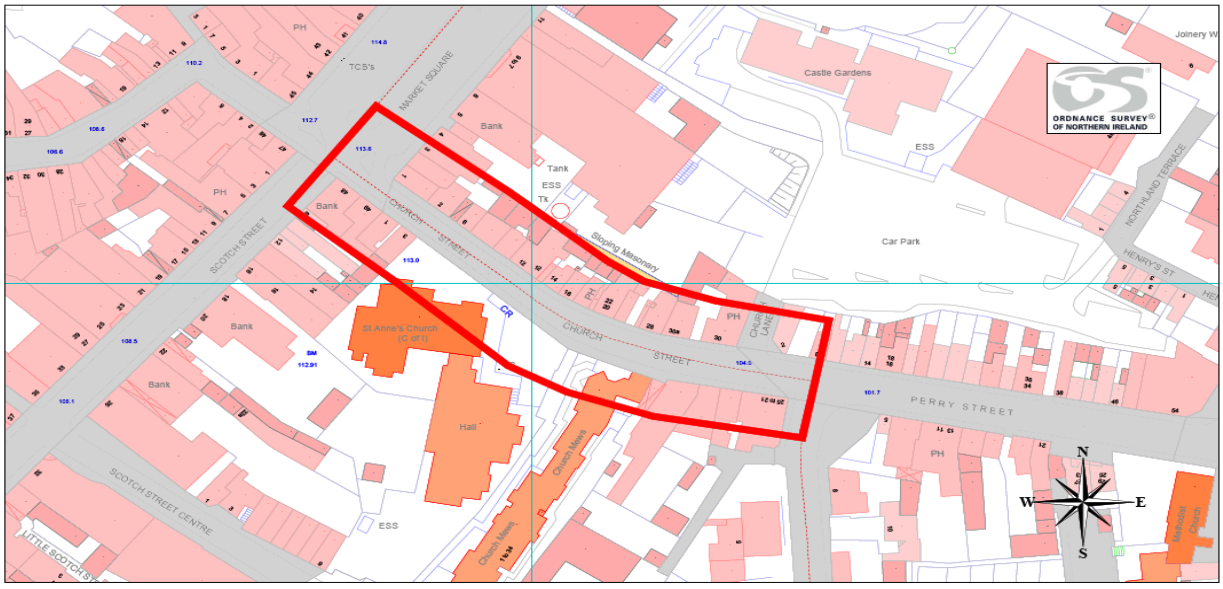
Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in Northern Ireland.

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 $\mu g/m^3$	Running annual mean	31.12.2003
	3.25 $\mu g/m^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu g/m^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu g/m^3$	Annual mean	31.12.2004
	0.25 $\mu g/m^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu g/m^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu g/m^3$	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 $\mu g/m^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu g/m^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu g/m^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu g/m^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu g/m^3$, 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	Yes	None
Reappraisal of Traffic Pollution Modelling	Jan 2004	None	No	None
Report of the Second and Third Stage R&A of Local Air Quality	Aug 2004	None	No	None
Progress Report	June 2005	None	Yes	None
Review and Assessment: Supplementary Report on NO2 concentrations in Church Street Dungannon	June 2005	None	No	None
Updating and Screening Assessment	June 2006	Yes	Yes	None
Further Assessment of NO2 levels in Church Street	September 2007	Yes	No	Yes
Progress Report	June 2008	Yes	No	Already declared
AQMA Action Plan	July 2010	-	-	-

Figure 1.1 Map of AQMA Boundaries (if applicable)



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Church Street AQMA 2008

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

There are no automatic monitoring sites in operation within the Borough

2.1.2 Non-Automatic Monitoring

During 2009 Dungannon and South Tyrone Borough Council carried out monitoring of NO_2 with diffusion tubes at nine sites throughout the Borough. The NO_2 diffusion tubes were prepared and analysed by Gradko Environmental Limited. The tubes are prepared by coating the grids in a 20% v/v solution of the absorbent, triethanolamine (TEA) in Water. Analysis is carried out using a colorimetric technique.

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA ?	Relevant Exposure? *(Y/N with distance (m) to relevant exposure)*	Distance to kerb of nearest road *(N/A if not applicable)*	Worst-case Location ?
Market Square	Roadside	-	NO_2	N	Y	<2m	N
Howard Primary School	Urban Background	-	NO_2	N	Y	<2m	Y
Ardgannon	Urban Background	-	NO_2	N	Y(<10)	1m	Y
11 Bushvale	Urban Background	-	NO_2	N	Y(6)	1m	Y
Church Street (x12 Tubes)	Roadside	-	NO_2	Y	Y(<1m)	1m	Y
Newell Road	Roadside	-	NO_2	N	Y(<1m)	1m	Y
Charlemont Street, Moy	Roadside	-	NO_2	N	Y(<1m)	1m	Y
Dungannon Road, Coalisland	Roadside	-	NO_2	N	Y(<1m)	1m	Y
Stewartstown Road, Coalisland	Roadside	-	NO_2	N	Y	1m	Y

The bias factor used to adjust the diffusion tube results was taken from the UWE Review and Assessment Website. The bias factor used to adjust the diffusion tubes is 0.90

The details of Gradko Environmental Ltd WASP results are provided in Appendix A.

See Appendix C for Map(s) of Monitoring Sites (if applicable)

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

Three of the diffusion tube sites monitored in Dungannon recorded an NO_2 result above the objective limit of 40µg/m^3 during 2008. This was in Church Street and Newell Road in Dungannon and Charlemont Street in Moy.

Dungannon and South Tyrone Borough Council do not monitor NO_2 pollution using automatic monitoring equipment.

Details of Gradko Environmental Ltd's WASP can be found in Appendix A.

Nitrogen Dioxide Diffusion Tube Monitoring Data

Table 2.3 Results of Nitrogen Dioxide Diffusion Tubes

Dungannon and South Tyrone Borough Council monitors NO_2 pollution using diffusion tubes at 9 sites through the borough. All of the tubes are positioned in accordance with the practical guidelines published by AEA Energy and Environment in a report to Defra and the Devolved Administrations.

