Part IV of the Environment Act 1995

Local Air Quality Management

Perth and Kinross

Air Quality Review and Assessment

Progress Report

April 2007

Executive Summary

The UK Government introduced the Local Air Quality Management regime through the Environment Act 1995 and enacted it through the Air Quality (Scotland) Regulations of 1997, 2000, and 2002. This regime requires each local authority to undertake the periodic review and assessment of air quality within its area.1 In areas where an air quality objective2 is not anticipated to be met, local authorities are required to establish an Air Quality Management Area (AQMA) and implement Action Plans to work towards delivering the national objectives.

The USA undertaken in 2006 and using 2005 data identified nitrogen dioxide and PM_{10} as pollutants which are still at risk of exceeding the annual mean objective levels.

There are a number of hotspots in Perth town centre where the 2005 NO_2 objective is being breached on a regular basis however in order to adopt a holistic approach Perth and Kinross Council declared the whole of Perth city an AQMA on 5 May 2006 for both Nitrogen Dioxide and PM_{10}.

Perth and Kinross Council has a comprehensive diffusion tube network which has been expanded to this end. This ensures that the area within the AQMA surrounding the hotspots can be effectively monitored and we have an indication of how the area affected by NO_2 pollution is changing. Of the 52 monitoring sites, 17 sites are breaching the 2005 annual mean of 40µg/m^{-3}, and 8 are between 35 – 39µg/m^{-3}. All of the sites which are breaching the 2005 objective are close to Perth city centre.

Perth and Kinross Council will continue to monitor NO_2 and PM_{10} in Perth and Kinross, and will take into account future developments which may impact on local air quality. The

1 As illustrated by LAQM.TG(03) Box 1.3: Timetable for review and assessment. (1)

2 Refers to objectives in the strategy for each of the eight pollutants as shown within LAQM.TG(03) Table 1.1. The objectives provide policy targets by outlining what should be achieved in the light of the air quality standards and other relevant factors and are expressed as a given ambient concentration to be achieved within a given timescale. (1)

Further Assessment and Air Quality Action Plan are under development at present and these will be considered in the next Progress Report.

Contents

Introduction

Legislative Background

The UK Government introduced the Local Air Quality Management regime through the Environment Act 1995 and enacted it through the Air Quality (Scotland) Regulations of 1997, 2000, and 2002. This regime requires each local authority to undertake the periodic review and assessment of air quality within its area.3 In areas where an air quality objective4 is not anticipated to be met, local authorities are required to establish an Air Quality Management Area (AQMA) and implement Action Plans to work towards delivering the national objectives.

LAQM in Perth and Kinross

In accordance with the requirements set out in the aforementioned legislation and relevant guidance Perth and Kinross Council began the third round of Review and Assessment with an Updating and Screening Assessment, in which sources of emissions to air are reassessed to identify whether the situation has changed since the second round, and if so, what impact this may have on predicted exceedences of the air quality objectives. The Updating and Screening Assessment was undertaken in 2006 (based on 2005 data) and concluded that Perth and Kinross Council is not required to carry out a Detailed Review and Assessment for carbon monoxide, benzene, 1,3-butadiene, lead, nitrogen dioxide, PM_{10} or sulphur dioxide. The USA identified nitrogen dioxide and PM_{10} as pollutants which are still at risk of exceeding the objective levels, which are the two pollutants which Perth and Kinross Council currently monitor.(2)

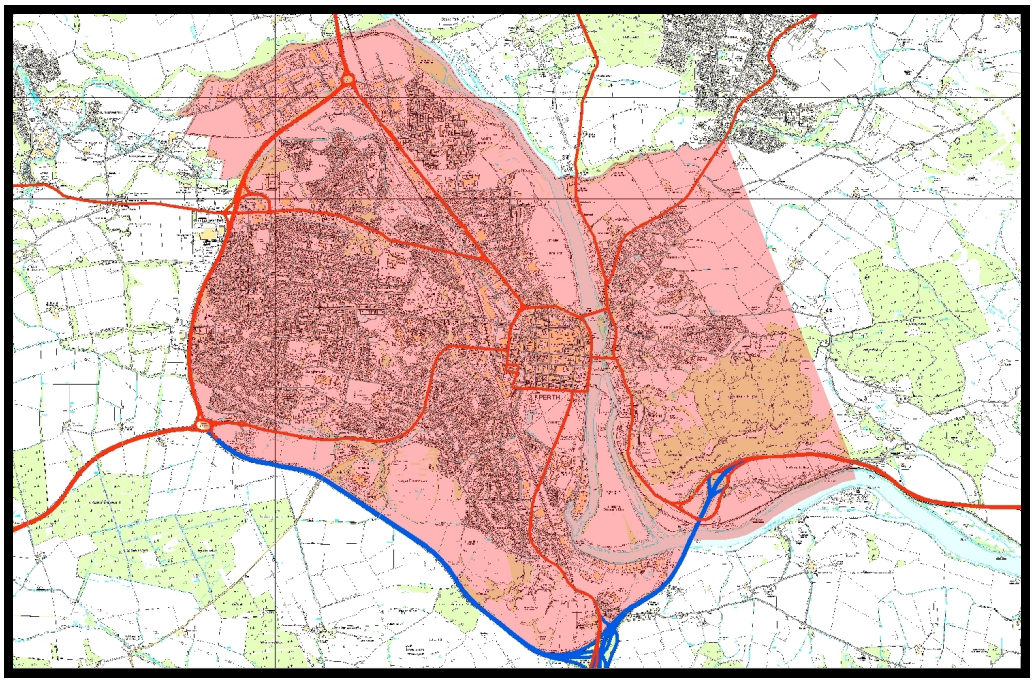
AQMA

On 5 May 2006 the whole of Perth city was designated an Air Quality Management Area for both nitrogen dioxide and particles (PM_{10}) and the boundary of this area is shown on the map below. The decision to designate the whole of Perth city an AQMA was made in order that a holistic approach could be taken by Perth and Kinross Council. This decision will

3 As illustrated by LAQM.TG(03) Box 1.3: Timetable for review and assessment. (1)

4 Refers to objectives in the strategy for each of the seven pollutants as shown within LAQM.TG(03) Table 1.1. The objectives provide policy targets by outlining what should be achieved in the light of the air quality standards and other relevant factors and are expressed as a given ambient concentration to be achieved within a given timescale. (1)

ensure that areas that are close to, but do not at present exceed, the objectives are covered and also it allows the Action Plan to take in a wider area, thus avoiding moving problems to other parts of the city, while dealing with the areas which are exceeding the objectives.



Progress Report

As part of the LAQM regime all local authorities are required to prepare a Progress Report between subsequent rounds of review and assessment. The idea of this being that continuity in the LAQM process will be ensured. Local Authorities are therefore required to submit a Progress Report in 2007. Perth and Kinross Council have collated data from an array of monitoring sites and other sources in respect of these duties and here provide an update of air quality issues in Perth and Kinross.

This progress report is produced in accordance with the requirements and recommendations of Progress Report Guidance LAQM.PRG(03), published in 2003 and issued in Scotland by the Scottish Executive. (3) This guidance states that the aims of a progress report are to:

- Report progress on implementing local air quality management; and
- Report progress in achieving, or in many cases maintaining, concentrations below the air quality objectives.

Chapter 1 – New Monitoring Data

1.1 Monitoring in Perth and Kinross

Perth and Kinross Council utilises two automated stations within Perth which provide air quality monitoring data5. Each site samples and records the continuous, real-time concentrations of nitrogen dioxide (NO_2) and small particulate matter (PM_{10}).

In addition to this the council maintains an extensive network of diffusion tubes throughout Perth and also in Aberfeldy, Crieff and Glencarse to monitor levels of nitrogen dioxide throughout Perth and Kinross6.

When the previous Progress Report was undertaken in 2005, Perth and Kinross Council had 64 diffusion tubes at 42 different locations. The vast majority of these sites were in Perth, although there were also 2 sites in Glencarse (just off the A90 Perth to Dundee), 4 sites in Crieff and 2 sites in Aberfeldy.

Today Perth and Kinross has an additional 10 diffusion tubes at 10 further locations in Perth city. The additional monitoring sites have been put in place to provide additional data in the areas of exceedence of the annual mean objective for NO_2.7 Of the 52 monitoring sites, 17 sites are breaching the 2005 annual mean of 40µg/m^{-3}, and 8 are between 35 – 39µg/m^{-3}. All of the sites which are breaching the 2005 objective are close to Perth city centre. The highest annual mean recorded by the diffusion tubes was at the Real Time monitor in Atholl Street. The level recorded was 57µg/m^{-3}.

1.1.1 Diffusion Tube Preparation and Analysis

The NO_2 diffusion tubes are provided and analysed by Dundee City Council Scientific Services. This laboratory takes part in and meets QA/QC Field Intercomparison standards

5 See Appendix I for location maps of all automatic monitoring stations.

6 See Appendix I for location maps of all diffusion tubes sites.

7 Appendix 2 shows the site details of the diffusion tubes.

specified for the National NO_2 Network. Preparation utilises a 20% v/v triethanolamine (TEA) in water methodology and analysis via colorimetric techniques typically follows four/ five week exposure periods. (4)

1.1.2 AEA Energy & Environment Ratification

All automatic monitoring data has been collected, ratified and supplied by AEA Energy & Environment (formally Netcen). AEA ensure monitoring instrumentation, methodologies and data conform to consistent and traceable national and international standards. This includes full measurement traceability through the use of UKAS-accredited calibration gases.

1.2 Nitrogen Dioxide (NO_2)

1.2.1 Objective[8]

*By 31 December 2005: 200 micrograms per cubic metre or less, when expressed as an hourly mean, not to be exceeded more than 18 times within any year **and** 40 micrograms per cubic metre or less, when expressed as an annual mean.*

Perth and Kinross Council are still working towards the above objective. In addition to this the EU has set limit values in respect of nitrogen dioxide to be achieved by 1 January 2010.

1.2.2 Automated Monitoring Data

Data collected at both the High Street monitor and the Atholl Street monitor correspond to the period 1 January 2006 – 31 December 2006. Graphs showing variation in hourly mean over this period are presented in Appendix 3.

Ratified NO_2 data for the High Street and Atholl Street monitors are summarised in the tables below.

Table 1 *High Street*

Automated NO_2 Monitoring Levels (µg m^{-3})

8 Objective taken from Chapter 6: Review and assessment of nitrogen dioxide in LAQM.TG(03). (1)

Parameter	Objective	Measured	Exceedences
Hourly Mean	200	147	0
Annual Mean	40	28	0
Data Capture		94.9%	

Table 2 *Atholl Street*

Automated NO_2 Monitoring Levels (µg m^{-3})			
Parameter	**Objective**	**Measured**	**Exceedences**
Hourly Mean	200	195	0
Annual Mean	40	57	1
Data Capture		99.1%	

1.2.3 Diffusion Tube Monitoring Data

Diffusion tube data for 2006 has been treated in accordance with the necessary guidance9, using a statistical tool created by AEA Energy & Environment and found on the UK National Air Quality Archive website. This assists in the calculation of precision and accuracy of co-location studies, and the adjustment of diffusion tube results using the bias adjustment calculated.

In addition to this, in line with guidance, due to the good precision of the collocation study a locally derived adjustment factor has been applied. The calculations for this are shown in Table 5 and tables showing both the adjusted and unadjusted figures for the diffusion tube data are presented in Appendix 4.

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9 As described within LAQM.TG(03) Boxes 6.3, 6.4 and Annex 1. (1)

1.2.4 Discussion

High Street

The High Street monitoring site is a roadside site and the monitor sits approximately 3m from the kerb.

The results presented in Section 1.2.2 show that neither the hourly mean objective level nor the annual mean objective level were breached at the High Street automatic monitoring station during 2006. The automatic monitoring station has been in operation at this location since June 2003, and consequently it is not possible to make any meaningful assessment of trends in the annual data levels as "it is normal practice to only consider a trend as being significant when five years worth of data are available". (3) It is possible to say however that the annual mean at this site is comparable with previous years by showing the annual mean from 2003 to date in the table below.

