Banbridge District Council

Updating and Screening Assessment of Local Air Quality

April 2006

Executive Summary

The Environment (Northern Ireland) Order 2002 places a requirement on local authorities to carry out periodic reviews of current and likely future air quality within their district. This involves undertaking an assessment of whether statutory air quality standards and objectives are being achieved or are likely to be achieved within relevant periods. Seven specific pollutants for consideration are carbon monoxide (CO), benzene, 1,3-butadiene, nitrogen dioxide (NO2), lead, sulphur dioxide (SO2) and PM_{10} (particles under 10μm in diameter).

This is a report on an Updating and Screening Assessment of air quality across the Banbridge District Council District. The Council completed a two stage Review and Assessment of Air Quality Council for the period 2001 to 2005 and, to date, no AQMA's have been declared.

The first round of review and assessment was a four-stage process with the necessity to progress to each stage dependent upon the standard of air quality in each local authority area. Authorities were only required to progress to a further stage if it was determined that an exceedence of air quality standards and objectives was likely.

In Banbridge District, Particulate Matter (PM_{10}), sulphur dioxide (SO_2) and nitrogen dioxide (NO_2) were considered to a Stage 2/3 review and assessment. It was concluded that there was no likelihood of exceedence of the annual objectives for these pollutants.

In the second round of review and assessment, local authorities are required to carry out an Updating and Screening Assessment (USA) by the end of April 2006. The USA is intended to identify significant changes that may have occurred since the first round of Review and Assessment, which may lead to a risk of the air quality objectives being exceeded. Changes can include new monitoring data, revised objectives or new or increased emission sources. The seven prescribed pollutants are addressed by the assessment, with revised objectives for carbon monoxide and benzene.

The conclusion of this report is that Banbridge District Council is not required to proceed to a more detailed assessment for any of the prescribed pollutants.
Banbridge District Council will continue to maintain the current good standard of air quality in the District by adopting the recommendations outlined in its recently published Local Air Quality Strategy 2006- 2010.

CONTENTS **PAGE NO.**

EXECUTIVE SUMMARY

APPENDICES

Appendix 1	Map of NI showing Banbridge District
Appendix 2	Map showing main traffic routes through Banbridge District
Appendix 3	Regulated Processes/Activities in Banbridge District
Appendix 4	Nitrogen dioxide monitoring results 2001 - 2005
Appendix 5	NO_2 Diffusion Tube Locations in Banbridge District

1.0 INTRODUCTION

This is a report on an Updating and Screening Assessment of air quality across the Banbridge District Council District. It follows the Reviews and Assessments of Air Quality carried out by Banbridge District Council from 2001 to 2005.

1.1 Background

The Environment (Northern Ireland) Order 2002 places a requirement on local authorities to carry out periodic reviews of current and likely future air quality within their district. This involves undertaking an assessment of whether statutory air quality standards and objectives are being achieved or are likely to be achieved within relevant periods. Seven specific pollutants for consideration are carbon monoxide (CO), benzene, 1,3-butadiene, nitrogen dioxide (NO_2), lead, sulphur dioxide (SO_2) and PM_{10} (Particles under 10μm in diameter). Guidance on the methodology to be employed in carrying out the reviews and assessments is published by the Department of Environment, Transport and Regions Affairs (DETR). The first round of review and assessment was a four-stage process. The first stage was an initial desk-top study to identify significant sources of pollution in areas where there are relative "receptors". Where potential exceedences of the air quality standards were identified it was necessary to progress to the second stage which included simple monitoring and modelling of the identified pollutants to identify whether there were likely to be exceedences. Where exceedences were thought likely, a stage three study required more detailed and complex modelling and monitoring of the relevant pollutants. Following the third stage, Local Authorities were required to reach a conclusion as to whether the objectives would be achieved. Where this was deemed unlikely the Council was required to designate an Air Quality Management Area in all or the relevant part of the district. A Stage four study was required where further investigation was needed following the declaration of an Air Quality Management Area.

Banbridge District Council's report on the first stage of the review and assessment process was published in 2001. It identified three pollutants, PM_{10}, SO_2 and NO_2, with potential to result in an exceedence of the air quality standards. A Stage 2/3 study was carried out to assess these in more detail.

The Stage 2/3 report concluded that exceedences of PM_{10}, SO_2 and NO_2 were unlikely in Banbridge District and it was therefore not necessary for the Council to designate an Air Quality Management Area at this time.

1.2 Updating and Screening Assessment

To maintain the focus on air quality for all local authorities, and ensure that standards are maintained, new guidance – Local Air Quality Management Technical Guidance (03) (LAQM TG(03)) - has been issued by DEFRA. This requires local authorities to carry out an Updating and Screening Assessment (USA) by the end of April 2006. The USA is intended to identify significant

changes that have occurred since the last review and assessment, which may lead to a risk of the air quality objectives being exceeded. These might include new monitoring data, revised objectives or new or increased emissions. All seven pollutants are required to be addressed by the assessment and there are revised objectives for carbon monoxide, benzene, lead, nitrogen dioxide, sulphur dioxide, and particulate matter PM10. The assessment is based on the use of the checklists provided in LAQM TG(03) and on the Local Air Quality Management website, at *www.airquality.co.uk/archive/laqm/laqm.php,* which provides support with a package of tools and Helpdesk services. The checklists help to ensure that all sources of pollution are identified and that new sources that were not applicable in the first round of review and assessment are now considered for evaluation at this stage. Where significant changes are identified, screening or other tools are to be applied to determine whether or not there is sufficient risk of exceedence of the objective. A conclusion as to whether a detailed assessment is required for any pollutant should be reached by the end of April 2007.

The guidance also sets out a timetable for future reviews and assessments up to 2010 (LAQM TG(03)).

1.3 The UK Air Quality Strategy

The Air Quality Strategy provides a co-ordinated and proactive approach to the regulation of ambient air quality by setting standards and objectives for pollutants of greatest concern and introducing a system of Local Air Quality Management(LAQM).These have been incorporated into air quality legislation.

The main aim of the Strategy is to ensure

"that ambient air quality in public places poses no significant risk to health and quality of life."

Public places are those locations in the external environment where members of the public are likely to be regularly present and exposed to a specified pollutant over the averaging period indicated for the relevant objective.

The eight pollutants identified occur widely throughout the country and are known to pose a risk to human health as well as cause damage to crops, vegetation, eco systems, buildings and materials. They arise mainly from transport and industry.

The standards set are based purely on medical evidence of the effects of a pollutant on human health on the advice of the Expert Panel on Air Quality Standards (EPAQS). They are the atmospheric concentrations which are taken to indicate a certain level of environmental quality.