Table 2.4a Results of Nitrogen Dioxide Diffusion Tubes

Site ID	Location	Within AQMA?	Data Capture 2008 %	Annual mean concentrations 2009 (µg/m^3) Adjusted for bias
Site 1	Market Square	N	92	25
Site 2	Howard Primary School	N	100	22
Site 3	Ardgannon	N	92	12
Site 4	11 Bushvale	N	92	9
Site 5	Church Street 1	Y	100	47
-	Church Street A	Y	92[1]	31
-	Church Street B	Y	92[1]	28
-	Church Street C	Y	92[1]	44
Site 6	Newell Road	N	75[2]	52
Site 7	Charlemont Street, Moy	N	83[2]	57
Site 8	Dungannon Road, Coalisland	N	83[2]	37
Site 9	Stewartstown Road, Coalisland	N	75[2]	41

NO_2 emissions are monitored at 4 locations on Church Street in triplicate diffusion tube formation. The result obtained at this site is an average of the triplicate tubes.

[1] Note: Monitoring at Sites 5A, B and C did not start until the beginning of February 2009
[2] Note: Monitoring at Sites 6, 7, 8 and 9 did not start until the beginning of March 2009

2.2.2 PM_{10}

Dungannon and South Tyrone Borough Council does not monitor for PM10 emissions at this time.

2.2.3 Sulphur Dioxide

N/A

2.2.4 Benzene

N/A

2.2.5 Other pollutants monitored

N/A

2.2.6 Summary of Compliance with AQS Objectives

Dungannon and South Tyrone Borough Council has measured concentrations of **NO_2** above the annual mean objective at relevant locations outside of the AQMA , and **will need to proceed to a Detailed Assessment**, for Newell Road, Dungannon and Main Street, Moy.

3 New Local Developments

3.1 Road Traffic Sources

3.2 Other Transport Sources

3.3 Industrial Sources

3.4 Commercial and Domestic Sources

3.5 New Developments with Fugitive or Uncontrolled Sources

Dungannon and South Tyrone 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.

4 Local / Regional Air Quality Strategy

The Dungannon and South Tyrone Borough Council Local Air Quality Management Strategy 2006 – 2010 was launched in tandem with the 4 neighbouring councils (Armagh, Banbridge, Craigavon and Newry) in Southern Group in March 2006. It was issued for public consultation and Dungannon and South Tyrone Borough Council consulted the community, statutory consultees and key organisations that have an interest in local air quality affecting the Borough.

Since the launch of the Strategy the key responsibility of the Southern Group Local Air Quality Manager along with the corresponding council officers has been to implement the objectives outlined in Section 4 of the strategy document. The objectives served to act as a guide for the councils on how to minimise the impact of pollution on air quality from a variety of sources and details actions on how best to achieve these objectives.

The strategy highlights the lead role being played in the delivery of each objective and the relevant partners required to work together in order to achieve successful delivery of each objective aim and the respective cost of doing so.

The Council has found it difficult to implement the strategy due to budgetary constraints both within Council and with the strategic partner organisations, particularly since the beginning of the international economic downturn in late 2007. Other constraints include a lack of power or authority by the Council and its neighbouring LA's to encourage the uptake of the objectives contained within the strategy. However, the Council has had some success in delivering several actions. These are listed below;

To Promote and Maximise the use of public transport, car-sharing, walking and cycling as a means to get to School

- Launch of Walk to School Competition May 2006
- News article on Walk to School completed by Brian Black for UTV news November 2006
- Walk to School Competition and Presentation with Guest Speaker Brian Black (UTV environment correspondent) November 2006.
- Walk to School Competition photos and press release sent to main newspaper in each district.
- Schools Air Quality Conference programmed for April 2008 had to be cancelled due to low response from schools. New air quality conference scheduled for 24th September 2008. Broader in perspective but schools will still take part in some role.
- Walk to school, Cycle to School and use of public transport to school High visibility campaign launched to raise awareness at school level.

To Promote and Maximise the use of public transport, car-sharing, walking and cycling as a means to get to Work

- Questionnaire sent in payslip to all Council Staff about travel to work preferences. Questionnaire reported to council and agreement reached upon implementation of CarShare Scheme for council staff.
- Southern Group CarShare Scheme rolled out and promoted to each council within Southern Group during 2007.
- Launch of Southern Group CarShare Scheme promotional drive. Newly joined members entered into draw for 2 mountain bikes. Both bikes won by staff from Newry and Mourne District Council. Pictures and editorial of bike winners published in Newry newspapers.

To** a**ctively target the population in general with relevant air quality messages and information.

- Completed under the STAQ campaign also. STAQ is being promoted by the Local Air Quality Management Officer as a project of high visibility with posters and banners, media and press releases throughout the entire southern group area with the aim of bringing the air quality agenda to everyone. It will be mostly demonstrated in areas where there is a higher risk of exceedences of the objective limits in the air quality legislation and guidance (LAQM TG03).

The Southern Group Local Air Quality Strategy is available upon request from the Council.

The Strategy will be reviewed at the end of 2010.

5 Planning Applications

N/A

6 Air Quality Planning Policies

N/A

7 Local Transport Plans and Strategies

N/A

8 Local Transport Plans and Strategies

Regional Transportation Strategy

The Regional Transportation Strategy (RTS) for Northern Ireland 2002- 2012 identifies strategic transportation investment priorities and considers potential funding sources and affordability of planned initiatives. The RTS focuses on three geographic areas and one overlying Network. These are as follows:

- Belfast Metropolitan Area (BMA), containing the continuous area comprising Belfast City Council and the built-up areas within the Council areas of Carrickfergus, Castlereagh, Lisburn, Newtownabbey and North Down;
-
- Other Urban Areas (OUAs): collectively those towns described as main or local hubs in the RDS (including Dungannon) and other towns outside the BMA with a population greater than 5,000);

- Rural Area – the remainder of Northern Ireland; and

- Regional Strategic Transport Network (RSTN) comprising the complete rail network and all motorway and trunk road links (including the Key Transport Corridors and Link Corridors).