Table 3 *High Street Annual Mean 2003 - 2006*

Year	Annual Mean ($\mu g\ m^{-3}$)
2003 (extrapolated)	29.7
2004	28
2005	28
2006	28

Atholl Street

The Atholl Street monitoring site is a roadside site and the monitor sits approximately 1m from the kerb.

The results presented in Section 1.2.2 show that the hourly mean objective level was not breached however the annual mean was exceeded once at the Atholl Street automatic monitoring station during 2006. The automatic monitoring station has been in operation at

this location since October 2004, and consequently it is not possible to make any meaningful assessment of trends in the annual data levels (as discussed above).

Table 4 *Atholl Street Annual Mean 2003 - 2006*

Year	Annual Mean ($\mu g\ m^{-3}$)
2004 (estimated)	40
2005	54
2006	57

One conclusion which may be drawn from the data, and which was considered at the time of the Progress Report in 2005 (4), is that the estimated annual mean concentration for 2004 (which was calculated using prescribed methodology) was an underestimation. This would appear to be the case due to the much higher levels which were recorded from 2005 and 2006 data.

Collocation Studies

Collocation studies have been undertaken at both of the automatic monitor sites in Perth, with the diffusion tubes being exposed in triplicate. The measured concentrations have been compared with the results from the automatic monitors using guidance in Box 6.4 of LAQM. TG(03). (1) These results are summarised in Table 5 below. Both collocation studies indicate that the diffusion tube measurements are fairly accurate, as the bias adjustment factor for both is close to one.

For the purposes of the Progress Report, an average of the two factors has been applied to the results (1.01). No bias adjustment factor has been published on the UWE website for Dundee Scientific Services for 2006. Consideration has been given to the report entitled 'The Relationship between Diffusion Tube Bias and Distance from the Road' carried out by Air Quality Consultants, however as there is no guidance on this method it has not been used.

Table 5 *Diffusion Tube Bias Adjustment Factor*

Site Name	Diffusion Tube Mean Conc (Dm) (µg m^{-3})	Automatic Monitor Mean Conc (Cm) (µg m^{-3})	Bias (B) (Dm-Cm)/Cm	Bias Adjustment Factor (A) (Cm/Dm)
High Street	29	28	3%	0.965
Atholl Street	54	57	-5%	1.055

1.3 Small Particulate Material (PM_{10})

1.3.1 Objective[10]

By 31 December 2010 (2004)11: 50 micrograms per cubic metre or less, when expressed as a 24 hour mean, not to be exceeded more than 7 (35) times within any year ***and*** *18 (40) micrograms per cubic metre or less, when expressed as an annual mean.*

1.3.2 Automated Monitoring Data

Measurements in Perth and Kinross are made using a TEOM automatic particulate analyser. The Scottish Executive has previously issued advice for authorities in Scotland, based on local intercomparison tests. For the annual mean objectives, the Scottish Executive has recommended that authorities should correct TEOM concentrations using both a 1.3 factor12 and a 1.14 factor.13 Measured concentrations presented in this report have therefore been multiplied by a factor of 1.3 and a factor of 1.14 to approximate the gravimetric equivalent value according to the guidance. The advice states that the 1.3 correction factor should continue to be used for assessment of the 24-hour mean objectives.

Table 6 *High Street PM_{10}*

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10 Objective taken from Chapter 8: Review and assessment for PM_{10} in LAQM.TG(03). (1)

11 2004 objectives are shown within brackets.

12 As detailed in LAQM.TG(03) Box 8.2: Relationship between the European transfer reference sampler and other PM_{10} sampling methods. (1)

13 Information on 1.14 factor comes from FAQ number 8 for PM_{10} on the Air Quality Review and Assessment Website - http://www.uwe.ac.uk/aqm/review/questions.html (5)

Automated PM_{10} Monitoring Levels (µg m^{-3})			
Parameter	**Objective**	**Measured**	**Exceedences**
24hr Mean	50	60 (max)	2
Annual Mean	18(40)	16	1
Data Capture		98.9%	

Table 7 *Atholl Street PM_{10}*

Automated PM_{10} Monitoring Levels (µg m^{-3})			
Parameter	**Objective**	**Measured**	**Exceedences**
24hr Mean	50	62 (max)	6
Annual Mean	18(40)	22	1
Data Capture		97.1%	

N.B. The measured results refer to the results measured by the TEOM automatic particulate analyser before the conversion factors are applied. The exceedences refer to the number of exceedences once the 1.3 factor has been applied.

1.3.3 Discussion

High Street

The maximum daily average concentration recorded at the High Street automatic monitoring station for PM_{10} in 2006 was 78(Gravimetric)µg m^{-3}, and the annual average was 21(Gravimetric)µg m^{-3}. The results presented in Section 1.3.2 show that 24hr objective level was breached twice in 2006 and the 2010 target annual mean was breached once. The projected concentration for 2010 was calculated using the guidance on The Air Quality

Archive website.14 This showed a small reduction in the PM_{10} annual mean to 19.7µg/m^{-3}, however this is still a breach of the 2010 annual mean objective.

Table 8 *High Street - Pm_{10} Adjusted Mean*

Year	Annual Mean (µg m^{-3})	Annual Mean (Gravimetric) (µg m^{-3})	
		1.3 factor	1.14 factor
2004	13	17	15
2005	14	18	16
2006	16	21	18

Atholl Street

The maximum daily average concentration recorded at the Atholl Street automatic monitoring station for PM_{10} in 2006 was 81(Gravimetric)µg m^{-3}, and the annual average was 29(Gravimetric)µg m^{-3}. The results presented in Section 1.3.2 show that 24hr objective level was breached six times in 2006 and the 2010 target annual mean was breached once. The projected concentration for 2010 was calculated using the guidance on The Air Quality Archive website.15 This showed a small reduction in the PM_{10} annual mean to 27µg/m^{-3}, however this is still a breach of the 2010 annual mean objective.

Table 9 *Atholl Street - Pm_{10} Adjusted Mean*

Year	Annual Mean (µg m^{-3})	Annual Mean (Gravimetric) (µg m^{-3})	
		1.3 factor	1.14 factor
2004 (period mean Oct – Dec only)	19	25	22

14 http://www.airquality.co.uk/archive/laqm/tools.php?tool=year04

15 http://www.airquality.co.uk/archive/laqm/tools.php?tool=year04

2005	19	25	22
2006	22	29	25

As with nitrogen dioxide it is not possible to come to any conclusions regarding annual trends in PM_{10} pollution in Perth as there isn't 5 years of data. We can however look at the data in order to draw an informal comparison. It would appear at both the High Street and Atholl Street that the PM_{10} level is increasing year on year by a small margin.

The Detailed Assessment which was published in August 2005 (6), and was carried out to assess in detail the likelihood of the objectives for NO_2 and PM_{10} being breached, stated that this was likely at hotspots in Perth City due to traffic congestion.

The Further Assessment and Action Plan are being undertaken at the time of writing and it is intended these will develop proposals that Perth and Kinross Council may be able to apply to work towards the achievement of the national objectives as well as improve the air quality in the AQMA. In addition to this it may be possible to further consider the significance of data trends during the next phase of Review and Assessment.

Chapter 2 – New Local Developments

2.1 Industrial Processes Affecting Air Quality

Since the last round of review and assessment two new energy from waste plants have been proposed in the Perth & Kinross Council area. One of these is to be in Perth and at the time of undertaking this report has outline planning permission. The other energy from waste plant is near Glenfarg and has recently received full planning permission. Both of these will be regulated under PPC by SEPA.

Shierglas Quarry, Killiecrankie (PPC/B/1004392) – the addition of a small cement batching plant within the Quarry site boundary.

Wester Bleaton near Kirkmichael – planned reopening of limestone quarry. This will be PPC permitted under mobile crusher permit when crushing is being undertaken.

Table 10 *Regulated Processes*

SEPA Ref.	Company and Site Address	Process Description	Status
APC/E/20502	The Brig Motor Co Main Street Bridge of Earn PH2 9PJ	Petrol Vapour Recovery	Closing Spring 2007
PPC/B/1005099	Sommerfields Scone	Petrol Vapour Recovery	New
PPC/B/1004392	Ennstone Thistle Shierglas Quarry Pitlochry PH16 5II	Mineral	New

A number of PPC permits for car respraying have been revoked as the annual solvent threshold limit has been increased from 1 ton to 2 tons.

Information received from SEPA states that SEPA is unaware of any SEPA regulated process that has increased emissions to air by more than 30%.16

2.2 New Industrial, Commercial and Transport Developments

A new B&Q superstore has opened in Perth just off the Crieff Road, adjacent to Newhouse Road. Although this new development is within the AQMA it is not close to any diffusion tubes which show exceedences, or levels close to exceeding the objectives. In addition to this the Updating and Screening Assessment which was undertaken in 2006 states that there are no receptors on the primary access routes to the store, and that traffic management is in place to minimise congestion in the area.

Since the last round of Review and Assessment a 150 home housing development has been built in Scone, which is just to the north east of Perth city and is traditionally a commuter town for Perth. The Updating and Screening Assessment states that the impact of the development on traffic flows has been assessed, and has not been found to be significant. (2)

2.3 New Mineral and Landfill Developments

There is one new quarry process operating in the Perth and Kinross council area which was not operating in previous rounds of review and assessment. This is called Marlee Quarry and it is near Blairgowrie. This was considered in the Updating and Screening Assessment which states there are no locations for public exposure within 200 metres of the site. In addition to this the council is unaware of any complaints with regards to dust since it started operating.

In addition to this there is the proposed reopening of Wester Bleaton Quarry near Kirkmichael (as stated in section 2.1). There are 2 residential properties in the vicinity; however neither of these is within 200 metres of the proposed quarry. There are no objections to the application from nearby residents however a dust management strategy

16 See Appendix 5.

has been proposed with mitigation measures which include dust suppression and cessation of operations if necessary in periods of adverse weather conditions.

Perth and Kinross Council have no recorded complaints of dust from mineral working or landfill sites during 2006.

Chapter 3 – Additional Information

Perth and Kinross Council declared an Air Quality Management Area in May 2006, and has subsequently begun the process of undertaking an Air Quality Action Plan. As yet the Action Plan is still under development and consequently there is nothing to report in terms of the progress of any Action Plan objectives.

Perth and Kinross Council does not monitor any pollutants which are not covered by the regulations, e.g. ozone, polycyclic aromatic hydrocarbons (PAH) etc.

There are attempts to forge close links between planning and environmental health and air quality is addressed as a material consideration through normal planning procedure.

There is to date no Air Quality Strategy for Perth and Kinross. The Further Assessment and Air Quality Action Plan are under development and will be considered in the next Progress Report.

Chapter 4 – Summary of Conclusions and Recommendations

4.1 New Monitoring Data

The USA undertaken in 2006 and using 2005 data identified nitrogen dioxide and PM_{10} as pollutants which are still at risk of exceeding the annual mean objective levels.

There are a number of hotspots in Perth town centre where the 2005 NO_2 annual mean objective is being breached on a regular basis however in order to adopt a holistic approach Perth and Kinross Council declared the whole of Perth city an AQMA on 5 May 2006 for both Nitrogen Dioxide and PM_{10}.

Perth and Kinross Council has a comprehensive diffusion tube network which has been expanded to this end. This ensures that the area within the AQMA surrounding the hotspots can be effectively monitored and we have an indication of how the area affected by NO_2 pollution is changing.

Of the 52 monitoring sites, 17 sites are breaching the 2005 annual mean of 40µg/m^{-3}, and 8 are between 35 – 39µg/m^{-3}. All of the sites which are breaching the 2005 objective are close to Perth city centre.

4.2 New Local Developments

Although there have been a number of relatively large developments in Perth and Kinross since the last Progress Report in 2005, none have been identified as having a significant adverse impact upon local air quality. There are a couple of planning applications pending which may have some effect, but at this time it is unknown whether permission will be granted to said applications.

It should be noted that the Pollution Control section is given the opportunity to comment on planning applications with regards to air quality and to date we have requested further information on a number of applications both within and outwith the AQMA.

4.3 Recommendations

Perth and Kinross Council will continue to monitor NO_2 and PM_{10} in Perth and Kinross, and will take into account future developments which may impact on local air quality. The Further Assessment and Air Quality Action Plan are under development at present and these will be considered in the next Progress Report.