The objectives are the targets to be met to achieve the standards except where the objective derives from an Air Quality Daughter Directive limit value based on World Health Organisation guidelines. For some pollutants the strategy allows for stricter national objectives.

Table 1 overleaf indicates the seven pollutants addressed by the Air Quality Strategy for LAQM.

The eighth pollutant, ozone, will not be the subject of LAQM. This is because ozone is trans-boundary in nature in that ozone precursors emitted in one area lead to ozone formation in another. Reduction in levels can only be effectively addressed by international action.

1.4 Local Air Quality Management (LAQM)

LAQM places a responsibility for air pollution control at local authority level. Local authorities are required to carry out a review and assessment of ambient air quality throughout their area in relation to each of the specified pollutants. They must consider present and likely future pollutant levels and assess whether the relevant objective can be achieved by the designated deadline. Where the review and assessment indicates that objectives are not likely to be met in any location the local authority must designate the area as an Air Quality Management Area (AQMA).

Table 1

Pollutants identified in the Air Quality Strategy for Local Air Quality Management

Pollutant		**Objective**	
	Concentration	**Measured as**	**To be achieved by**
Benzene	16.25ug/m^3 (5 ppb)	running annual mean	31.12.2003
1,3 Butadiene	2.25 ug/m^3 (1 ppb)	running annual mean	31.12.2003
Carbon monoxide	11.6 mg/m^3 (10 ppm)	running 8-hour mean	31.12.2003
Lead	0.5 ug/m^3 0.25 ug/m^3	annual mean annual mean	31.12.2004 31.12.2008
Nitrogen dioxide	200 ug/m^3 (105 ppb) not to be exceeded more than 18 times a year	1 hour mean	31.12.2005
	40 ug/m^3 (21 ppb)	annual mean	31.12.2005
Particles (PM_{10})	50 ug/m^3 (gravimetric) not to be exceeded more than 35 times a year	24 hour mean	31.12.2004
	40 ug/m^3 (gravimetric)	annual mean	31.12.2004
Sulphur dioxide	350 ug/m^3 (132 ppb) not to be exceeded more than 24 times a year	1 hour mean	31.12.2004
	125 ug/m^3 (47 ppb) not to be exceeded more than 3 times a year	24 hour mean	31.12.2004
	266 ug/m^3 (100 ppb) not to be exceeded more than 35 times a year	15 minute mean	31.12.2005

1.5 Review and Assessment of Air Quality

Review and assessment of air quality is a 3 stage process.

Stage 1 - is an initial screening of all pollution sources within the local authority area and a collection of all relevant existing data.

Stage 2 - involves a further screening of locations identified by the first stage as potential areas of concern. These are likely to be areas where the highest concentrations of pollutants are likely to occur.

Stage 3 - requires a detailed and accurate assessment of a pollutant (by estimation or monitoring) where previous stages have revealed a significant risk of an air quality objective not being met.

An AQMA will only be declared where a third stage review and assessment has indicated that air quality objectives are unlikely to be met by the relevant deadline. Having designated an AQMA the local authority must draw up an action plan to address areas where an air pollution problem has been identified.

As well as enabling local authorities to fulfil their statutory obligations the review and assessment process provides a benchmark against which to measure future improvements in local ambient air quality. It creates public awareness of air quality issues and is one of the performance indicators in relation to Best Value.

All local authorities are encouraged by Government to prepare a local air quality strategy irrespective of the necessity for an action plan in relation to AQMAs. They should aim for an integrated approach to local air quality management taking into account domestic, commercial and industrial requirements as well as local environmental needs. The active support of public, private and voluntary sectors should be encouraged in the pursuit of better air quality.

1.6 The Northern Ireland Perspective

NI maintains its own legislative framework separate from that of the remainder of the UK. The approach to air quality control has historically been reactive and fragmented with legislation designed to deal mainly with pollution incidents and complaints. The burning of solid fuel has traditionally been the main source of air pollution. In view of this, regulation and monitoring has been limited to sulphur dioxide and smoke in the few larger urban areas. The current trend is that improvements resulting from the creation of Smoke Control Areas under the Clean Air Order are now being offset by an increasing contribution to air pollution from road traffic and industrial emissions. Many urban areas experience occasional periods of high pollution levels mainly from sulphur dioxide,

particulates and nitrogen dioxide. Belfast has had the highest recorded levels of sulphur dioxide and particulates in the UK and NAQS objectives for nitrogen dioxide have been exceeded in a number of towns. In recent years, particularly following the introduction of the new air quality legislation under the Environment (Northern Ireland) Order 2002, monitoring of ambient air quality has expanded with district councils contributing to work carried out by the DOE (NI).

1.7 Banbridge District

Banbridge District covers approximately 180 square miles in the north west of County Down and has a population of around 41,392. It is a predominantly rural area with a largely agricultural economic base. The main centres of population are Banbridge town, the focus of administration and commercial activity in the District, and the smaller settlements of Dromore, Rathfriland, Gilford, Loughbrickland and Scarva.

The District is dissected by two major traffic routes. The A1 from Belfast to Dublin runs along the outskirts of Dromore, Banbridge town and Loughbrickland through a traditionally rural area. In recent years residential development has expanded in proximity to the carriageway. This is to some extent due to the area becoming a convenient satellite residential base for commuters to Belfast. The A50 from Castlewellan to Portadown passes through the centre of Banbridge town. It crosses the A1 via a flyover in the developing residential area to the east of the town.

There are four relatively large quarries located in the district. Activities include rock blasting, crushing, screening, manufacture of bitmac and asphalt coating products and cement and concrete production. Other industries include animal feed, cement and food production, timber processing, textile manufacturing and engineering works. Some of these processes are prescribed for regulation under industrial pollution control legislation. Those significant to this report will be considered in Chapter 2.

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

1.8 Consultation.

The first stage review and assessment has been carried out in consultation with neighbouring authorities, the Environment and Heritage service, the Roads Service and the Northern Ireland Housing Executive. The council will continue to consult at all stages of the review and assessment procedure. At the last stage a full consultation will be carried out with all relevant agencies, businesses and the local community.

2.0 SOURCES OF POLLUTION IN BANBRIDGE.

2.1 Transport Sources.

The only transport related source of pollution in Banbridge District is road traffic. Road traffic emissions are a major contributor of most of the specified pollutants, particularly NO_2 and PM_{10}. The main problems occur in busy urban areas. The significant traffic routes in Banbridge are the A1 Belfast to Dublin dual carriageway and the A50 single carriageway from Castlewellan to Portadown. The A26 single carriageway to Lurgan is part of a busy route to the International Airport at Aldergrove. None of these roads are prone to congestion within the District.

Table 2 below shows current and predicted traffic flows for these traffic routes.

Statistics are from automatic monitoring carried out by the Roads Service, an agency of the D.O.E. (N.I.).