The RTS is a “daughter document” of the Regional Development Strategy (RDS), which sets out the spatial development framework for Northern Ireland up to 2025. Implementation of the Strategy will be through three Transport Plans covering the Regional Strategic Transport Network (RSTN), the Belfast Metropolitan Area (BMA), and the Sub-Regional Transport Plan (SRTP). Transport studies undertaken to support the RSTN Transport Plan will take due account of current and future cross-border inter-urban transport demands and the roles of the gateway cities and towns, including Dungannon.

3.4 Regional Strategic Transport Network Transport Plan

The Regional Strategic Transport Network (RSTN) Transport Plan prepared by the Department for Regional Development (DRD) covers the complete rail network, five Key Transport Corridors (KTCs), four Link Corridors, the Belfast Metropolitan Transport Corridors and the remaining trunk network across Northern Ireland. The Plan is based on the guidance set out in the Regional Development Strategy (RDS) and the Regional Transportation Strategy (RTS), as described in Sections 3.2 and 3.3 of the RSTN Transport Plan.

The RSTN Transport Plan consists of proposals for transport schemes and measures for the maintenance, management and development of the RSTN until 2015. The RSTN Transport Plan also includes a number of measures for rail, bus, roads, walking and cycling.

3.5 Sub-Regional Transport Plan 2015

The Sub-Regional Transport Plan (SRTP) was prepared by the Department for Regional Development (DRD) and completed in 2007. The SRTP is based upon the guidance provided by the Regional Development Strategy (RDS) and the Regional Transportation Strategy (RTS). Proposed public transport measures for Armagh (within category of Other Urban Areas (OUA)) contained within the SRTP are as follows:

· Improved walk/cycle

· Improved local bus services

· Bus stop Improvement Strategy

· Bus based Park and Ride

· Increased parking at bus/rail station

· Taxi rank

· Transport Programme for People with Disabilities

Spatial Development Strategy for Northern Ireland

The Spatial Development Strategy (SDS) guides the physical development of the Region to 2025. The SDS will contribute to meeting a number of key regional challenges emerging from the significant local, national and international forces, which will drive change over the next 25 years, including:

Transport:

- Promote a change in travel culture and particularly manage the effects of a possible 100% growth in the number of vehicles by 2025;
- Contribute to the creation of a modern, sustainable, safe transportation system for the Region, meeting the travel needs of all groups in society;
- Accommodate the growing volume of freight moving to and from the regional gateways; and
- Strengthen the regional gateways to handle the increasing flow of people and goods in and out of the Region.

Environment:

- Accommodate future development growth while protecting and caring for the environment;
- Reduce the consumption of resources;
- Continue to maintain or, where needed, to improve the quality of air, water and land resources within the Region;
- Seek to maintain local landscape character and to conserve cultural assets; and
- Take particular care to sustain and, where required, to enhance the biodiversity of the Region, its natural habitats, high quality landscapes and built heritage.

Developing a Regional Transportation System

Creating an upgraded and integrated transport system, built around the Regional Strategic Transport Network of the key transport corridors with their main public transport services providing the framework for future development is recognised as one of the key assets to accommodate growth. Strategic planning guidelines relating to the development of a Regional Transport System (RTS) are as follows:

- **SPG-TRAN 1:** To develop a Regional Strategic Transport Network (RSTN), based on Key Transport Corridors (KTCs), to enhance accessibility to regional facilities and services. Two major roads within the District are identified in the RDS as part of the Key Transport Corridors in Northern Ireland: -
- A4 Dungannon - Fivemiletown Road: The South Western Corridor; and
- A5 Aughnacloy - Omagh Road: The Western Corridor.
- In addition, the A29 Cookstown to Moy Road is identified as part of one of three additional Link Corridors in the RTS.

- **SPG-TRAN 2:** To extend travel choice for all sections of the community by enhancing public transport. Including the strengthening of the regional bus network (including the promotion of public transport routes and Park and Ride schemes) and the regional rail system;

- **SPG-TRAN 3:** To integrate land use and transportation to provide a much better range of travel choices for all, and reduce the demand for travel; and

- **SPG-TRAN 4:** To change the regional travel culture and contribute to healthier lifestyles, such as giving greater priority to encouraging more walking and cycling.

9 Climate Change Strategies

N/A

10 Implementation of Action Plans

Dungannon and South Tyrone Borough Council is currently in the process of completing an Action Plan for the AQMA currently in operation in Church Street, Dungannon. The due date for completion of the Action Plan is June 2010. Following consultation, the Action Plan will be implemented during 2010 – 2011.

The Action plan is due to be brought before the Council's Environmental Committee on the 29th June 2010 for comment and approval. Following this the Action Plan will then be presented to a meeting of the full Council committee for approval and signed off for official adoption by the Council.

Appendix D contains a list of the Actions that have been formulated by the AQMA Stakeholder Committee which includes DRD Roads Service, The Northern Ireland Planning Service, Translink, Southern Group Environmental Health Committee and the councils Environmental Health Department.

11 Conclusions and Proposed Actions

11.1 Conclusions from New Monitoring Data

Monitoring at 9 locations within Dungannon and South Tyrone Borough Council's area has demonstrated that there are 3 sites where NO_2 levels exceed the objective limit of 40ug/m^3. Based on the results for 2009, the council **will not** be revoking the current AQMA but will be completing a detailed assessment of NO_2 pollution at Newell Road in Dungannon and Charlemont Street in Moy due to exceedences of the objective limit at these sites during 2009.

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The next course of action to be taken by the council is to complete and submit a detailed assessment of NO_2 at Newell Road in Dungannon and Charlemont Street in Moy. This will run concurrently with the Draft Action Plan for the current AQMA and a Progress Report in 2011.

12 References

Local Air Quality Management Technical Guidance – LAQM.TG(09)

Appendices

Appendix A QA/QC Data and Gradko WASP Data

Appendix B Diffusion Tube Site Maps

Appendix C Diffusion Tube Monitoring Data 2009

Appendix D Church Street AQMA Action Plan: Actions Tables

Appendix A: QA:QC Data and Gradko WASP Data

Diffusion Tube Bias Adjustment Factors

The NO_2 diffusion tubes were prepared and analysed by Gradko International Ltd. This laboratory takes part in the NO_2 Network QA/QC Field Intercomparison survey. Gradko Internationals diffusion tubes are prepared by coating the grids in 20% TEA in water. Dungannon and South Tyrone Borough Council obtained the appropriate bias factor from the UWE Review and Assessment Website. A factor of 0.90 was taken from the drop down menus available on the excel spreadsheet matrix.