References

(1) DEFRA (2003) *Part IV of the Environment Act 1995: Local Air Quality Management Technical Guidance LAQM.TG(03)*. DEFRA Publications, London, UK.

(2) Netcen (2006) *Air Quality Updating and Screening Assessment. A report produced for Perth and Kinross Council*. Perth and Kinross Council.

(3) DEFRA (2003) *Part IV of the Environment Act 1995: Local Air Quality Management. Progress Report Guidance LAQM.PRG(03)*. DEFRA Publications, London, UK.

(4) Edwards R (2005) *Perth and Kinross Air Quality Review and Assessment Progress Report 2005*. Perth and Kinross Council.

(5) AQM Resource Centre (UWE) (2007, April 2 – last update) *Frequently Asked Questions – PM_{10}* (Air Quality Review and Assessment website).

Web address:

http://www.uwe.ac.uk/aqm/review/questions.html

(6) Netcen (2005) *Air Quality Report Perth and Kinross Council (Detailed Assessment)*. Perth and Kinross Council.

Appendices

Appendix 1: Monitoring Location Maps

Appendix 2: Site Details

Appendix 3: Automatic Monitoring Reports 2006

Appendix 4: NO_2 Diffusion Tube Data 2006

Appendix 5: SEPA Information Request

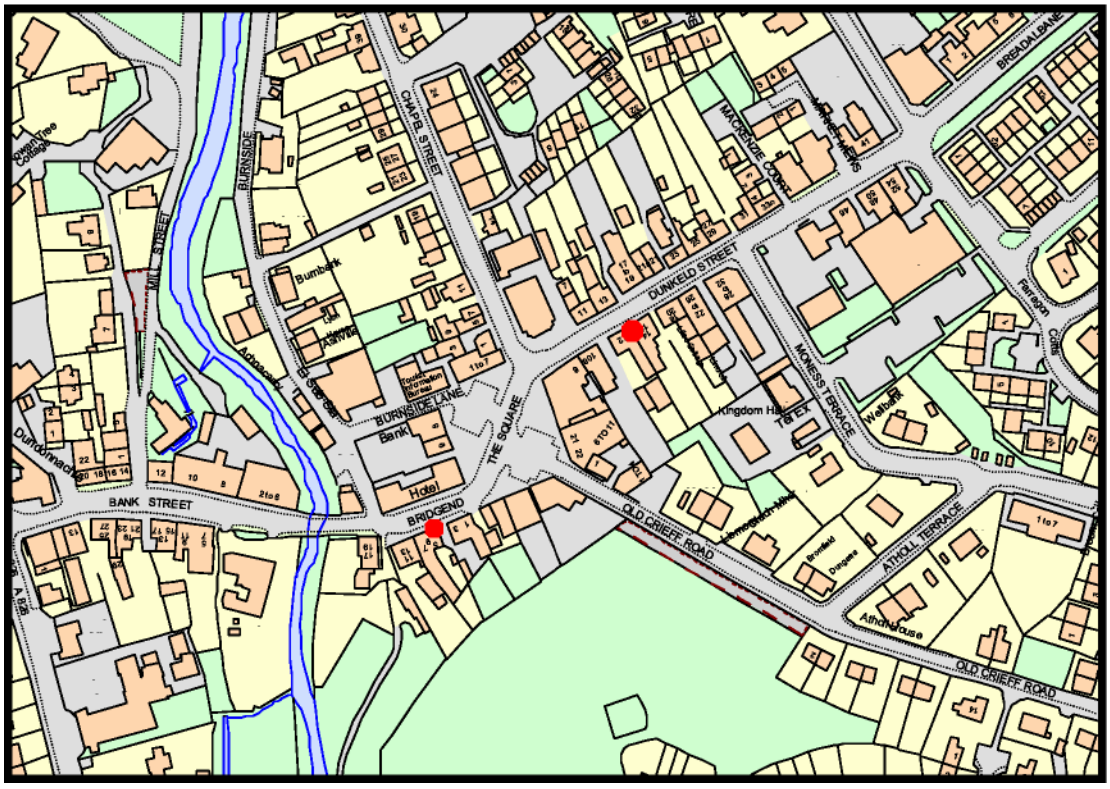
Appendix 1

Monitoring Location Maps

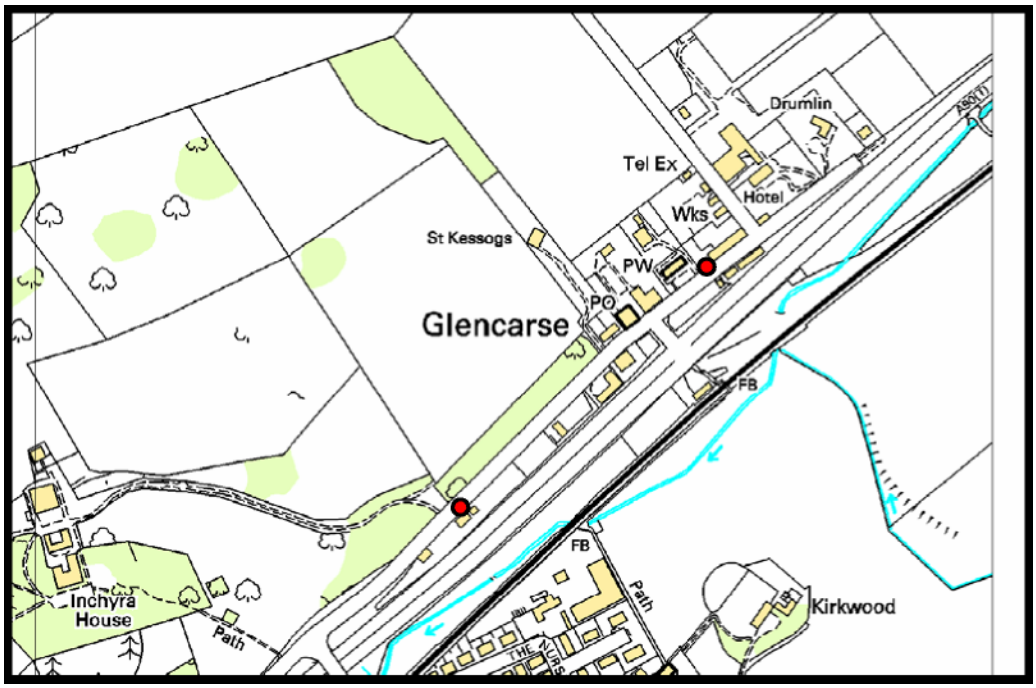
Existing Locations

New Locations

Crieff



Glencarse



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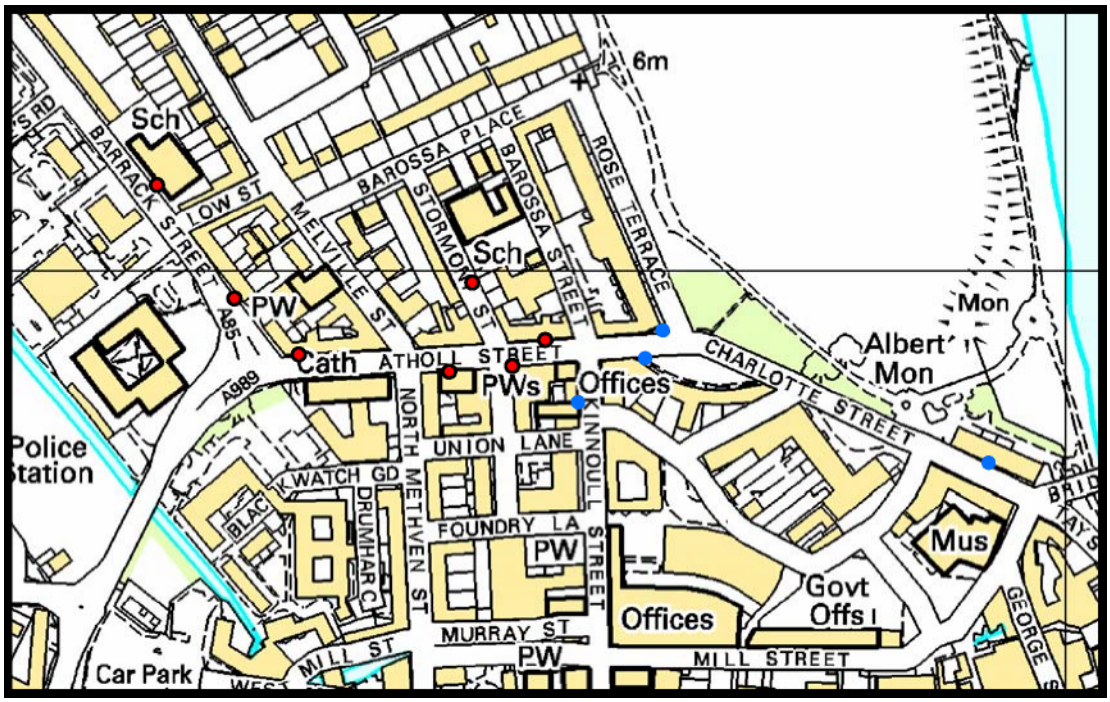