Table 2

Location	1997*	2004*	2006*
Al Dromore - Banbridge	18,810	24,540	25,030[a]
Al Banbridge By-pass	14,050	19,790	20,186[a]
Al Loughbrickland – Newry	13,950	18,100	18,462[a]
A26 Banbridge – Lurgan. North of Broken Bridge.	6,170	6,880	6,983[b]
A50 Banbridge – Gilford at Laurencetown.	7,460	8,340	8,465[b]

* Annual average Daily Traffic flows – average vehicle counts per day.
[a] Predicted traffic flows based on 2% annual increase for A-roads.
[b] Predicted traffic flows based on 1.5% annual increase for other A-roads

2.2 Industrial Sources

In Banbridge District there are currently 1 Part A and 6 Part B processes/activities regulated by the Industrial Pollution and Radiochemical Inspectorate (IPRI) and 20 Part C processes/activities regulated by Banbridge DC under Industrial Pollution Control/Pollution Prevention & Control Legislation. Details of those

subject to control since the Round 1 Stage 1 Review & Assessment are listed in Appendix 3.

2.3 Sources Outside the District

Banbridge has 5 neighbouring local authority areas (Appendix 1). All have been consulted and information has been provided on prescribed processes in each area. Consideration has been given to any such process falling within 15 km of Banbridge District in relation to their potential to affect pollutant objectives being achieved in this area.

2.4 Other Sources

Some sources may be insignificant when viewed separately but may be sufficiently numerous that the combined effect of emissions make a significant contribution to air pollution. These are regarded collectively as an 'area source'. In Banbridge District domestic emissions will be considered as a potential area source.

2.5 Proposed Development

The A1 By-pass through Banbridge District is currently being upgraded, however it is not envisaged that this new development will cause any significant impact on air quality within that part of the District.

A new business and retail park is under construction at Banbridge Town. An Environmental Impact Assessment has been undertaken as a requirement of the planning process this has predicted that there will be no adverse impact on air quality.

3.0 REVIEW AND ASSESSMENT OF BENZENE

3.1 Introduction

The Government and the Devolved Administrations have adopted a running annual mean of 3.25 μg/m3 as an objective, to be achieved by the end of 2010.

Box 3.1: Checklist for benzene		
Reference no	**Source, location or data that need to be assessed**	
A	Monitoring data	3.3
B	Very busy roads or junctions in built-up areas	3.4
C	Industrial sources	3.5
D	Petrol stations	3.6
E	Major fuel storage depots (petroleum only)	3.7

3.2 Result of first round of review and assessment of air quality

The first round of review and assessment of air quality for Banbridge District Council was taken only to stage one for benzene. At this time the government stated that existing national policies, particularly with regard to improvements in vehicle technology such as greater use of catalytic converters, were expected to deliver the national air quality objective by the end of 2005. The stage one report stated that there were no sources of benzene emissions or any major roads likely to lead to an exceedence of the air quality standards in Banbridge District.

3.3 Monitoring data

Banbridge District Council has not carried out any monitoring for benzene.

3.4 Very busy roads or junctions in built-up areas

The guidance LAQM TG(03) states that EU legislation and national policy measures have led to a reduction in the benzene content of petrol from 5% to 1%. Benzene has the same criteria for busy roads as carbon monoxide. Again, there are no heavily trafficked roads across the district that are likely to lead to an exceedence of the air quality objective for benzene.

3.5 Industrial sources

There are no industrial sources of benzene emissions in Banbridge District, or in adjacent local authorities, which are likely to lead to an exceedence of the air quality objective.

3.6 Petrol stations

The main sources of benzene emissions in the UK are from petrol-engine vehicles, petrol refining and refuelling of vehicles at petrol station forecourts. LAQM TG(03) states that petrol stations with a throughput of less than 2000m^3 are unlikely to have a significant effect on benzene emissions. The majority of petrol stations in the Banbridge District Council area do not have a throughput of more than 2000m^3 per year. LAQM TG(03) states that only petrol stations with a throughput of petrol of more than 2000m^3 per year which are close to a busy road with daily flows of more than 30,000 vehicles and with relevant receptors within 10m of the pumps should be considered. Banbridge District has no petrol stations that meet this criteria.

3.7 Major fuel storage depots (petroleum only)

There are no petroleum storage depots in the Banbridge District Council area.

3.8 Conclusion for benzene

On the basis of the above information Banbridge District Council is confident that the risk of the 2010 objective for benzene being exceeded in the district is negligible. It will therefore not be necessary to proceed to a Stage 2 review and assessment for benzene.

4.0: REVIEW AND ASSESSMENT OF 1,3-BUTADIENE

4.1 Introduction

The Government and the Devolved Administrations have adopted a maximum running annual mean concentration of 2.25 μg/m3 as an air quality standard for 1,3-butadiene. The objective is for the standard to be achieved by the end of 2003.

1,3 – butadiene is a hydrocarbon compound. It is, like benzene, a human carcinogen for which there is no absolutely safe level of exposure. It has been linked to increased risk of cancers of the lymphoid system and blood forming tissues, lymphomas and leukaemia.

The main source of 1,3 – butadiene is the combustion of petrol and diesel fuels. It is also an important industrial chemical used mainly in the production of synthetic rubber for tyres. Motor vehicle exhaust emissions are, however, the single dominant atmospheric source. The use of catalytic converters on vehicles reduces emissions but their effectiveness is diminished by poor vehicle maintenance.

Box 4.1: Checklist for 1,3-butadiene		
Reference no	**Source, location or data that need to be assessed**	
A	Monitoring data	4.3
B	New industrial sources	4.4
C	Existing industrial sources with significantly increased emissions	4.5

4.2 Result of first round of review and assessment of air quality for 1,3-butadiene

The first round of review and assessment of air quality was taken only to stage one for 1,3-butadiene in Banbridge District. At this time the government stated that existing national policies were expected to deliver the national air quality objective by the end of 2005. The Stage 1 report concluded that there were no industrial sources of 1,3-butadiene emissions or any major roads likely to lead to an exceedence of the air quality standard for 1,3-butadiene in Banbridge District, and that it was likely that the air quality objective for 1,3-butadiene would be met.

4.3 Monitoring data

Banbridge District Council has not carried out any monitoring for 1,3-butadiene as it was thought unlikely that concentrations would exceed those found at the first stage.

4.4 New industrial sources

There have been no new industrial sources of 1,3-butadiene in Banbridge District, or in adjacent local authorities, since the first review and assessment.

4.5 Existing industrial sources with significantly increased emissions

There are no existing industrial sources of 1,3-butadiene in Banbridge District, or in adjacent local authorities.