Factor from Local Co-location Studies (if available)

N/A

Discussion of Choice of Factor to Use

Dungannon and South Tyrone Borough Council used the Bias Factor from the UWE Air Quality Website. This was calculated by using the matrix available on the site by selecting the appropriate laboratory, year of monitoring and significant methodology. Dungannon and South Tyrone Borough Council used a bias factor for 2009 (0.90)

PM Monitoring Adjustment

N/A

Short-term to Long-term Data adjustment

N/A

QA/QC of automatic monitoring

N/A

QA/QC of diffusion tube monitoring

St Martins House,
77 Wales Street,
Winchester.
Hampshire.
SO23 0RH England.
Tel: +44 (0)1962 860331
Fax: +44 (0)1962 841339
Email: diffusion@gradko.co.uk
Website: www.gradko.co.uk

GRADKO Environmental Laboratory; Nitrogen Dioxide (NO_2) WASP Results.

Our WASP results for January 2008 to January 2010 were as follows:

Jan08 Round 100 : Ref Value : 1.36ugNO2; Measured Value : 1.34 ugNO2 Z score -0.1 **Satisfactory.**

Ref Value 1.47ugNO2; Measured Value : 1.50 ugNO2 Z score 0.2 **Satisfactory.**

March 08 Round 101 Ref Value : 0.92ug NO2; Measured Value : 0.95ugNO2 Z Score 0.2 **Satisfactory.**

Ref Value : 1.86ugNO2; Measured Value : 1.85ugNO2 Z Score 0 **Satisfactory.**

July 08 Round 102 Ref Value : 1.37ugNO2 Measured Value : 1.42ugNO2 Z Score 0.3 **Satisfactory.**

Ref value : 2.28ugNO2; Measured Value : 2.21ugNO2 Z score -0.2 **Satisfactory.**

Jan 09 Round 104 Ref Value : 2.02ugNO2; Measured Value : 1.85ugNO2 Z Score -0.7 **Satisfactory.**

Ref Value : 1.22ug NO2; Measured Value : 1.21ugNO2 Z Score - 0.1 **Satisfactory.**

Apr 09 Round 105 Ref Value : 1.68ugNO2; Measured Value : 1.63ugNO2 Z Score -0.4 **Satisfactory.**

Ref Value : 0.96ug NO2; Measured Value : 0.92ugNO2 Z Score - 0.5 **Satisfactory.**

July 09 Round 106 Ref Value : 1.84ugNO2; Measured Value : 1.88ugNO2 Z Score 0.3 **Satisfactory.**

Ref Value : 1.42ug NO2; Measured Value : 1.34ugNO2 Z Score - 0.8 **Satisfactory.**

October 09 Round 107 Ref Value : 2.03ugNO2; Measured Value : 1.87ugNO2 Z Score –1.1 **Satisfactory.**

Ref Value : 2.20ug NO2; Measured Value : 1.96ugNO2 Z Score -1.4 **Satisfactory.**

January 2010 Round 108 Ref Value : 1.92ugNO2; Measured Value : 1.87ugNO2 Z Score - 0.3 Satisfactory**.**

Ref Value : 1.47ug NO2; Measured Value : 1.45ugNO2 Z Score -0.2 Satisfactory**.**

The criteria for Z-scores are: Z score of < +/- 2 Satisfactory Result

Z score of < +/- 2 and <+/- 3 Questionable (Warning) Result

Z score of > +/- 3 Unsatisfactory Result

The above criteria has been set by HSL and AEA, and as from April 2010 the performance scores will be based on Rolling Performance Index (RPI) and not Z-scores.

For the precision (bias+) data: AEAT (NETCEN) have advised that Local Authorities requiring bias adjustment factors should refer the Review and Assessment website;
http://www.uwe.ac.uk/agm/review/

If you require any further information please contact me.