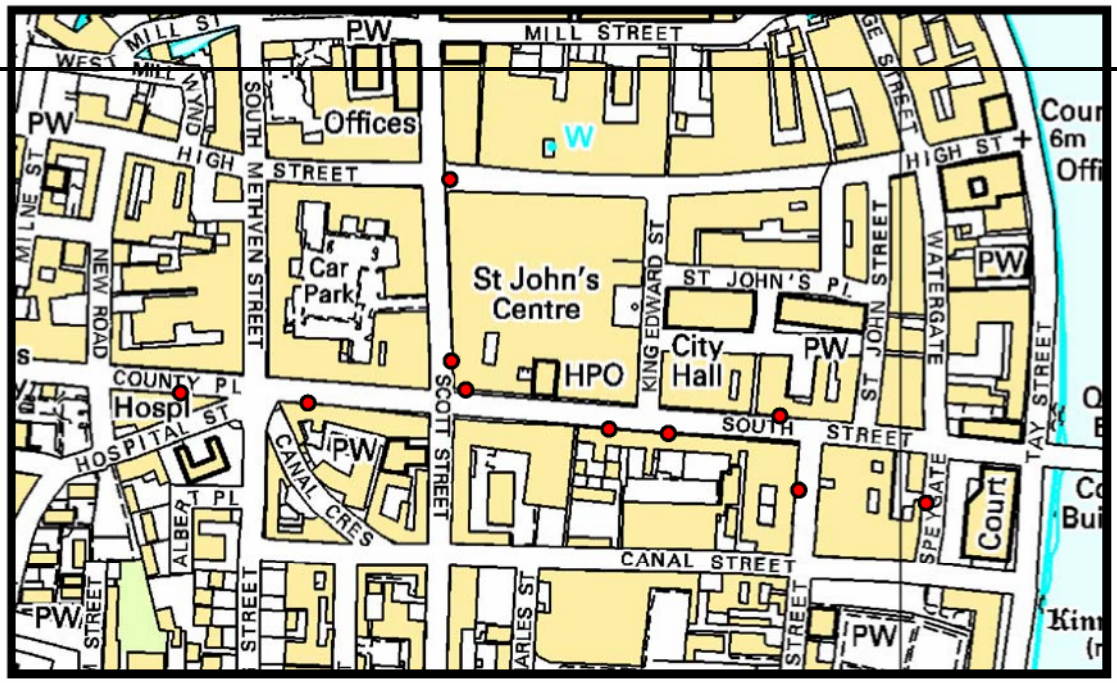
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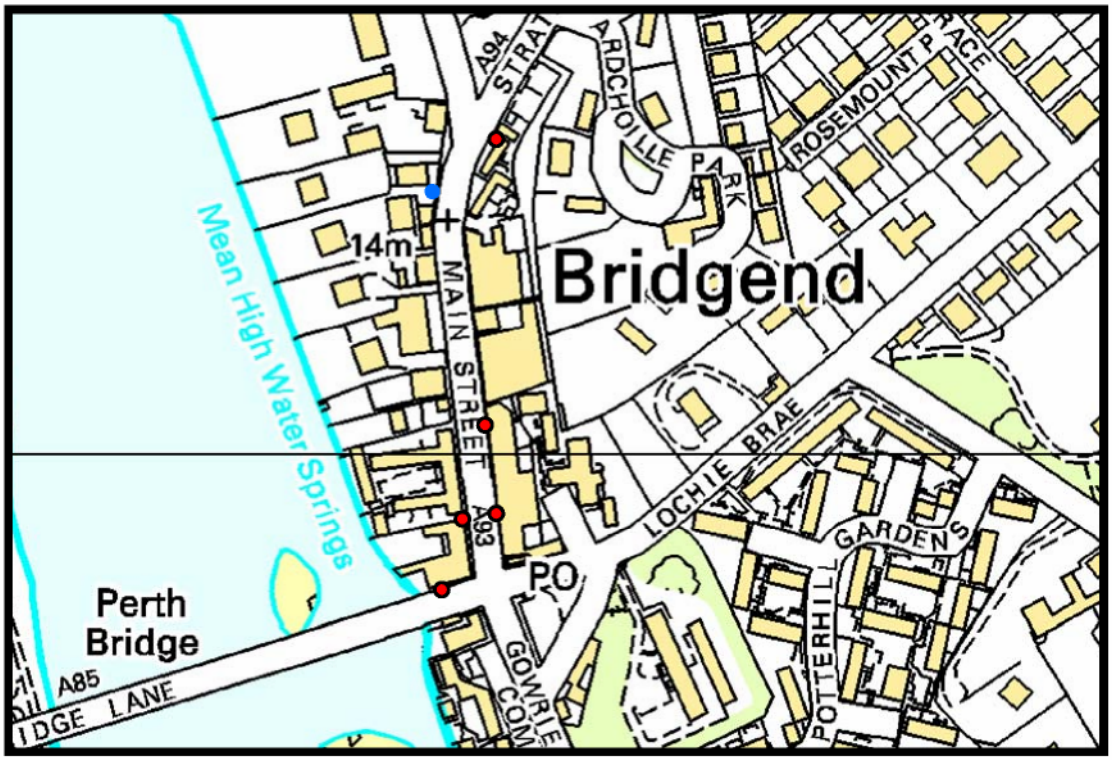
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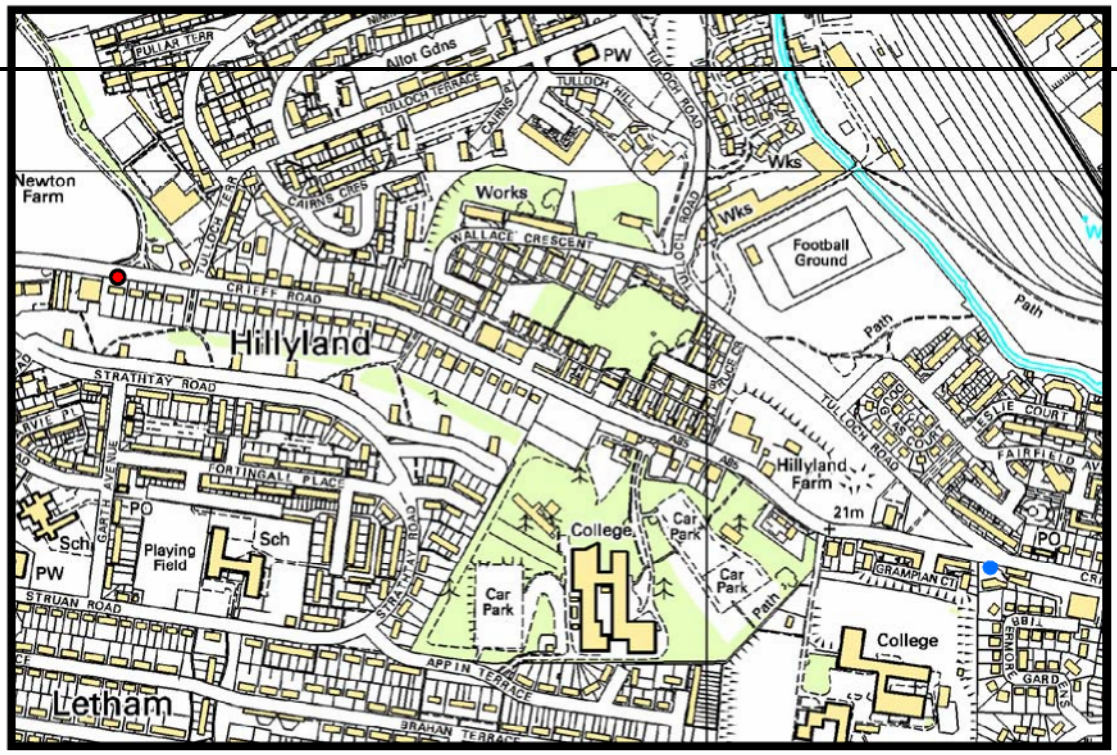
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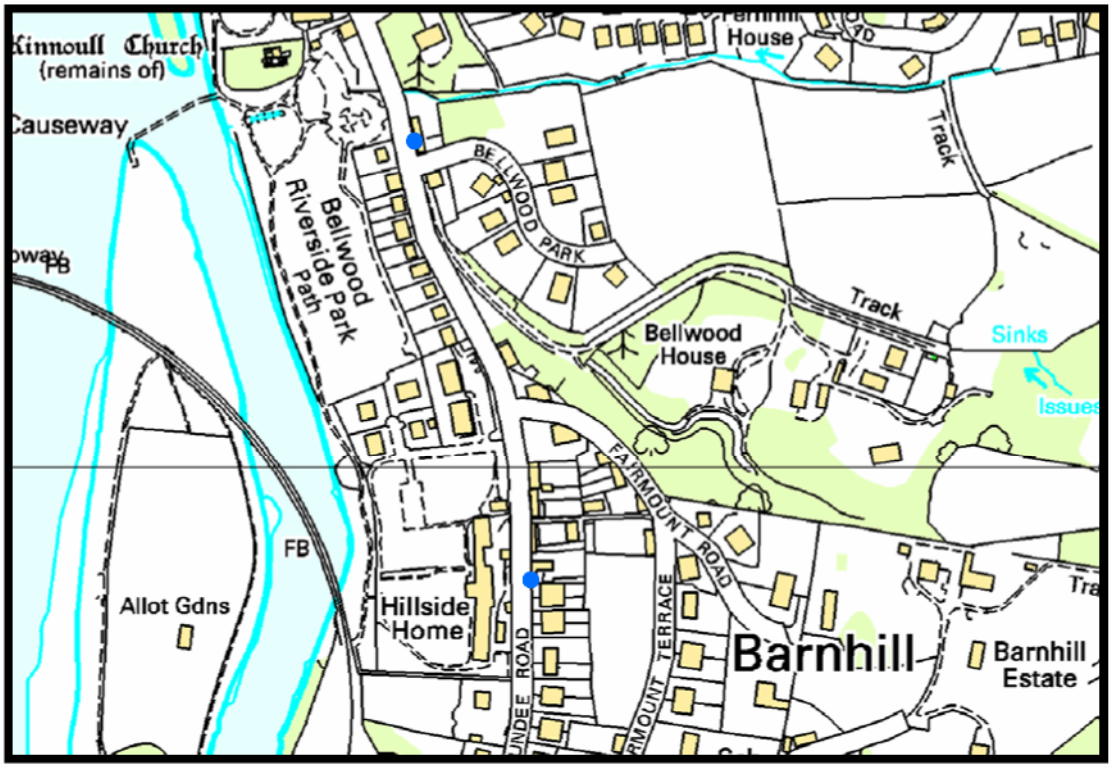
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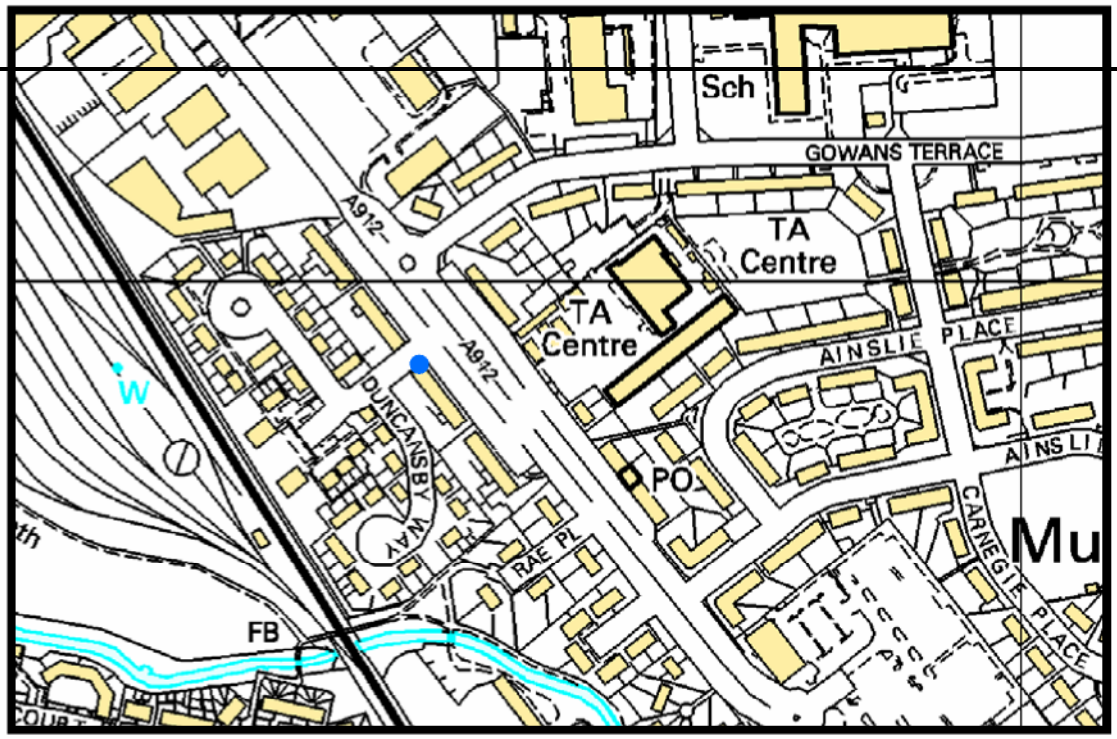