4.6 Conclusion for 1,3,butadiene

Banbridge District Council has considered all relevant background and industrial criteria and found that there is very little likelihood of exceedence of the 2003 air quality objective for 1,3-butadiene.

5.0 REVIEW AND ASSESSMENT OF CARBON MONOXIDE

5.1 Introduction

The Government and the Devolved Administrations have adopted an 8-hour running mean concentration level of 10mg/m3 to be achieved by the end of 2003.

Box 5.1: Checklist for carbon monoxide		
Reference no	**Source, location or data to be assessed**	
A	Monitoring data	5.3
B	Very busy roads	5.4

5.2 Result of first round of review and assessment of air quality

Banbridge District Council's first round of review and assessment of air quality concluded that there were no sites at risk of failing to meet the CO objective at stage 1. The guidance indicated that existing national policies were expected to deliver the national air quality objective by the end of the year 2003 with the possible exception of those in the vicinity of heavily trafficked roads or in the vicinity of certain stationary sources. All industrial sources thought to have the potential to lead to an exceedence of the air quality standard were considered and the conclusion was that the risk of the 2003 CO air quality objective being exceeded was negligible. Therefore, Banbridge District Council was not required to proceed to a second stage review and assessment of CO.

5.3 Monitoring Data

Banbridge District Council has not carried out any monitoring for CO.

5.4 Very busy roads

Technical Guidance LAQM TG(03) states that for the assessment of CO, "*very busy roads and junctions in areas where the 2003 background is expected to be above 1 mg/m3*" should be identified. The criteria for very busy roads are given as single carriageway roads where the daily average flows exceed 80,000 vehicles per day or dual carriageway roads where the daily average flows exceed 120,000 vehicles per day. Banbridge District Council has no areas expected to exceed the 2003 background of 1 mg/m3 or any roads that meet the daily vehicle flows shown below.

- **Single carriageway roads AADT greater than 80,000**
- **Dual carriageway roads AADT greater than 120,000**
- **Motorways**
- **Junctions where combined flow is equal to a) or b) above**

5.5 Conclusion for carbon monoxide

Banbridge District Council has considered all relevant background, industrial and traffic criteria and found that there is very little likelihood of exceedence of the 2003 air quality standard for carbon monoxide.

6.0 REVIEW AND ASSESSMENT FOR LEAD

6.1 Introduction

The Government and the Devolved Administrations have adopted an annual mean concentration of 0.5 μg/m3 as the air quality standard for lead, to be achieved by the end of 2004. In addition, a lower air quality objective of 0.25 μg/m3 to be achieved by the end of 2008 has also been set.

Box 6.1: Checklist for lead		
Reference no	**Source, location or data that needs to be assessed**	
A	Monitoring data outside an AQMA	6.3
B	New industrial sources	6.4
C	Industrial sources with substantially increased emissions	6.5

6.2 Result of first round of review and assessment of air quality for lead

The first round of review and assessment of air quality was taken only to Stage one for lead. The report concluded that there were no significant industrial sources. It was, therefore, not deemed necessary to progress to a second stage review for lead.

6.3 Monitoring data outside an AQMA

Monitoring for lead has not been carried out and there are no AQMAs in Banbridge District Council's area.

6.4 New industrial sources

There are no new industrial sources of lead in Banbridge District or in adjacent local authorities, since the last review and assessment.

6.5 Industrial sources with substantially increased emissions

There are no existing industrial sources of lead in Banbridge District, or in adjacent local authorities.

6.6 Conclusion for lead

Banbridge District Council has considered all relevant background and industrial criteria and found that there is very little likelihood of exceedence of either of the 2004 or 2008 air quality objectives for lead.

7.0 REVIEW AND ASSESSMENT FOR NITROGEN DIOXIDE

7.1 Introduction

The Government and the Devolved Administrations have adopted two Air Quality Objectives for nitrogen dioxide, as an annual mean concentration of 40 μg/m3 and a 1-hour mean concentration of 200 μg/m3 not to be exceeded more than 18 times per year. The objectives are to be achieved by the end of 2005.

Box 7.1: Checklist for nitrogen dioxide		
Reference no	**Source, location or data that need to be assessed**	
A	Monitoring data outside an AQMA	7.3
B	Monitoring data within an AQMA	7.4
C	Narrow congested streets with residential properties close to the kerb	7.5
D	Junctions	7.6
E	Busy streets where people may spend 1-hour or more close to traffic	7.7
F	Roads with high flow of buses and/or HGVs	7.8
G	New roads constructed or proposed since first round of review and assessment	7.9
H	Roads close to the objective during the first round of review and assessment	7.10
I	Roads with significantly changed traffic flows	7.11
J	Bus stations	7.12
K	New industrial sources	7.13
L	Industrial sources with substantially increased emissions	7.14
M	Aircraft	7.15

7.2 Result of first round of review and assessment of air quality for Nitrogen Dioxide.

The Stage 2/3 Review and Assessment concluded that there was little likelihood of exceedence of the annual Nitrogen Dioxide objective in Banbridge District.

Banbridge District Council has continued monitoring nitrogen dioxide using diffusion tubes.

7.3 Monitoring data outside an AQMA

Banbridge District Council has not been required to declare any AQMA's at this time.

7.4 Monitoring data within an AQMA

Banbridge District Council has not been required to declare any AQMA's at this time.

7.5 Narrow congested streets with residential properties close to the kerb

There are no other locations identified within Banbridge District since the last round of round of review and assessment.

7.6 Junctions

There have been no junctions that have significant impact on air quality at any sensitive receptor locations identified within the Banbridge District Council area.

7.7 Busy streets where people may spend 1 hour or more close to traffic

There have been no such streets identified within the Banbridge District Council area that have significant impact on air quality

7.8 Roads with high flow of buses and/or HGVs

LAQM TG(03) states that an unusually high proportion of HGVs can be taken to be greater than 25%. There are no such vehicle flows within the Banbridge District Council area. This conclusion is supported by the most recent traffic census completed by DRD Roads Service ; *Traffic and Travel Information 2004.*

7.9 New roads constructed or proposed since first round of review and assessment

Since the first round of review and assessment, there have been no new roads which may impact on air quality. The A1 By-pass through Banbridge District is currently being up-graded, however it is not envisaged that this new development will cause any significant impact on air quality within that part of the District.

7.10 Roads close to the objective during the first round of review and assessment

The Stage 2/3 report concluded that no roads were close to the objective.

7.11 Roads with significantly changed traffic flows

LAQM TG(03) defines "significantly changed" traffic flows as increasing by 25% since the first round of reviews and assessments. There are no roads that meet this criteria in the Banbridge District.

7.12 Bus stations

LAQM TG(03) states that only bus stations with more than 1000 movements per day should be considered. There are no such bus stations in the Banbridge District.