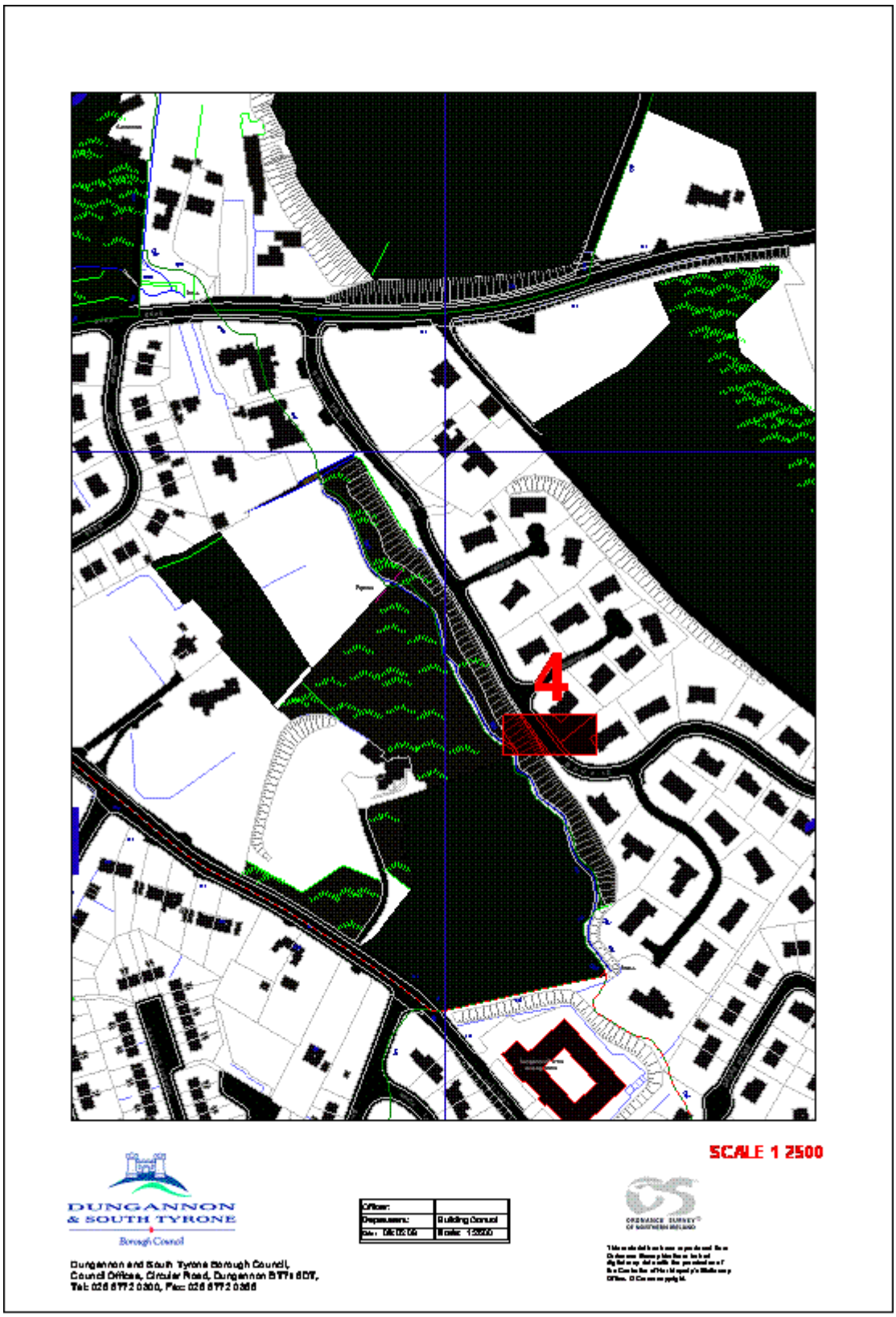
Dr. Jim McEvoy.

Appendix B – Diffusion Tube Site Maps

Market Square (1) and Church St (5, 6&7 Triplicate)

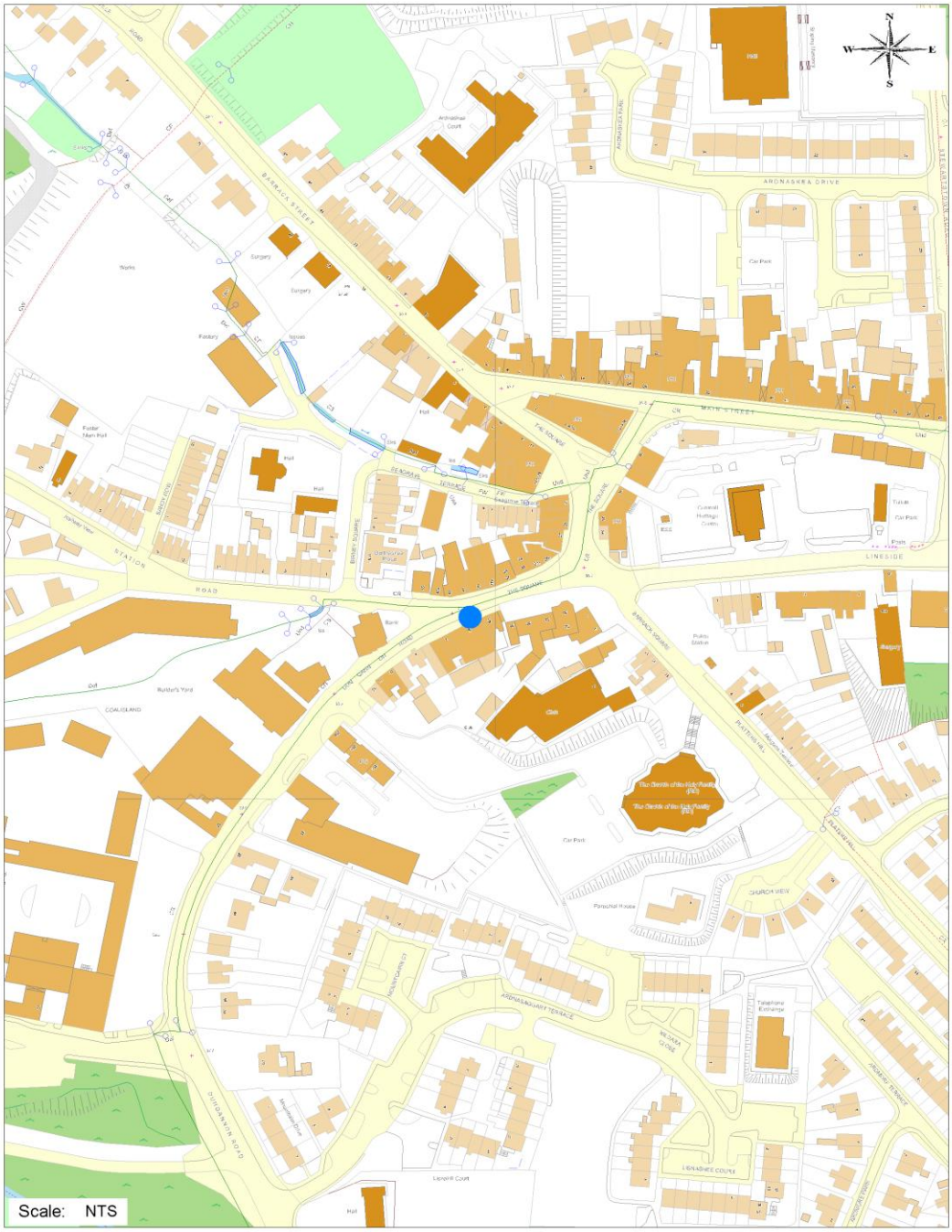

3
011SW1
scale1 2500
DUNGANNON
& SOUTH TYRONE
Borough Council
Dungannon and South Tyrone Borough Council,
Council Offices, Circular Road, Dungannon BT71 6DT,
Tel: 028 8772 0300, Fax: 028 8772 0366

Ardgannon (3)



11 Bushvale (4)

Howard Primary School (2)



NO2 MONITORING LOCATION MAP

Dungannon Road, Coalisland (10)

DUNGANNON & SOUTH TYRONE Borough Council

Land & Property Services.