Barnhill
Barnhill Estate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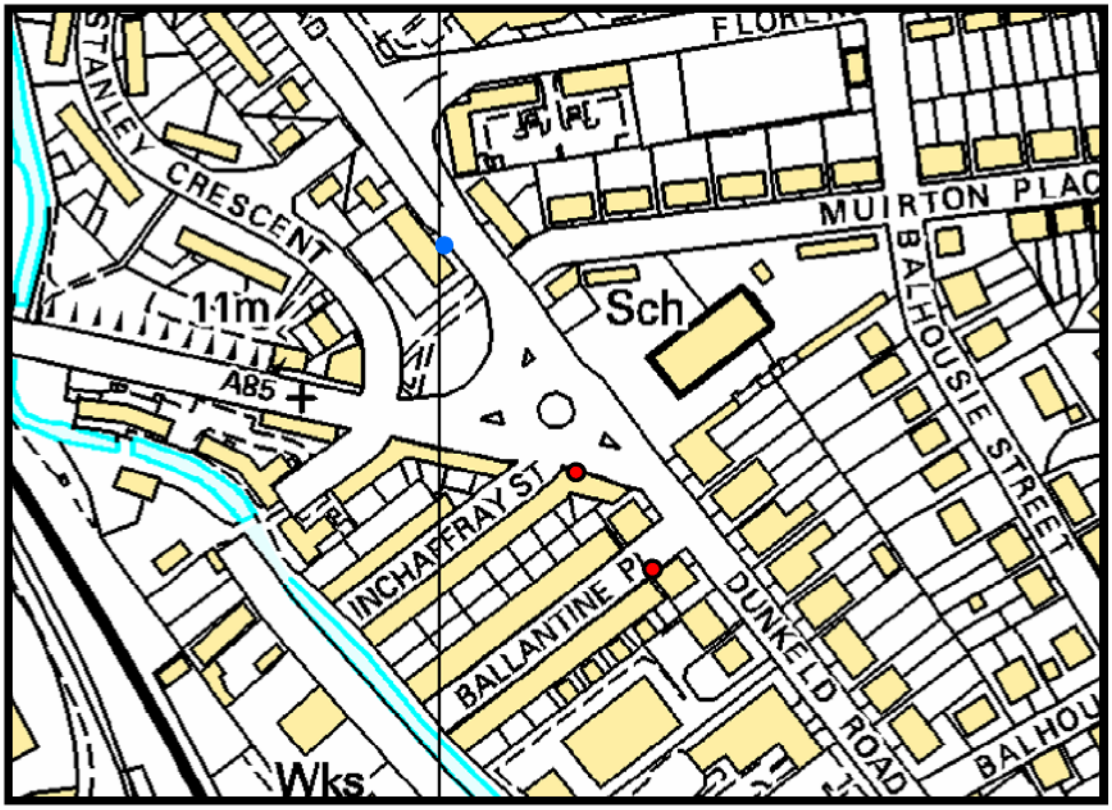
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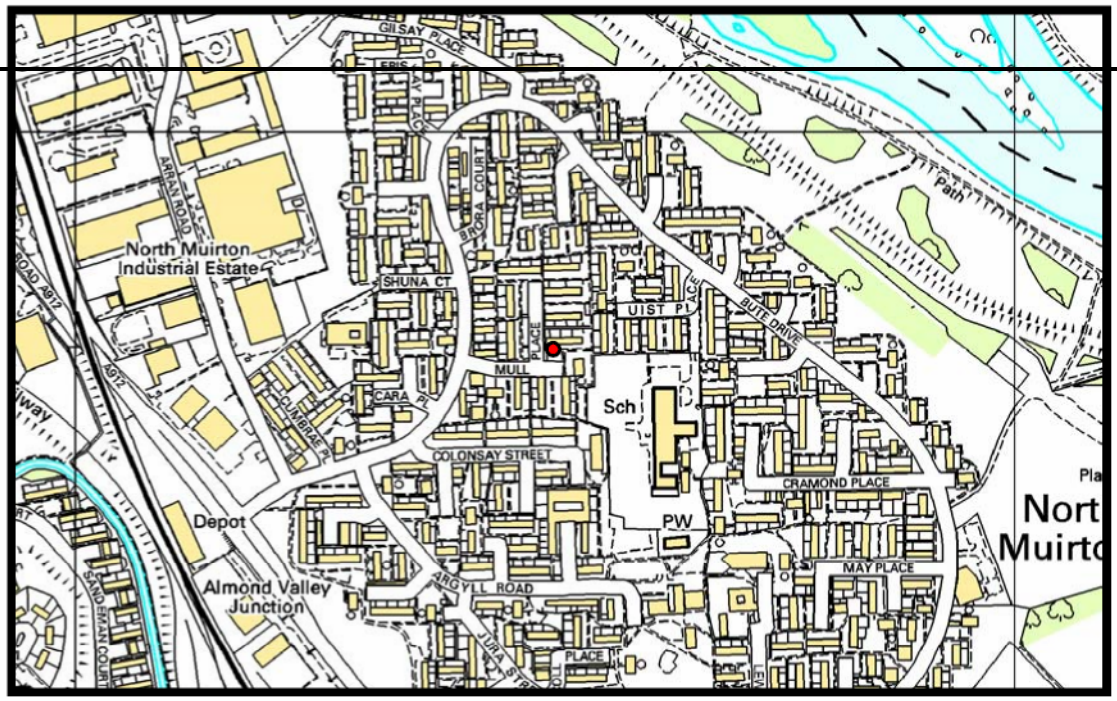
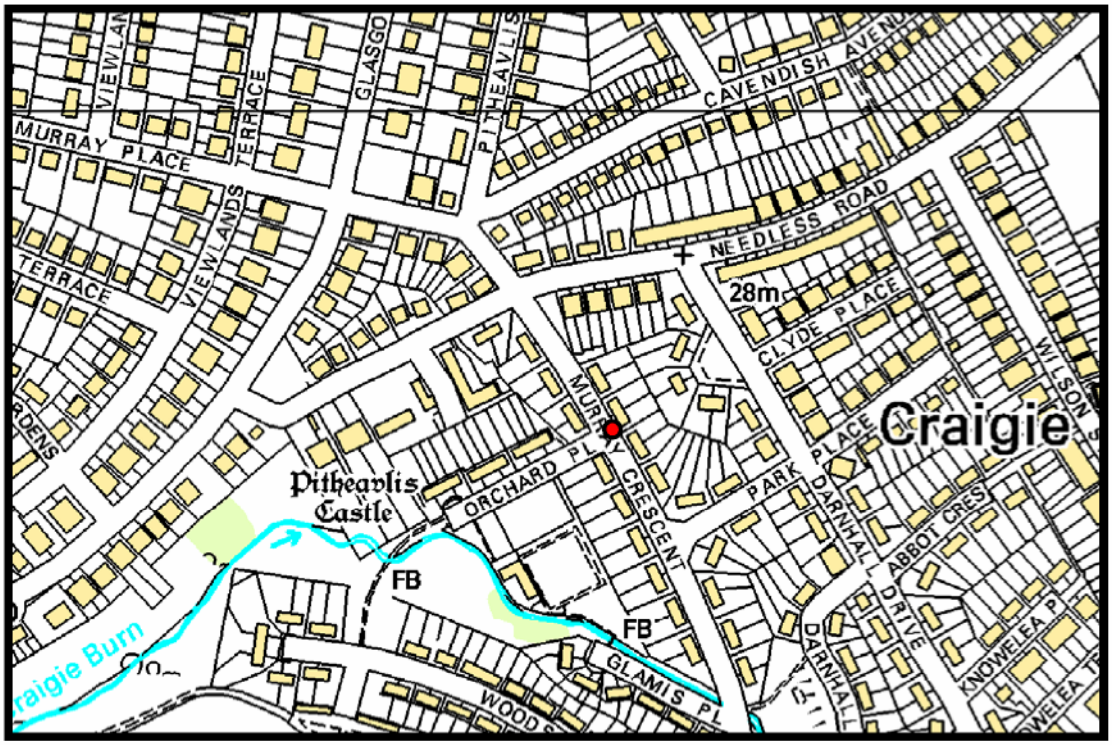
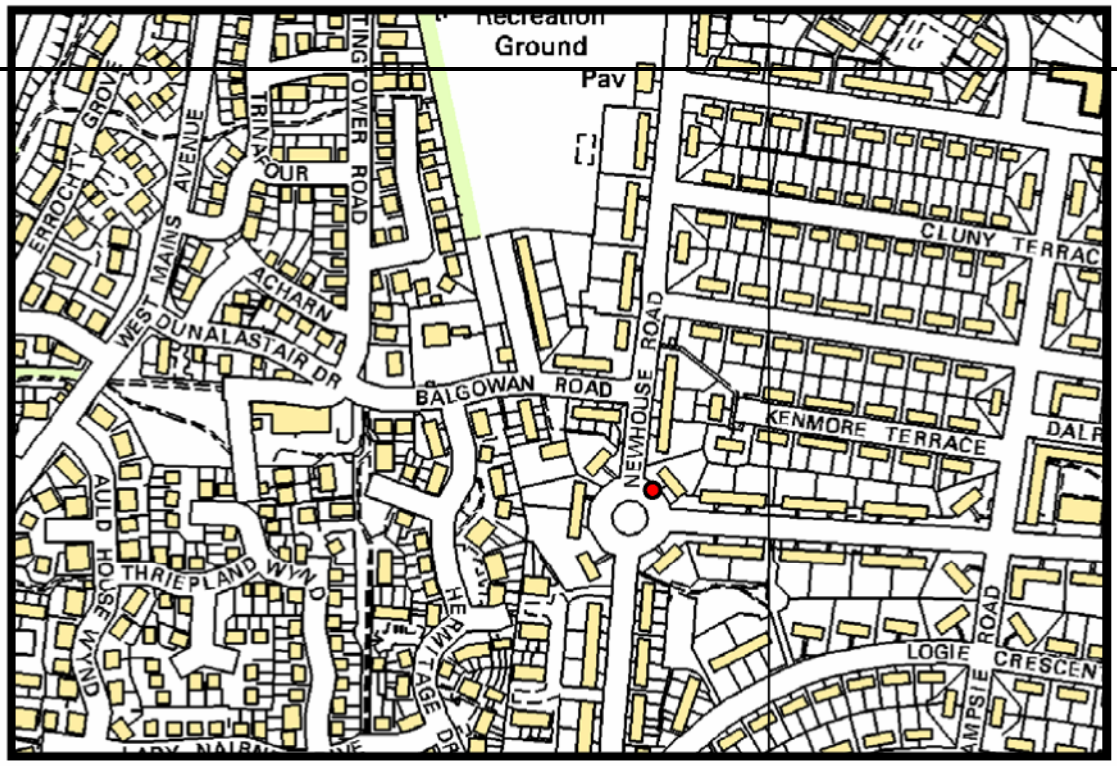
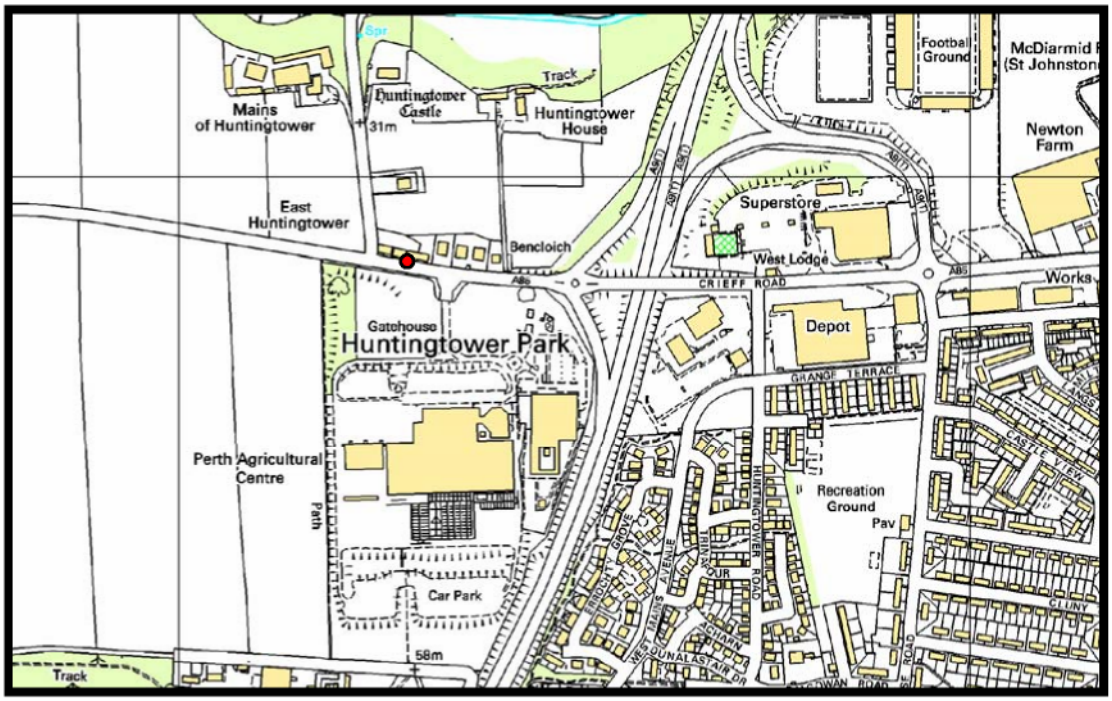