7.13 New industrial sources

There have been no significant new industrial sources since round one of review and assessment, either within Banbridge District Council's area or within neighbouring authorities with the capacity to influence air quality in the District.

7.14 Industrial sources with substantially increased emissions

There have been no industrial sources with substantially increased emissions of NO_2, with the potential to influence air quality in Banbridge District Councils area or any adjacent local authority areas, since the first round of review and assessment.

7.15 Aircraft

There are no airports in the Banbridge District Council area meeting the criteria.

7.16 Conclusion for nitrogen dioxide

On the basis of the above information Banbridge District Council is confident that the risk of the 2005 objectives for nitrogen dioxide being exceeded in the District is negligible for all sources .

8.0 REVIEW AND ASSESSMENT FOR PM_{10}

8.1 Introduction

The Government and the Devolved Administrations have adopted two Air Quality Objectives for fine particles (PM10). The objectives are 40 μg/m^3 as the annual mean, and 50 μg/m^3 as the fixed 24-hour mean to be exceeded on no more than 18 days per year, to be achieved by the end of 2005. The objectives are based upon measurements carried out using the European gravimetric transfer reference sampler or equivalent.

Box 8.1: Checklist for PM10		
Reference no	**Source, location or data that need to be assessed**	
A	Monitoring data outside an AQMA	8.3
B	Monitoring data within an AQMA	8.4
C	Busy roads and junctions in Scotland	8.5
D	Junctions	8.6
E	Roads with high flow of buses and/or HGVs	8.7
F	New roads constructed or proposed since first round of review and assessment	8.8
G	Roads close to the objective during the first round of review and assessment	8.9
H	Roads with significantly changed traffic flow	8.10
I	New industrial sources	8.11
J	Industrial sources with substantially increased emissions	8.12
K	Areas with domestic solid fuel burning	8.13
L	Quarries, landfill sites, opencast coal, handling of dusty cargoes at ports etc	8.14
M	Aircraft	8.15

8.2 Result of first round of review and assessment of air quality for PM10

In the first round PM_{10} was taken forward to a second stage review and assessment. The second stage review and assessment and a supplementary document detailing fugitive PM_{10} emissions from RMC Catherwood Quarry, indicated that the risk of the 2004 air quality objective for PM_{10} being exceeded was negligible.

8.3 Monitoring data outside an AQMA

Banbridge District Council has not declared any AQMA's for PM_{10}.

8.4 Monitoring data within an AQMA

Banbridge District Council has not declared any AQMA's for PM_{10}.

8.5 Busy roads and junctions in Scotland

At the time of writing, no part of the Banbridge District lies within Scotland.

8.6 Junctions

No Junctions within the Banbridge District Council area have been identified that have a significant impact on air quality at any sensitive receptor locations

8.7 Roads with high flow of buses and/or HGVs

LAQM TG(03) states that an unusually high proportion of HGVs can be taken to be greater than 25%. There are no such roads in Banbridge District Council with particularly high flows of buses or HGVs.

8.8 New roads constructed or proposed since first round of review and assessment

Since the first round of review and assessment, no new roads have been constructed which might impact on air quality. The A1 By-pass through Banbridge District is currently being up-graded, however it is not envisaged that this new development will cause any significant impact on air quality within that part of the District.

8.9 Roads close to the objective during the first round of review and assessment

There were no roads in Banbridge District close to exceeding the 2004 PM10 objective.

8.10 Roads with significantly changed traffic flow

LAQM TG(03) defines "significantly changed" traffic flows as increasing by 25% since the first round of reviews and assessments. There are no roads that meet this criteria in the Banbridge District.

8.11 New industrial sources

There have been no significant new industrial sources of PM_{10} in Banbridge District Council's area or any adjacent local authority areas since the first round of reviews and assessments.

8.12 Industrial sources with substantially increased emissions

There have been no substantially increased industrial sources of PM_{10} in Banbridge Council's District or any adjacent local authority areas since the first round of reviews and assessments.

8.13 Areas with domestic solid fuel burning

Domestic coal burning was not considered likely to lead to an exceedence of the air quality objective for PM_{10} in the first round of review and assessment. Levels of coal burning have not increased since Round 1 and a subsequent supplementary document submitted by Banbridge District Council indicated that the Northern Ireland Housing Executive has converted a significant number of public housing to oil fired central heating, thus further reducing the risk of the 2004 PM_{10} objective being exceeded.

8.14 Quarries, landfill sites, opencast coal, handling of dusty cargoes at ports etc

There are 4 quarries in the Banbridge District area. None of these have been the subject of dust complaints in recent years and they are not thought to be significant sources of PM_{10} at relevant receptors. A supplementary document submitted by Banbridge District Council indicated that the impact from quarrying activities at RMC Catherwood Quarry was not likely to have a significant impact on fugitive PM_{10} emissions at the nearest receptor.

8.15 Aircraft

There are no airfields in the Banbridge District meeting the criteria.

8.16 Conclusion for PM_{10}

Banbridge District Council has considered all relevant background, industrial and traffic criteria and found that there is little likelihood of exceedence of the 2004 air quality objectives for PM_{10}.

9.0 Review and assessment of sulphur dioxide

9.1 Introduction

The Government and the Devolved Administrations have adopted a 15-minute mean of 266 μg/m3 as an air quality standard for sulphur dioxide, with an objective for the standard not to be exceeded more than 35 times in a year by the end of 2005.

Box 9.1: Checklist for sulphur dioxide		
Reference no	**Source, location or data that need to be assessed**	
A	Monitoring data outside an AQMA	9.3
B	Monitoring data within an AQMA	9.4
C	New industrial sources	9.5
D	Industrial sources with substantially increased emissions	9.6
E	Areas of domestic coal burning	9.7
F	Small boilers (5MW(thermal) burning coal or oil	9.8
G	Shipping	9.9
H	Railway Locomotives	9.10

9.2 Result of first round of review and assessment of air quality for sulphur dioxide

In the first round SO_2 was taken forward to a Stage 2/3 Review and Assessment. The Stage 2/3 Review and Assessment and a supplementary document detailing SO_2 emissions from domestic fuel emissions indicated that the risk of the 2004 and 2005 air quality objectives for SO_2 being exceeded were negligible.

9.3 Monitoring data outside an AQMA

Banbridge District Council has no AQMA's declared at this time.

9.4 Monitoring data within an AQMA

Banbridge District Council has no AQMA's declared at this time.

9.5 New industrial sources

There are no significant new industrial sources within Banbridge District, or in neighbouring authorities with the potential to influence the District's air quality.

9.6 Industrial sources with substantially increased emissions

There are no significantly altered industrial sources within Banbridge District, or in neighbouring authorities with the potential to influence the District's air quality.