Dungannon and South Tyrone Borough Council,
Council Offices, Circular Road,
Dungannon BT71 6DT,
Tel: 028 8772 0300, Fax: 028 8772 0368

NO2 Monitoring Point (Passive Diffusion Tube)

NO2 MONITORING LOCATION MAP

Newell Road, Dungannon (8)

NO2 Monitoring Point
(Passive Diffusion Tube)

DUNGANNON & SOUTH TYRONE Borough Council

Land & Property Services.

Dungannon and South Tyrone
Borough Council,
Council Offices, Circular Road,
Dungannon BT71 6DT,
Tel: 028 8772 0300, Fax: 028 8772 0368

NO2 MONITORING LOCATION MAP

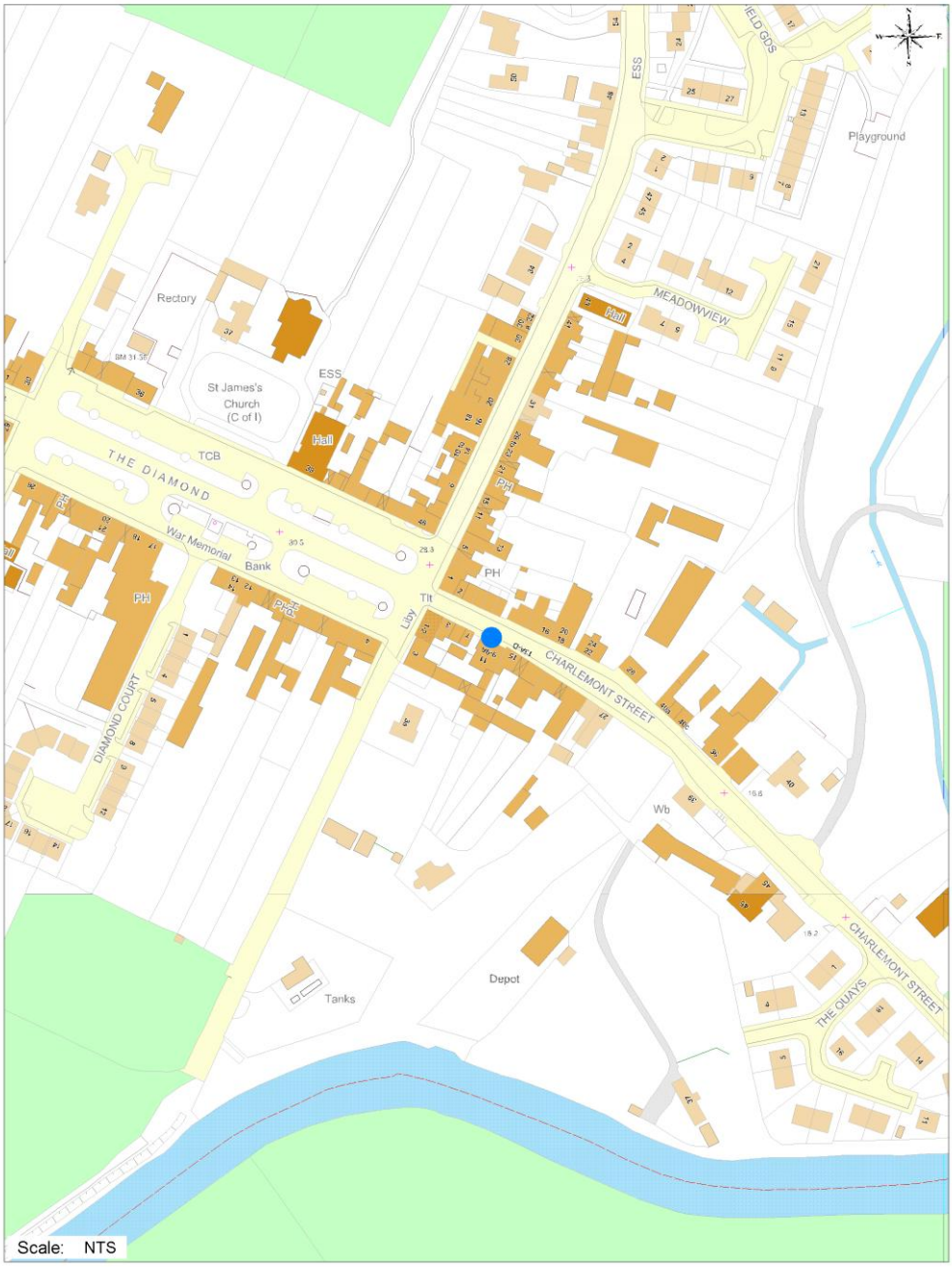
Stewartstown Road, Coalisland (11)

NO2 Monitoring Point (Passive Diffusion Tube)

DUNGANNON & SOUTH TYRONE Borough Council

Land & Property Services.

Dungannon and South Tyrone Borough Council,
Council Offices, Circular Road,
Dungannon BT71 6DT,
Tel: 028 8772 0300, Fax: 028 8772 0368



NO2 MONITORING LOCATION MAP

Moy Hill, Charlemont Street, Moy (9)

NO2 Monitoring Point (Passive Diffusion Tube)

DUNGANNON & SOUTH TYRONE Borough Council

Land & Property Services.