North Muirton
Industrial Estate
SHUNA CT
UIST PL
BUTE DRIVE
MULL
CARA PL
Sch
COLONSAY STREET
CRAMOND PLACE
Depot
PW
MAY PLACE
Almond Valley
Junction
ARGYLL ROAD


MURRAY PLACE
VIEWLANDS
TERRACE
CAVENDISH AVENUE
NEEDLESS ROAD
28m
CLYDE PLACE
Craigie
Pitheavlis
Castle
ORCHARD PL
MURRAY CRESCENT
PARK PLACE
DARNHALL DRIVE
ABBOT CRES
FB
FB
Craigie Burn
GLAMIS PL
WOOD


Recreation
Ground
Pav
TINGTOWER ROAD
TRINAFOUR
AVENUE
ERROCHTY GROVE
WEST MAINS
ACHARN
DUNALASTAIR DR
BALGOWAN ROAD
NEWHOUSE ROAD
CLUNY TERRAC
KENMORE TERRACE
DALR
AULD HOUSE WYND
THRIEPLAND WYND
HEMMIT
VILLAGE DR
LOGIE ROAD
CRESCEN
AMPSIE


Spr
Track
Mains
of Huntingtower
Huntingtower
Castle
31m
Huntingtower
House
East
Huntingtower
Bencloich
Gatehouse
Huntingtower Park
Perth Agricultural
Centre
Path
Car Park
58m
Track
Football
Ground
McDiarmid
(St Johnston
Newton
Farm
Superstore
West Lodge
CRIEFF ROAD
Works
Depot
GRANGE TERRACE
Recreation
Ground
Pav
CLUNY
A85
A9(T)

Appendix 2

Site Details-Perth Nitrogen Dioxide Diffusion Tube (Oct 2002 onwards)

ID	Address	Grid Ref	Height (m)	Dist from kerb (m)	Site Class
P1 L	42 Scott St, Perth, PH1 5PH	NO116235 311690,723503	3.1	3	UC
P1 C	42 Scott St, Perth, PH1 5PH		3.1	3	UC
P1 R	42 Scott St, Perth, PH1 5PH		3.1	3	UC
P2	17 Speygate, Perth, PH2 8PJ	NO120234	2.7	1.6	UC
		312018,723405			
P3 L	5 Murray Cres, Perth, PH2 0HU	NO106227 310646,722783	2.9	2.05	UB
P3 R	5 Murray Cres, Perth, PH2 0HU		2.9	2.05	UB
P5 L	8 Stormont St, Perth, PH1 5NW	NO115239 311586,723991	3	1.7	UC
P5 R	8 Stormont St, Perth, PH1 5NW		3	1.7	UC
P6	41 Mull Place, Perth, PH1 3DP	NO105257	3	1.7	UB
		310509,725767			
P7	257 Rannoch Rd/Newhouse Road Roundabout, Perth, PH1 2DW	NO089242	3	2.1	UC
		308924,724287			
P13 L	86/88 South Street Perth PH2 8PD	NO118234	3	2.6	

P13 R	86/88 South Street Perth PH2 8PD	311840,723453	3	2.6	R
P14 L	15 Main St, Bridgend, Perth, PH2 7HD	NO122239	2.4	2.3	R
P14 C	15 Main St, Bridgend, Perth, PH2 7HD	312262,723968	2.4	2.3	R
P14 R	15 Main St, Bridgend, Perth, PH2 7HD		2.4	2.3	R
P19	St Ninian's School ,Dunkeld Rd, Perth, PH1 5RF	NO113240	3.4	3.2	R
		311366,724059			
P20	2 Crieff Road Perth PH1 5RT	NO110243	3.3	1.9	R
		311059,724394			
P28	28 York Place Perth PH2 8EH	NO111235	2.5	2.4	R
		311190,723505			
P29	37 York Place Perth PH2 8EH	NO112235	2.5	4.1	R
		311252,723518			
P30 L	104 South St, Perth, PH2 8PA	NO117234 311799,723456	2.7	2.4	R
P30 C	104 South St, Perth, PH2 8PA		2.7	2.4	R
P30 R	104 South St, Perth, PH2 8PA		2.7	2.4	R
P31	45-47 South St, Perth, PH2 8PD	NO119234	2.8	3.5	R
		311917,723465			
P32	135 South St, Perth, PH2 8PA	NO117234	3	4.6	R
		311700,723483			
P33	216 South St, Perth, PH1 2NY	NO115234	3	2.5	R
		311591,723474			
P34 L	10 County Place, Perth, PH2 8EE	NO115234	3	3	R
P34 R	10 County Place, Perth, PH2 8EE	311503,723481	3	3	R
P35	17 Princes St, Perth, PH2 8NG	NO119234	2.8	1.8	RUC
		311930,723414			
P36	51 Glasgow Rd, Perth, PH2 0PE	NO107235	3.5	2.6	R

		310778,723556			
P37	Riggs Rd, Perth, PH1 1PR	NO108235	3.3	1.9	R
		310860,723563			
P38	93-109 Main St Bridgend, PH2 7HE	NO122241		7	R
		312262,724167			
P39 L	39 Main St, Bridgend, PH2 7HD	NO122240	3.2	2.1	R
P39 R	39 Main St, Bridgend, PH2 7HD	312256,724015	3.2	2.1	R
P40 L	18 Main St, Bridgend, PH2 7HB	NO122239	2.4	2.4	R
P40 R	18 Main St, Bridgend, PH2 7HB	312244,723965	2.4	2.4	R
P41 L	76 Atholl St, Perth, PH1 5NL	NO114239	2.5	2.5	R
P41 R	76 Atholl St, Perth, PH1 5NL	311465,723941	2.5	2.5	R
P42	26-28 Atholl St, Perth, PH1 6NP	NO116239	3.5	0.3	K
		311637,723951			
P43 L	17 Atholl St, Perth, PH1 5NH	NO116239 311614,723933	3	3	R
P43 C	17 Atholl St, Perth, PH1 5NH		3	3	R
P43 R	17 Atholl St, Perth, PH1 5NH		3	3	R
P44 L	22 Barrack St, Perth, PH1 5RD	NO114239	3.5	0.3	K
P44 R	22 Barrack St, Perth, PH1 5RD	311420,723980	3.5	0.3	K
P45	Ballantine Place, Perth PH1 5RR	NO110243	3	1.7	UC
		311092,724352			
P46	204 A Crieff Rd, Perth, PH1 2PE	NO093248	3.5	2	R
		309327,724878			
P47	5 East Huntingtower, Perth, PH1 3JJ	NO082248	3.5	1.8	R

		308289,724892			
P48	30 Edinburgh Rd, Perth, PH2 8BX	NO114218	3	2.5	R
		311492,721849			
P49	Opp Wood'n Garden, Glencarse, PH2 7LX	NO197216	3.5	2.8	R
		319702,721636			
P50	Linden Garden Centre, Glencarse, PH2 7LX	NO194213	3.6	2.1	R
		319445,721384			
P51	2 West Bridge St, Bridgend, Perth, PH2 7HA	NO122893	2.7	3.7	R
		312233,723927			
P52	Perth Blank				
P53	Perth Blank				
P-TB	Travel Blank				
P-TB	Travel Blank				
P54L	Real Time monitor - Scott St/High St	NO116236 311689,723628	1.6	7.2	R
P54C	Real Time monitor - Scott St/High St		1.6	7.2	R
P54R	Real Time monitor - Scott St/High St		1.6	7.2	R
P55	7 West High st, Crieff	NN863216	3.3	0.4	UC
		286332,721638			
P56	39, High St, Crieff	NN865215	2.5	1.2	UC
		286505,721555			
P57	The Highland Trading Company, 62, High St, Crieff	NN865215	2.8	1	UC
		286550,721562			
P58 L	9 East High St, Crieff	NN865215	2.2	0.3	UC
P58R	9 East High St, Crieff	286577,721554	2.2	0.3	
P59	12 Dunkeld St, Aberfeldy	NN857491		1.7	UC
		285706,749106			
P60L	Highland Gift Shop, Bridgend, Aberfeldy, PH15 2DF	NN857491		2.3	UC
P60R	Highland Gift Shop, Bridgend, Aberfeldy, PH15 2DF	285619,749018		2.3	
P61L	St Andrew's & Parish Church, Atholl St Perth, PH1 5NH	NO115239 311570,723929	1.6	3.7	R
P61C	St Andrew's & Parish Church, Atholl St Perth, PH1 5NH		1.6	3.7	R

P61R	St Andrew's & Parish Church, Atholl St Perth, PH1 5NH		1.6	3.7	R
P62	84 Dundee Rd, Perth PH2 7BA	NO125229	3	1.7	R
		312503,722912			
P63	30 Dundee Rd, Perth PH2 7AQ	NO124232	3	1.4	R
		312414,723242			
P64	The Lodge, Isla Rd, Bridgend, Perth PH2 7HG	NO122241	3.5	1.4	R
		312234,724174			
P65	5-7 Charlotte Street, Perth PH1 5LW	NO119238	5	2	R
		311943,723864			
P67	1 Atholl Street, Perth PH1 5NH	NO116239	3.5	2	R
		311699,723938			
P68	2 Atholl Street, Perth PH1 5NP	NO117239	3.5	0.8	R
		311719,723954			
P69	United Free Church of Scotland, Kinnoull Street, Perth PH1 5EZ	NO116239	3.5	2.6	R
		311659,723907			
P70	Leith Buildings, 28 Dunkeld Rd, Perth PH1 5AJ	NO110244	3.5	2.1	R
		311009,724485			
P71	134-140 Dunkeld Road, Perth PH1 5AS	NO106249	3.5	1.5	R
		310614,724970			
P72	82 Crieff Road, Perth PH1 2RP	NO103240	4	2.4	R
		310354,724028			

Appendix 3

Automatic Monitoring Reports 2006

Air Pollution Report

Produced by AEA Energy & Environment on behalf of Perth and Kinross Council

PERTH, Atholl Street

01 January to 31 December 2006

These data have been fully ratified by AEA Energy & Environment

POLLUTANT	NO_2	NO_X	PM_{10}+
Number Very High	0	-	0
Number High	0	-	0
Number Moderate	0	-	25

Number Low	8677	-	8510
Maximum 15-minute mean	292 µg m^{-3}	1316 µg m^{-3}	688 µg m^{-3}
Maximum hourly mean	195 µg m^{-3}	898 µg m^{-3}	192 µg m^{-3}
Maximum running 8-hour mean	165 µg m^{-3}	625 µg m^{-3}	81 µg m^{-3}
Maximum running 24-hour mean	107 µg m^{-3}	397 µg m^{-3}	62 µg m^{-3}
Maximum daily mean	102 µg m^{-3}	386 µg m^{-3}	51 µg m^{-3}
Average	57 µg m^{-3}	153 µg m^{-3}	22 µg m^{-3}
Data capture	99.1 %	99.1 %	97.1 %

+ PM_{10} instrument is a TEOM

All mass units are at 20'C and 1013mb

NO_X mass units are NO_X as NO_2

Pollutant	Air Quality Regulations (2000) and Air Quality (Scotland) Amendment Regulations 2002	Exceedences	Days
Nitrogen Dioxide	Annual mean > 40 µg m^{-3}	1	-
Nitrogen Dioxide	Hourly mean > 200 µg m^{-3}	0	0
Nitrogen Oxides (NO_2)	Annual mean > 30 µg m^{-3}	1	-