9.7 Areas of domestic coal burning

Domestic coal burning was not considered likely to lead to an exceedence of the air quality objective for SO_2 in the first round of review and assessment. Levels of coal burning in the Banbridge District Council area have not increased and there are no areas where coal smoke is particularly noticeable. It is not likely that such activity would lead to an exceedence of any of the 2004 and 2005 air quality objectives for SO_2.

9.8 Small boilers (5MW(thermal) burning coal or oil)

There have been no changes to the existing coal and oil burning appliances in the Banbridge District since the first round of review and assessment and the air quality standard for SO_2 is unlikely to be exceeded. There is only one installation within the district with a total output of >5MW ie. Armaghdown Creameries Ltd.

9.9 Shipping

There is no shipping in the Banbridge District.

9.10 Railway Locomotives

There are no rail networks operating through Banbridge District.

9.11 Conclusion for sulphur dioxide

Banbridge District Council considers that there is unlikely to be an exceedence of the 15 minute objective for 2005, or 1 hour or 24 hour objective for 2004, for sulphur dioxide.

10.0 SUMMARY

This Updating and Screening Assessment was carried out in accordance with technical guidance on Local Air Quality Management issued by the Department of Environment, Transport and Regions using information available from Local Government and other bodies. On the basis of this assessment the Council is confident that the risk of the objectives being exceeded for the 7 prescribed pollutants is negligible. Therefore it is not deemed necessary for Banbridge District Council to proceed to further stage of assessment for any of the pollutants at this time.

REFERENCES

1 The Air Quality Strategy for England, Scotland, Wales and Northern Ireland DETR 2000

2 Review and Assessment: Pollutant Specific Guidance LAQM.TG (03) DETR 2000

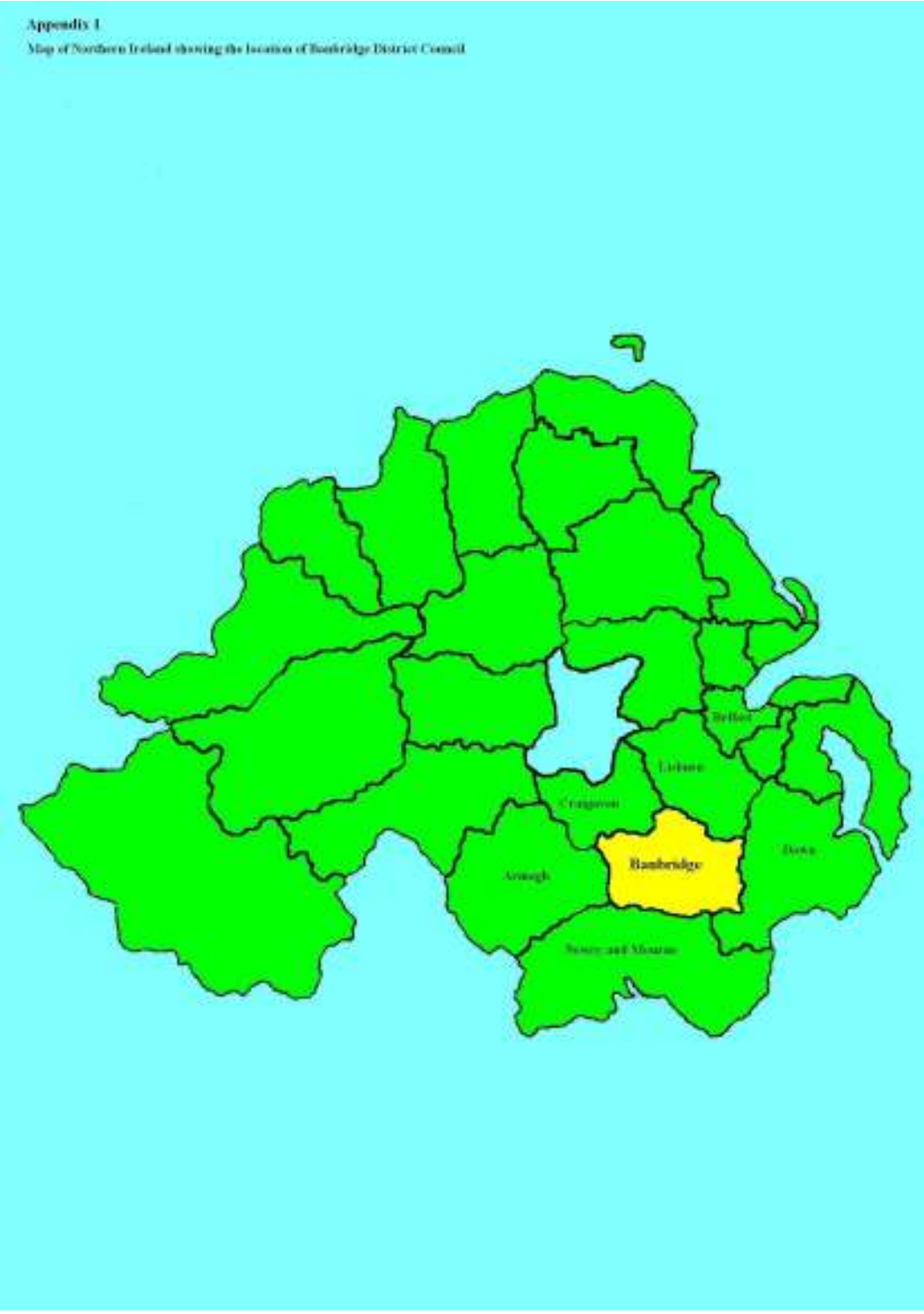
3 Air Quality in Northern Ireland by Pollution Control Group on behalf of the Chief Environmental Health Officers Group for Northern Ireland