Dungannon and South Tyrone Borough Council,
Council Offices, Circular Road,
Dungannon BT71 6DT,
Tel: 028 8772 0300, Fax: 028 8772 0368

Appendix C

Diffusion Tube Monitoring Data 2009

	Site ID	82754	83607	82756	82757	84674						
		Square	Howard	Ardgannon	Bushvale	Church 1	Church 2	Church 3	Newell	Charlemont Street, Moy	Dgn Rd	S'town Rd,
PERIOD		**Site 1**	**Site 2**	**Site 3**	**Site 4**	**Site 5**	**Site 6**	**Site 7**	**Site 8**	**Site 9**	**Site 10**	**Site 11**
1	Jan-09	31.05	27.22	20.65	16.01	54.66	56.67	49.73	-	-	-	-
2	Feb-09	33.76	25.00	14.60	13.16	45.86	64.73	53.88	-	-	-	-
3	Mar-09	28.81	23.96	13.78	11.65	48.59	51.86	63.18	51.04	60.99	30.14	54.71
4	Apr-09	29.69	27.95	13.66	10.32	65.43	60.89	55.19	63.36	76.01	54.25	51.32
5	May-09	-	10.02	-	4.44	30.01	18.09	26.83	32.50	47.76	34.02	33.05
6	Jun-09	23.05	31.97	11.89	7.20	41.37	58.38	56.13	79.13	68.57	45.81	48.06
7	Jul-09	23.79	21.67	7.87	-	41.63	57.33	46.72	54.07	62.20	38.41	45.75
8	Aug-09	21.02	14.35	8.19	6.27	41.83	43.14	30.73	-	51.69	37.58	46.29
9	Sep-09	25.51	24.20	9.81	8.15	38.00	47.01	51.10	63.31	66.91	38.33	55.28
10	Oct-09	26.49	30.04	15.53	11.38	48.06	62.44	42.42	37.94	60.31	42.00	-
11	Nov-09	28.73	27.21	16.50	12.31	48.53	43.02	50.94	64.04	70.27	49.06	54.67
12	Dec-09	32.37	31.71	18.25	15.02	54.84	46.44	46.03	72.99	67.55	42.88	62.31
	Mean	27.66	24.61	13.70	10.54	46.57	50.83	47.74	57.60	63.23	41.25	45.14

Church Street			Church Street			Church Street		
Site A1	**Site A2**	**Site A3**	**Site B1**	**Site B2**	**Site B3**	**Site C1**	**Site C2**	**Site C3**
-	-	-	-	-	-	-	-	-
42.65	55.80	35.73	28.70	36.11	35.20	46.26	59.86	49.50
36.49	35.71	37.10	34.19	37.67	34.48	55.30	60.50	53.97
40.68	39.46	31.75	34.99	37.60	41.36	61.58	58.32	54.80
21.79	29.27	25.83	12.32	22.03	27.32	14.86	36.13	38.07
42.96	38.01	33.58	34.95	32.95	36.58	59.18	56.66	52.19
32.92	30.10	29.06	22.38	27.72	26.31	33.41	42.20	38.90
21.65	22.00	22.88	25.41	26.50	24.77	34.18	41.87	39.70
32.31	31.78	34.19	27.60	28.26	26.86	48.32	46.89	53.93
30.66	33.68	36.22	31.53	35.56	28.71	38.98	47.75	48.40
35.59	30.83	32.31	30.90	30.77	34.48	46.97	53.60	47.42
41.80	44.49	47.91	37.02	32.56	37.80	53.40	60.41	68.34
34.50	35.56	33.32	29.09	31.61	32.17	44.77	51.29	49.57

Appendix D

Church Street AQMA Action Plan: Actions Tables

Action Plan Proposals for Dungannon and South Tyrone Borough Council

Dungannon and South Tyrone Borough Council along with Southern Group Environmental Health Committee developed a stakeholder group including Translink, Roads Service and The Northern Ireland Planning Service to consider the reduction in NO2 required to address the problem at the Church Street AQMA. In particular, as the major source of pollution in this AQMA is transport related those relevant authorities with responsibilities for transport had a very important role.

Following a number of stakeholder meetings and a detailed consideration of possible options, a number of proposals have been developed which in combination will reduce NO2 emissions within the area and will work towards achieving the AQ objective limit.

The proposals agreed by the stakeholders are detailed in the following pages, including the anticipated scale of impact and the timescales for delivering these proposals. In order to inform the action planning process a simple assessment of the cost and benefit of each proposal has been undertaken. The following table gives an indication of the scoring used. A simple multiplication of the cost and the beneficial impact gives an indication as to the cost effective score of the proposals.

Table 4.1 - Scoring used to assess and prioritise proposals

Costs		**Beneficial Impact on Air Quality**		**Timescale***	
Score	£				Years
7	<100k	10	Highest	Short (S)	1 – 2
6	100 – 500k				
5	500k – 1 million				
4	1 – 10 million			Medium (M)	3 – 5
3	10 – 50 million				
2	50 – 100 million				
1	>100 million	1	Lowest	Long (L)	6+

*measures implemented already are denoted as " I ", otherwise denoted as ongoing - "O"

4.1 Specific Measures to Be Implemented within the AQMA

To ensure that the AQS objectives will be achieved at the AQMA, the following measures are proposed to be implemented

ACTION	Lead Authority	Impact	Time scale	Status	Impact	Cost	Cost Effective score	Indicator	To be achieved
1. Introduce traffic control systems at the junction of Church Street and Market Square	DRD Roads Service (NI)	Allows for better efficiency in traffic flow throughout the town centre and could be synchronised with other traffic lights to maximise these benefits	S	O	2	7	14	Long Term reduction of NO2 levels in annual monitoring results Conduct road traffic surveys on Church St to assess traffic queue length and traffic delay times	Annually May 2011
2. Investigate the efficiency of the traffic lights on Circular Road and improve the timings of the lights to aid traffic flow	DRD Roads Service (NI)	Reduction in the overall level of traffic pollution on Church Street. De-incentivise Church Street as short cut through town. Optimises use of traffic lights on Circular Road at peak periods.	S	O	5	7	35	DRD to report back to AQMA Stakeholder Committee on possible efficiency measures	May 2011
3. To use vehicles, fuel and technology which optimize the balance of efficient operations, output emissions and environmental impact, with regulatory compliance as a minimum standard.	Translink	Reduction in the overall level of traffic pollution on Church Street and reduction in the numbers of highly polluting vehicles on the roads	S	O	2	7	14	To achieve an average road fleet age of 8 years and a retirement age of 12 years for coaches and 18 years for buses by 2013	2013