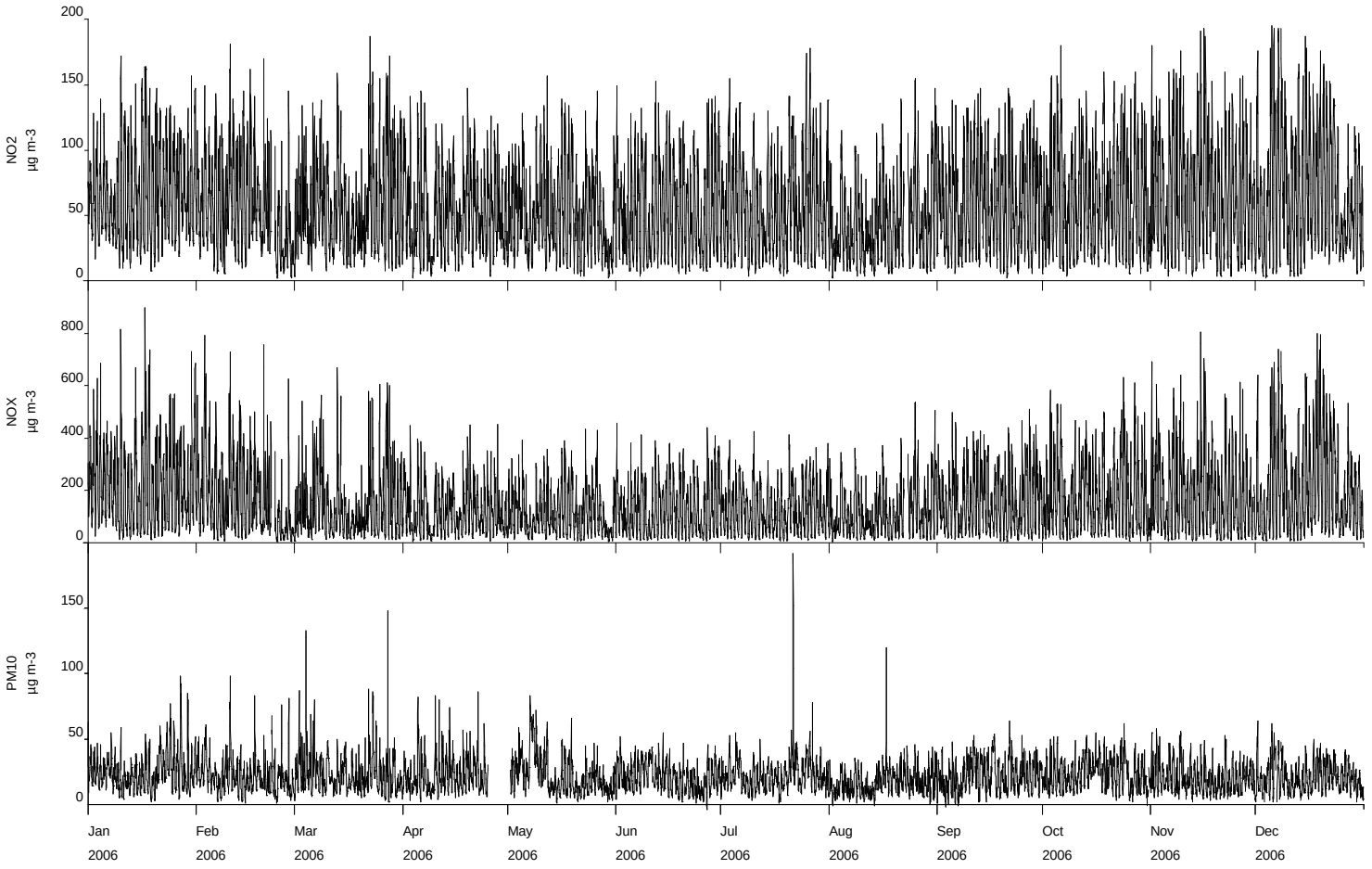
PM_{10} Particulate Matter (Gravimetric)	Daily mean > 50 µg m^{-3}	6	6
PM_{10} Particulate Matter (Gravimetric)	Annual mean > 40 µg m^{-3}	0	-
PM_{10} Particulate Matter (Gravimetric)	Annual mean > 18 µg m^{-3}	1	-

Air Pollution Report

Produced by AEA Energy & Environment on behalf of Perth and Kinross Council

Perth, Atholl Street - Air Monitoring

Hourly Mean Data for 01 January to 31 December 2006



Produced by AEA Energy & Environment on behalf of Perth and Kinross Council

PERTH, High Street

01 January to 31 December 2006

These data have been fully ratified by AEA Energy & Environment

POLLUTANT	NO_2	NO_X	PM_{10}+
Number Very High	0	-	0
Number High	0	-	0
Number Moderate	0	-	21
Number Low	8307	-	8647
Maximum 15-minute mean	195 µg m^{-3}	774 µg m^{-3}	186 µg m^{-3}
Maximum hourly mean	147 µg m^{-3}	584 µg m^{-3}	99 µg m^{-3}
Maximum running 8-hour mean	102 µg m^{-3}	429 µg m^{-3}	68 µg m^{-3}
Maximum running 24-hour mean	66 µg m^{-3}	278 µg m^{-3}	60 µg m^{-3}
Maximum daily mean	64 µg m^{-3}	264 µg m^{-3}	49 µg m^{-3}

Average	28 µg m^{-3}	59 µg m^{-3}	16 µg m^{-3}
Data capture	94.8 %	94.8 %	98.9 %

+ PM_{10} instrument is a TEOM

All mass units are at 20'C and 1013mb

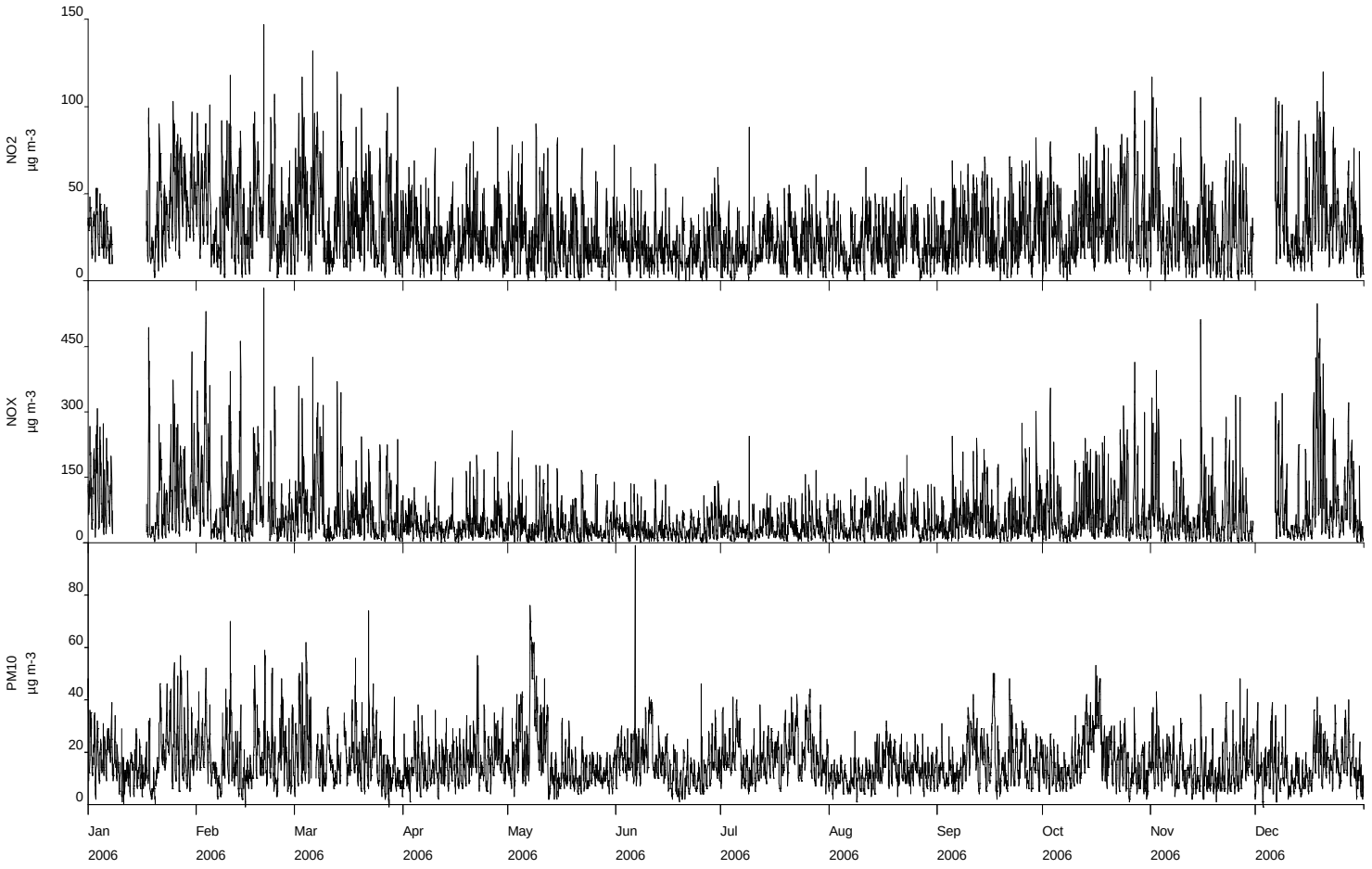
NO_X mass units are NO_X as NO_2

Pollutant	Air Quality Regulations (2000) and Air Quality (Scotland) Amendment Regulations 2002	Exceedences	Days
Nitrogen Dioxide	Annual mean > 40 µg m^{-3}	0	-
Nitrogen Dioxide	Hourly mean > 200 µg m^{-3}	0	0
Nitrogen Oxides (NO_2)	Annual mean > 30 µg m^{-3}	1	-
PM_{10} Particulate Matter (Gravimetric)	Daily mean > 50 µg m^{-3}	2	2
PM_{10} Particulate Matter (Gravimetric)	Annual mean > 40 µg m^{-3}	0	-
PM_{10} Particulate Matter (Gravimetric)	Annual mean > 18 µg m^{-3}	1	-

Produced by AEA Energy & Environment on behalf of Perth and Kinross Council

Perth, High Street - Air Monitoring

Hourly Mean Data for 01 January to 31 December 2006



Appendix 4

NO_2 Diffusion Tube Data 2006

NO_2 RESULTS 2006															
SITE NUMBER	**SITE ADDRESS**	**CAT**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**MEAN**	**ADJUSTED (x1.01)**
1L	42 SCOTT ST PERTH	UC	51.9	50.2	50.2	23.4	45	34	40.2	39.2	45.2	46.6	41.3	37.6	42	**42**
1C	42 SCOTT ST PERTH	UC	50	55.8	56.1	35.8	41.2	35	35.8	39.2	47.2	50.9	42	39.5	44	**44**
1R	42 SCOTT ST PERTH	UC	55.4	57.4	55.9	35.7	43.7	36.7	33.7	40.8	42.8	44.4	41.4	40.2	44	**44**
2	17 SPEYGATE PERTH	UC	34.4	34.7	30.9	21.4	18.4	17.4	14.8	21.5	26.4	28.1	30.1	23.6	25	**25**
3L	15 MURRAY CRES PERTH	UB	36.5	31.4	23.3	14.5	15.9	11	13.6	13.7	20.3	22.5	22.5	22.6	19	**21**
3R	15 MURRAY CRES PERTH	UB	35.2	31.2	23.8	15.3	14.8	11.7	16.1	16.6	21.5	24.3	26.3	24.9	22	**22**
5L	8 STORMONT ST PERTH	UC	35.9	28.4	22.7	21.2	19.6	14.4	15.7	16	21.6	25.8	27.7	31.2	23	**24**
5R	8 STORMONT ST	UC	35.4	29.4	22.2	22.5	17.4	17	17.3	16.6	21.6	25.3	31.6	30.1	24	**24**

NO_2 RESULTS 2006

SITE NUMBER	SITE ADDRESS	CAT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN	ADJUSTED (x1.01)
6	PERTH 41 MULL PLACE PERTH	UB	24	21	13.6	8	7.5	6.1	9	9.8	12.6	14.6	17.4	18.8	14	**14**
7	RANNOCH RD/ NEHOUSE RD ROUNDABOUT PERTH	UC	28.6	30	20.3	13.3	16	9	11.8	15.8	21.5	23.3	20.2	20.7	19	**19**
13L	86/88 SOUTH ST PERTH	R	27.1	46.5	41.9	43.5	35.9	39.5	39.3	31.6	40.1	45.6	44.5	46.6	40	**41**
13R	86/88 SOUTH ST PERTH	R	46.1	45.5	38.6	43.2	37.6	36.5	34.3	33.5	40.3	43.8	47.6	41.8	41	**41**
14L	9 MAIN ST PERTH	R	40.1	48.7	51.9	29	42.1	25.9	34.8	35.3	38.8	44	37.2	34	38	**39**
14C	9 MAIN ST PERTH	R	41.8	43.5	51.8	28.4	45.7	28.9	36.3	35.5	41.2	42	37.9	35.2	39	**39**
14R	9 MAIN ST PERTH	R	42.5	43.2	54.2	34.8	45.5	36.5	36.9	37.8	40.6	39.7	39.3	35.8	41	**41**
19	ST NINIANS SCHOOL DUNKELD RD PERTH	R	46.5	44.5	36.6	32.1	31.8	24.4	29.8	24.4	38	33.5	45	39.8	36	**36**
20	2 CRIEFF RD PERTH	R	44.6	15.3	33.9	23.5	28	19.9	23.5	24.5	30.8	32	37.7	34.3	29	**29**
28	28 YORK PL PERTH	R	57.5	55	45.9	40.2	47.8	39.3	39	38.9	48.2	49.8	52.6	48.2	47	**47**
29	37 YORK PL PERTH	R	53.5	52.1	47.4	28.6	31.8	28.2	30.9	34	42	42.7	38.1	35.9	39	**39**
30L	104 SOUTH ST PERTH	R	48.9	47.3	39.4	46.8	38.5	39.4	37.3	34.4	41.9	46	45.4	45.8	43	**43**