4 National Air Quality Information Archive (http://www.airquality.co.uk/archive/laqm/laqm)

5 Expert Panel on Air Quality Standards. DETR & DOE(NI)

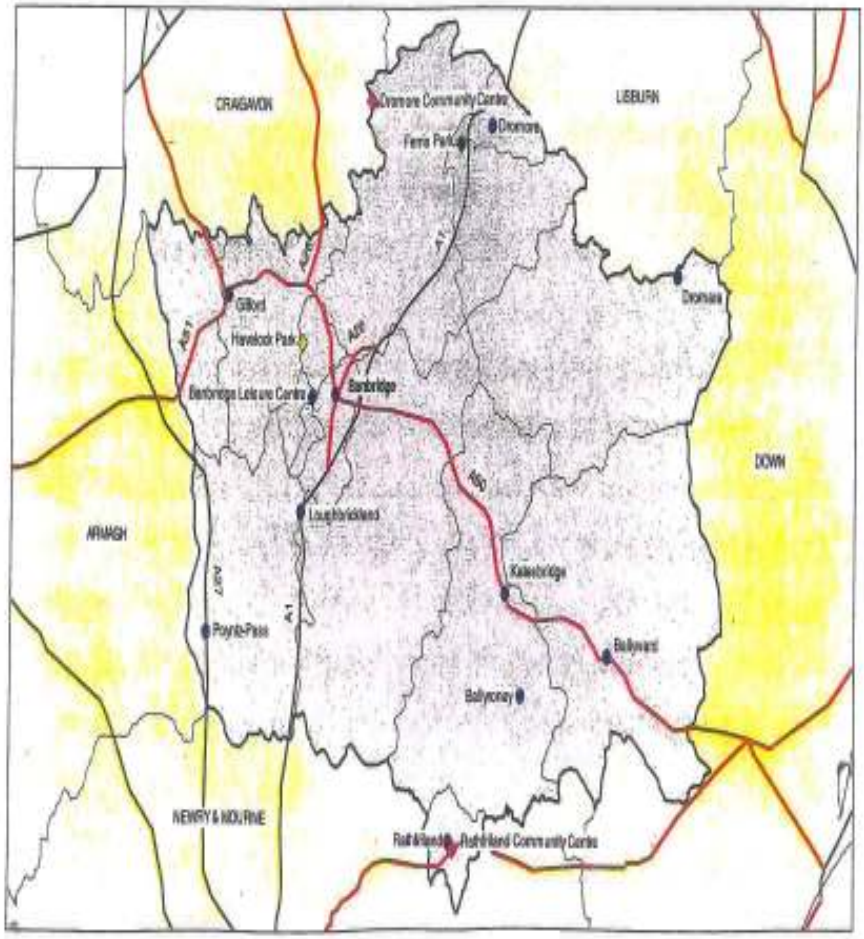
APPENDIX 1

Map of NI showing location of Banbridge District



APPENDIX 2

Map showing main traffic routes through Banbridge District



APPENDIX 3

Processes/Activities in Banbridge District subject to regulation under Industrial Pollution Control/Pollution prevention & Control Legislation since Round 1 Stage 1 Review & Assessment

Details of Process/Activity	Type of Process/Activity	*Specified Pollutants
Armaghdown Creameries Ltd. 30 Rathfriland Road Banbridge Co Down BT32 4LN Permit No: P0096/05A	Schedule 1 Section 6.8 Part A (e) Treating & processing milk	Sulphur dioxide
Milestone Service Station 83 Newry Street, Rathfriland BT34 5PZ Ref: EP/PV/0009	Schedule 1 Section 1.4 Part C Petroleum process	
Wright Accident Repair Centres Ltd 100 Church Street, Dromore, Co Down BT25 1AA Ref: CTP/03/01	Schedule 1 Section 6.5 Part C Respraying of road vehicles	Particulates
Kinallen Coachworks 166 Banbridge Road, Kinallen, Dromara, Dromore, Co Down, BT25 2NF Ref: CTP/05/01	Schedule 1 Section 6.5 Part C Respraying of road vehicles	Particulates
JNJ Contract Crushing & Screening 19 Lisbane Road, Scarva, Co Armagh BT636LN Ref: EP/MC/0017	Schedule 1 Section 3.5 Part C Mobile crushing	Particulates

Stoneyford Building Supplies 80 Tandragee Road, Craigavon, Co Armagh BT63 6HP Ref: EP/CP/0018	Schedule 1 Section 3.1 Part C Cement production	Particulates
Clean & Classy 11 Meeting Street, Dromore, Co. Down BT25 1AG Ref: EP/DC/0019	Schedule 1 Section 7 Part C Dry cleaning	
J.G. Wray Ltd 26 Bridge Street, Banbridge, Co. Down BT32 3JS Ref: EP/DC/0020	Schedule 1 Section 7 Part C Dry cleaning	
Nu-Speed Cleaners 10 Rathfriland Street, Banbridge, Co. Down BT32 3LA Ref: EP/DC/0021	Schedule 1 Section 7 Part C Dry cleaning	

* Pollutants specified in the Air Quality Strategy that are most likely to be released

APPENDIX 4

BANBRIDGE DISTRICT COUNCIL NO2 *RESULTS 2001 - 2005

Site no.	7		8		10		11	
	ug/m3	ppb	ug/m3	ppb	ug/m3	ppb	ug/m3	ppb
Year								
2001	18	9	16	8	28	15	35	19
2002	18	10	20	10	39	20	35	18
2003	14	7	16	8	36	19	34	18
2004	16	8	15	8	31	16	32	17
2005	17	9	16	8	31	16	35	18

Site no.	Site Description
7	Rural Background
8	Urban Background
10	Kerbside
11	Kerbside