ACTION	Lead Authority	Impact	Time scale	Status	Impact	Cost	Cost Effective score	Indicator	To be achieved
4 Air Pollution Monitoring.	Dungannon and South Tyrone Borough Council	Identification of long term trends in pollution and focus on areas of poor air quality	M	O	5	7	35	Long Term reduction of NO2 in annual monitoring results	On-Going
5. Remove a number of the parking spaces on the 'downside' direction on Church Street.	DRD Roads Service (NI)	Reduces pressure on vehicles exiting Market Square and on Church Street & Perry Street. Optimises traffic speeds and eradicates congestion on the downside of Church Street.	M	O	2	7	14	Redesign included in drawings submitted to Northern Ireland Planning Service as part of Public realm Scheme in Dungannon Number of Car Parking spaces reduced Long term reduction of NO2 in annual monitoring results	May 2010 May 2011 On-Going
6. Investigate possibility of 'Pay & Display' system on Church Street	Dungannon and South Tyrone Borough Council	Increased efficiency in traffic flow leading away from the town centre. Reduces congestion and encourages use of larger off-street car parks.	S	O	5	7	35	DRD & Dungannon and South Tyrone Borough Council to report back to AQMA stakeholder committee on possible measures	Post May 2011

ACTION	Lead Authority	Impact	Time scale	Status	Impact	Cost	Cost Effective score	Indicator	To be achieved
7. To investigate the possibility of designating a number of free parking spaces in Market Square for electric/hybrid vehicles only.	Dungannon and South Tyrone Borough Council	Promotes the use of more environmentally friendly vehicles and the follow on reduction in road traffic pollution in the town centre	S	O	1	7	7	Included in drawings submitted to Northern Ireland Planning Service as part of Public realm Scheme in Dungannon Ducting laid for electricity supply of recharging points and Road Works completed at Market Square. Long term reduction of NO2 in annual monitoring results	Post May 2010 May 2011 On-Going
8. To investigate the possibility of creating a Low Emissions Zone within Dungannon Town Centre	Dungannon and South Tyrone Borough Council & DRD Roads Service (NI)	Allow access for vehicles that meet the latest euro emissions standards to designated area within town.	M/L	O	1	7	7	Dungannon and South Tyrone Borough Council & DRD to report back to AQMA stakeholder committee on possible measures	May 2011
9. Investigate the possibility of a 'Park and Ride' scheme for shoppers and employees on the outskirts of Dungannon	DRD Roads Service (NI) & Translink	Increases options for access to town centre and may reduce traffic congestion in Dungannon overall. Helps to promote the benefits of public transport.	M	O	2	6	12	Percentage of parking spaces being used on a daily basis Long term reduction of NO2 in annual monitoring results	On-Going On-Going

ACTION	Lead Authority	Impact	Time scale	Status	Impact	Cost	Cost Effective score	Indicator	To be achieved
10. Use the Northern Ireland Planning Service to ensure potential air quality issues are assessed with new developments before problems arise.	Dungannon and South Tyrone Borough Council)	Reduces the possibility of further AQMA declarations and limits the degradation of air quality in future years.	L	O	2	7	14	Long term reduction of NO2 in annual monitoring results Number of consultations on planning application by Dungannon and South Tyrone Borough Council	From May 2010 onwards
11. Air quality assessment of vehicle emissions	Dungannon and South Tyrone Borough Council	Reduction in the numbers of highly polluting vehicles on the roads	S	I	2	7	14	Long Term reduction of NO2 in annual monitoring results	On-Going
12. Cleaning up Council Vehicles	Dungannon and South Tyrone Borough Council	Reduction in pollution from Council vehicles	S	I	2	7	14	Long term reduction of NO2 in annual monitoring results	On-Going

ACTION	Lead Authority	Impact	Time scale	Status	Impact	Cost	Cost Effective score	Indicator	To be achieved
13. Investigate the use of alternative fuels where possible.	Dungannon and South Tyrone Borough Council	Reduction in pollution from Council vehicles	S	O	2	7	14	Report to be produced by Council on the viability of using alterative fuels for Council vehicles Long term reduction of NO2 in annual monitoring results	December 2011 On-Going
14. Vehicle upgrading/renewal programme to comply with EURO 5 emission standards	Dungannon and South Tyrone Borough Council	Reduction in pollution / noise from Council vehicles and increased fuel efficiency	S	O	2	7	14	Two new Bin Lorries purchased to replace two older models being removed from service Long term reduction of NO2 in annual monitoring results	December 2010 On-Going
15. Develop better travel planning amongst Council employees	Travelwise NI	Reduction in vehicle pollution from Council staff travelling to and from work.	S	O	2	7	14	Travel plan produced and implemented by Council	May 2011
16. Bin Collections to be restricted during peak traffic periods in Church Street.	Dungannon and South Tyrone Borough Council	Reduction in pollution from council vehicles in Church Street and to ease flow of traffic through AQMA	S	O	2	7	14	Instruction to be disseminated through Operational Services and placed on schedule of works.	May 2011

ACTION	Lead Authority	Impact	Time scale	Status	Impact	Cost	Cost Effective score	Indicator	To be achieved
17. Sustainable Development.	Dungannon and South Tyrone Borough Council	General environmental impact. In form policy makers. Increased awareness of sustainable development issues among a variety of stakeholders	M	O	5	7	35	Long Term reduction of NO2 in annual monitoring results	On-Going
18. Industrial Pollution Control	Dungannon and South Tyrone Borough Council	Reduced ambient pollution in local atmosphere	S	O	3	7	21	Long term reduction of NO2 in annual monitoring results Percentage of IPPC inspections completed by Dungannon and South Tyrone Borough Council	On-Going
19. Nuisance policy for dealing with burning of commercial and domestic waste	Dungannon and South Tyrone Borough Council	Reduced pollution from uncontrolled burning of commercial and domestic waste	S	O	1	7	7	Long Term reduction of NO2 in annual monitoring results	On-Going
20. Air Quality Awareness Promotion Campaign	Dungannon and South Tyrone Borough Council & Translink	Increase public awareness of Air Quality Management Area and general air pollution issues	S	O	2	7	14	Production of visual, verbal and written materials for dissemination to general public highlighting air quality issues through various media	Annually