NO_2 RESULTS 2006

SITE NUMBER	SITE ADDRESS	CAT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN	ADJUSTED (x1.01)
30C	104 SOUTH ST PERTH	R	56.3	42.8	41.7	42.8	39.2	36.8	37.3	33.8	36.2	46.6	52	47.3	43	**43**
30R	104 SOUTH ST PERTH	R	50.5	47.3	40.7	36.4	38	39.2	32.3	34.1	40.5	44.7	49.5	47.5	42	**42**
31	45-47 SOUTH ST PERTH	R	38.1	42.1	43	27.2	16	22.7	23.9	31.8	31.7	38.4	35.8	31.7	32	**32**
32	135 SOUTH ST PERTH	R	47.7	51.1	48.7	36.3	33.2	27.5	27.3	38.1	36.5	39.5	42.9	37.4	39	**39**
33	216 SOUTH ST PERTH	R	49.9	49.6	45.8	37.4	36.8	32.6	32.4	32.4	34.8	45.7	48.7	42.2	41	**41**
34L	10 COUNTY PL PERTH	R	62.9	48.3	55.1	52.7	53.2	43.4	50.1	31.5	50.5	56	61.6	52.7	52	**52**
34R	10 COUNTY PL PERTH	R	57.2	52.8	52.2	50.2	51.5	41.8	44.6	41.3	50.6	51.3	61.9	49.1	50	**51**
35	17 PRICES ST PERTH	RUC	x	41.2	31.9	27.7	x	17.3	26.4	22.9	32	32.6	34.4	28.5	29	**30**
36	51 GLASGOW RD PERTH	R	53.3	49.1	39.8	28.6	28.7	27.1	27.1	27.8	34.6	38.5	38.9	32.5	36	**36**
37	RIGGS RD PERTH	R	43.9	x	32.2	21.5	26.7	16.9	21.9	21.7	29.6	33.1	30.8	28.5	28	**28**
38	93-109 MAIN ST PERTH	R	38.4	39.3	43.4	22.9	34.5	25.3	31.2	29.7	31.3	30.9	32.2	30	32	**33**
39L	39 MAIN ST PERTH	R	54.6	54.7	60.6	42.5	47.2	42.9	47	42.5	48.3	50.2	46	40	48	**49**
39R	39 MAIN ST PERTH	R	53.4	59.8	68.5	44.4	49.8	47.3	42.5	46.6	49.3	49.3	47.5	37.1	50	**50**
40L	18 MAIN ST PERTH	R	52.2	53.3	46.7	46.6	39.8	38.5	43.8	41.6	45	48.3	50.4	45.6	46	**46**
40R	18 MAIN ST PERTH	R	53.8	50.2	49.6	47.5	46.4	42.6	46.7	39.4	44.1	43	55.6	47.6	47	**48**

NO_2 RESULTS 2006

SITE NUMBER	SITE ADDRESS	CAT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN	ADJUSTED (x1.01)
41L	76 ATHOLL ST PERTH	R	59.8	63.7	65.6	40.9	46	33.7	43.1	44	54.2	57.5	43.3	46.5	50	**50**
41R	76 ATHOLL ST PERTH	R	55.8	66.5	62	41.4	40.4	41.4	43.5	53.4	58.9	42.2	44.9	48.2	50	**50**
42	26-28 ATHOLL ST PERTH	K	55.5	53.7	56.3	42.8	41.6	38.2	33	48.3	45.4	48.4	49.3	44.8	46	**47**
43L	17 ATHOLL ST PERTH	R	58.5	54.2	55.5	48.5	49.7	50.6	53.1	45	54.4	51.3	57.3	x	53	**53**
43C	17 ATHOLL ST PERTH	R	60.7	57.5	55.3	51.4	55.5	47.2	51.1	47.5	55.6	55.3	56.7	54	54	**55**
43R	17 ATHOLL ST PERTH	R	63.1	55.7	58.3	51.9	51.3	46.5	49.6	47.5	54.6	55	58.2	57.1	54	**55**
44L	22 BARRACK ST PERTH	K	53.1	53.3	52.1	32.7	33.5	27.2	27.6	40.4	44.4	39.5	46.8	44.6	41	**42**
44R	22 BARRACK ST PERTH	K	53.9	59.4	49.5	37.6	31.2	30.5	27.6	44	45.5	44.1	46.8	41.3	43	**43**
45	BALLANTINE PL PERTH	UC	32.4	33.4	32.1	18.4	21.7	14.2	14.8	18.8	25.1	27.2	28.4	23.2	24	**24**
46	204A CRIEFF RD PERTH	R	38.9	37.3	30.1	23.8	30.3	24.7	27.8	24.6	34.6	31.7	34.4	30.6	31	**31**
47	5 EAST HUNTINGTOWER PERTH	R	37.6	32.9	30.3	17	23.9	15.9	20.7	8.6	32.7	33.4	29.4	22.2	25	**26**
48	30 EDINBURGH RD PERTH	R	40.8	31.8	33.3	16.8	23.7	16.4	18.5	14.7	28.2	28.8	29	24.9	26	**26**

NO_2 RESULTS 2006

SITE NUMBER	SITE ADDRESS	CAT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN	ADJUSTED (x1.01)
49	WOOD N GARDEN GLENCARSE	R	35.2	28.3	26.8	14.5	28.5	17.7	22.3	19.6	25.1	29.4	26	26.1	25	**25**
50	LINDEN GARDEN CENTRE GLENCARSE	R	36.6	27	27.1	18	29.6	15.1	22.6	18	22	29.5	27.2	24.4	25	**25**
51	2 WEST BRIDGE ST PERTH	R	36.9	33.8	34.4	28.7	24.2	20.1	24.3	22.3	26.8	32.1	33.3	26.2	29	**29**
52	PERTH BLANK	R	4.3	0	0.5	0.9	0	1.4	0.2	0.1	0.2	0.4	0.1	0.1		
53	PERTH BLANK	R	1.2	0.2	0.1	0.2	0.2	1.5	0.2	0.1	0.1	0.5	0.1	0.1		
54L	REAL TIME MONITOR HIGH ST PERTH	R	43.8	40.5	35.4	25	25.6	20	23.6	24.9	27.3	29.4	31.8	29.7	30	**30**
54C	REAL TIME MONITOR HIGH ST PERTH	R	41.1	34.6	32.8	29.2	25.3	x	22.8	25.8	24.4	33.2	35.5	30.5	30	**31**
54R	REAL TIME MONITOR HIGH ST PERTH	R	35.8	40	32.5	25.2	24.7	21	24.7	25.7	27	28.5	33.4	29.1	29	**29**
55	7 WEST HIGH ST CRIEFF	UC	43.7	46.1	47.2	27.8	34.4	31.3	34	38.9	37.1	44	32.5	27.2	37	**37**
56	39 HIGH ST CRIEFF	UC	41.1	38.8	39	32.1	38.7	33	x	30.3	28.4	34.3	25.7	31.4	34	**34**
57	62 HIGH ST CRIEFF	UC	38.9	36.6	40.6	23.8	29.1	25.5	23.2	27.3	32.4	35.2	29.5	32.1	31	**31**
58L	9 EAST HIGH ST CRIEFF	UC	44.3	42.5	41.2	30.1	39.8	33.5	35.1	35.5	42.1	42.4	25.9	41.5	38	**38**

NO_2 RESULTS 2006

SITE NUMBER	SITE ADDRESS	CAT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN	ADJUSTED (x1.01)
58R	9 EAST HIGH ST CRIEFF	UC	45.4	39.1	37.9	34.2	36.2	30.9	34.7	34.1	40.9	43.2	36.3	34.7	37	**38**
59	12 DUNKELD ST ABERFELDY	UC	30.4	32.7	32.4	22.3	28	20.1	21.8	20.8	30	29.7	29.8	27.9	27	**27**
60L	BRIDEND ABERFELDY	UC	24.4	19.7	23.5	4	21.1	15.4	16.7	17.5	17.2	20	20.3	20.7	18	**19**
60R	BRIDGEND ABERFELDY	UC	24.3	24.1	22.9	16.1	20.7	17.4	18.6	17.3	17.6	19.4	22.3	18.3	20	**20**
61L	REAL TIME MONITOR ATHOLL ST PERTH	R	61.5	53	52.3	45.5	47.9	56.2	54.2	38.1	55.8	59.4	61.9	55.8	53	**54**
61C	REAL TIME MONITOR ATHOLL ST PERTH	R	61.7	50.4	53.2	x	x	54.1	56.4	46.9	56.8	57.5	61.8	62.5	56	**57**
61R	REAL TIME MONITOR ATHOLL ST PERTH	R	59.4	49.1	52.6	50.8	53	51.7	52.2	47.6	60.1	61.2	62.4	59.5	55	**56**
62	84 DUNDEE RD PERTH	R	42.8	39.2	41.3	28.2	30.1	21	19	26.1	39.3	36.4	35.9	32.3	33	**33**
63	30 DUNDEE RD PERTH	R	43.4	43.6	49.4	27.6	29.4	35.2	32	36.2	39.3	43.5	44.2	35.1	38	**39**
64	THE LODGE ISLA ROAD PERTH	R	55.9	56.1	53.5	49.9	51.9	43.2	35.4	45.8	52.1	49.3	50.6	45	49	**50**
65	5-7 CHARLOTTE ST PERTH	R	39.5	37.2	41	21	27.2	22.2	23.2	27.6	35.1	37.9	20.3	31.2	30	**31**

NO_2 RESULTS 2006

SITE NUMBER	SITE ADDRESS	CAT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN	ADJUSTED (x1.01)
67	1 ATHOLL ST PERTH	R	51.7	42.1	38.8	40.9	37.6	34.6	35.3	30.6	40.1	43	48.6	46.9	41	**41**
68	2 ATHOLL ST PERTH	R	42.3	34	37.1	27.3	23.7	24.2	24.2	28.1	32	26	40.9	35.6	31	**32**
69	KINNOULL ST PERTH	R	59.3	65.3	64.7	48.6	40.2	29.6	26.9	33.8	38.4	40.7	55.7	49.9	46	**47**
70	LEITH BUILDINGS DUNKELD RD PERTH	R	43.8	41.1	33.2	29.2	26.1	20.1	24.1	27.5	32.5	34.2	37.7	32.7	32	**32**
71	134-140 DUNKELD RD PERTH	R	34	29.2	21.4	12.7	16.5	10.6	11.8	13.2	19.7	22.2	21.8	18.2	19	**19**
72	82 CRIEFF RD PERTH	R	50	46.2	41.5	x	32.7	28.3	32.2	31.8	39.3	36.8	41.9	41	38	**39**

Appendix 5

SEPA Information Request

Summary of Response from Area Teams (January 2007)

1	**Are you aware of any changes that have been made to any Part A or B processes that will result in a positive or negative effect on the local air quality? (this includes: change of fuel, increased or decreased emissions rates, changes to stack heights, the introduction of a new process etc).**
	Shierglas Quarry, Killiecrankie (PPC/B/1004392) – the addition of a small cement batching plant within the Quarry site boundary.
2	**Are you aware of any SEPA regulated process that has increased its emissions to air by more than 30%**
	No
3	**Are you aware of any new industrial or new commercial developments that are likely to have a significant impact on the local air quality?**
	No
4	**Are you aware of any Part A or B processes that have ceased to operate?**
	"The Brig" petrol station, Bridge of Earn (Petrol Vapour Recovery) is due to close in Spring 07. Several car resprayers PPC Permit now revoked as annual solvent threshold limit has been raised from 1t to 2t.
5	**Are you aware of any new petrol stations with an annual throughput of over 2000 cubic metres of petrol?**
	Somerfields, Scone, Perth. Permitted in June 2006 as >1000m3. Annual throughput not known (new station)

6	**Are you aware of any new mineral extraction processes that are likely to have a significant impact on the local air quality?**
	Wester Bleaton, nr Kirkmichael: planned reopening of Limestone quarry. Will be PPC permitted under mobile crusher permit when crushing is taking place.
7	**Are there any sources that you would like to see included in the Council's assessment?**
	No

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