- Results as Ratified Annual

APPENDIX 5

Maps Showing NO_2 Diffusion Tube Locations in Banbridge District

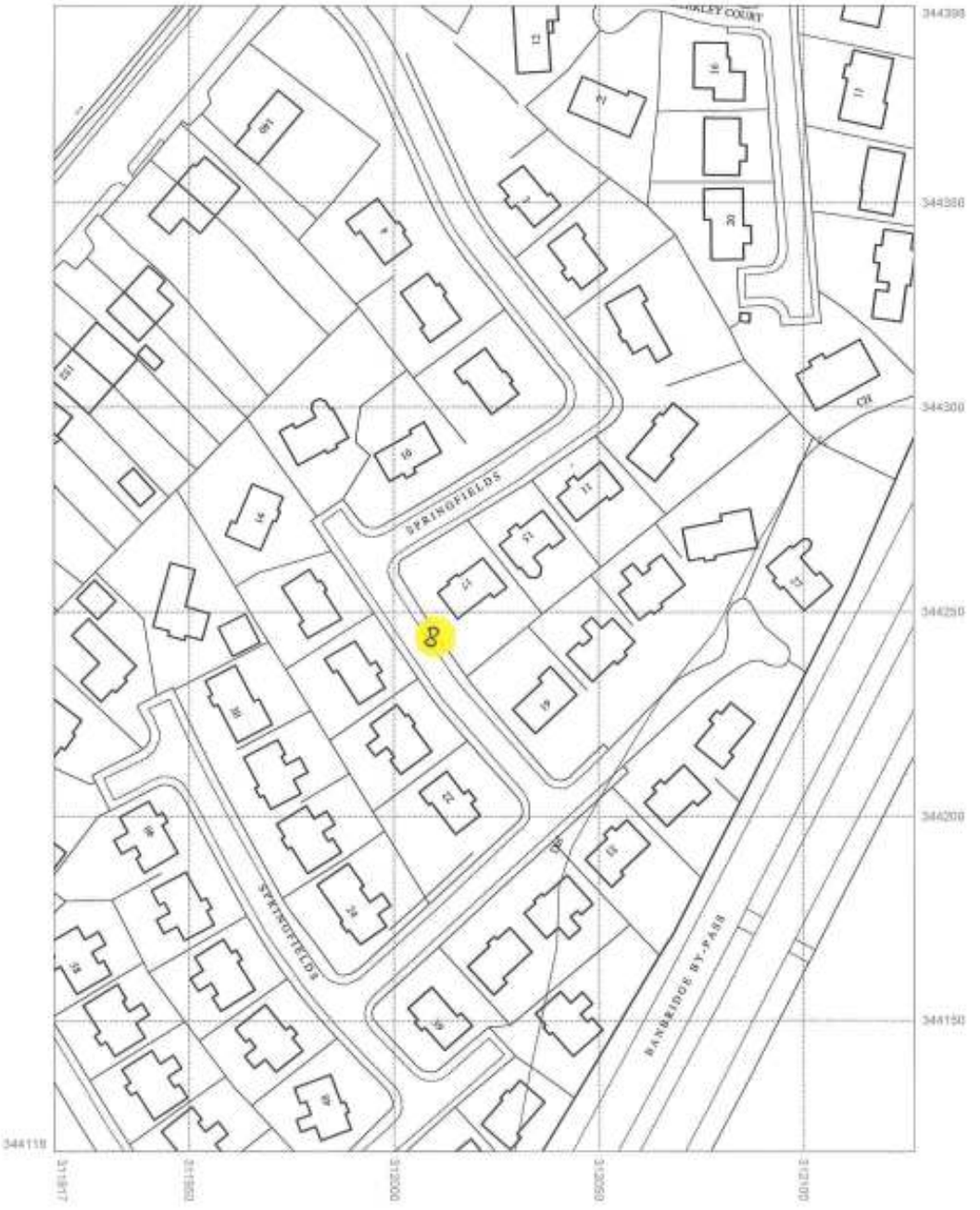
ACEmap™ *Online* Scale 1:1250 Plan No. 22012NE3

Printed: 16/05/2005 Customer Ref.

This map relates to the following address or grid reference

17, SPRINGFIELDS, BALLYVALLY, BANBRIDGE, BT32 3LT

ORDNANCE SURVEY OF NORTHERN IRELAND



ACEmap™ *Online* Scale 1:1250 Plan No. 22105NW1

Printed: 16/05/2005 Customer Ref.

This map relates to the following address or grid reference

DROMORE STREET, BALLYVALLY, BANBRIDGE, BT32 4BS

ORDNANCE SURVEY OF NORTHERN IRELAND

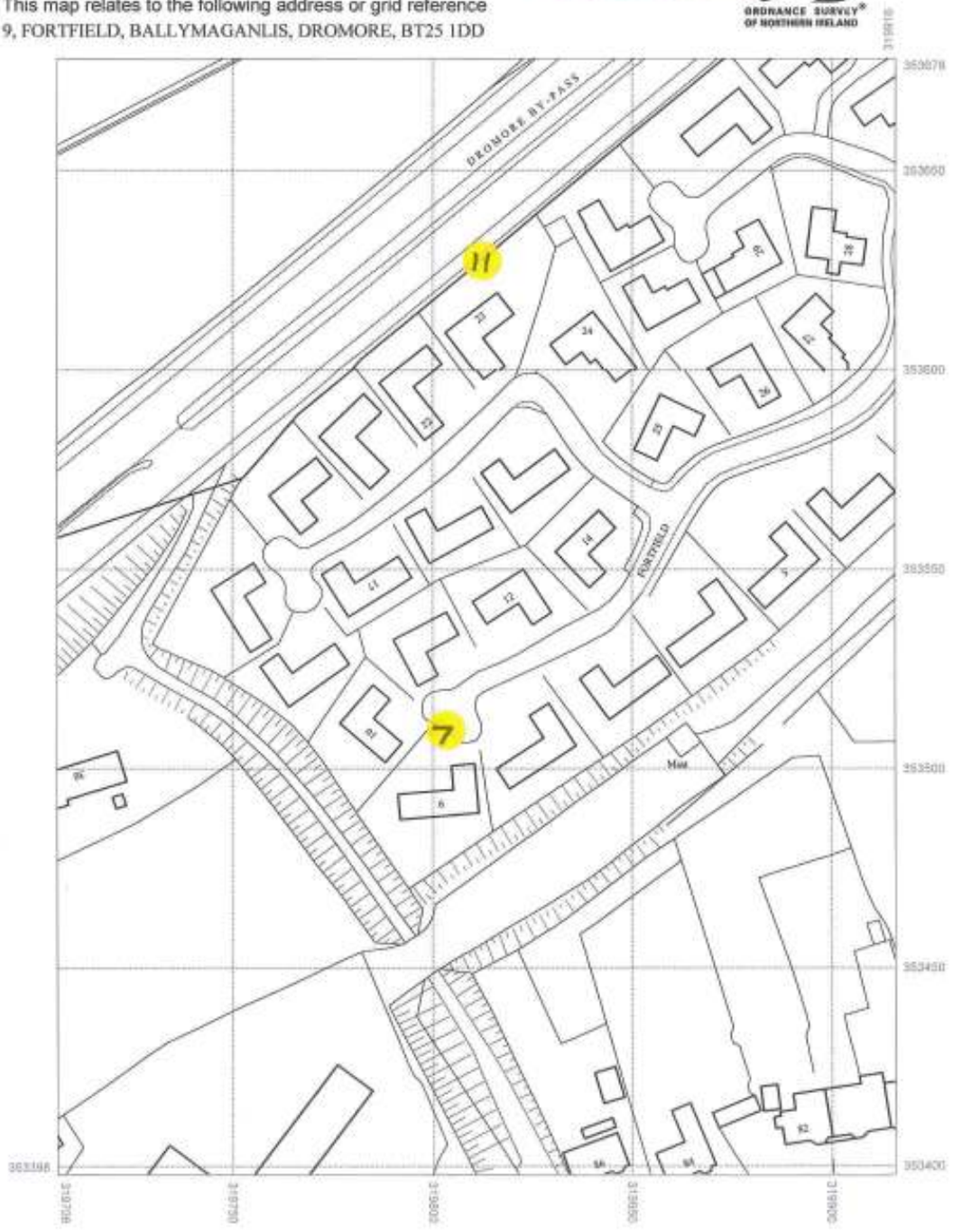
ACEmap™ *Online* Scale 1:1250 Plan No. 20203SE2

Printed: 16/05/2005 Customer Ref.

This map relates to the following address or grid reference

9, FORTFIELD, BALLYMAGANLIS, DROMORE, BT25 1DD

ORDNANCE SURVEY OF NORTHERN IRELAND



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