

Key Decision: ~~Yes~~/ No

## Declaration of new expanded Air Quality Management Area

### Report by the Director for Communities

#### 1.0 Summary

1.1 The council has a statutory duty to review air quality within its area and compare the levels of specified pollutants with national Objectives (target levels to be achieved). Where these levels have exceeded, or are predicted to exceed the objectives, the local authority shall declare an Air Quality Management Area (AQMA). An AQMA was declared in the vicinity of the Grove Lodge roundabout in 2010. Exceedances of the objective for annual average Nitrogen Dioxide (NO<sub>2</sub>) levels have been measured in the vicinity of Lyons Farm on the Upper Brighton Road (A27) and NO<sub>2</sub> levels are predicted to continue to exceed the objective. Therefore this Authority must declare an AQMA. The proposal is to expand the current AQMA to encompass these other areas of exceedance - Lyons Farm and an area to the west up to Offington Corner. The declaration must be preceded by a period of consultation.

#### 2.0 Background

2.1 Part IV of the Environment Act 1995 requires the Secretary of State to publish a national Air Quality Strategy and established the system of local air quality management (sometimes shortened to LAQM), for the designation of Air Quality Management Areas, which commenced in 1997. Air quality objectives are set out in the Air Quality (England) Regulations 2000, as amended by the Air Quality (England) (Amendment) Regulations 2002. These prescribe attainment dates for meeting air quality objectives for eight pollutants, seven of which fall within the LAQM regime (see Appendix 1).

2.2 Section 82 of the Environment Act 1995 provides that every local authority shall review both the present and likely future air quality within its area. Section 83 requires local authorities to designate an AQMA where air quality objectives are not being achieved, or are not likely to be achieved within the relevant period, as set out in the Air Quality (England) Regulations 2000. This applies only to those locations where members of the public might reasonably be exposed. Local authorities have to designate these AQMA's 'by means of an order'. Over 500 AQMA's have been declared across the UK varying in size from single properties to entire Boroughs. Once an area has been designated Section 84 requires the local authority to carry out a further assessment within 12 months and then develop an Action Plan for the AQMA, describing what actions relevant agencies will be taking to try and comply with the relevant Objective.

- 2.3 The Air Quality Strategy for England, Scotland, Wales and Northern Ireland states that air quality reduces life expectancy in the UK by an average of seven to eight months, with equivalent health costs estimated to be up to £20 billion a year. Improvements between 1990 and 2001 helped avoid an estimated 4,200 premature deaths and 3,500 hospital admissions a year. The UK Air Quality Strategy aims to cut the reduced life expectancy impact to five months by 2020.
- 2.4 In April Public Health England (PHE) published a report estimating the number of deaths in UK local authority areas that can be attributed to long term exposure to particulate air pollution. It estimates mortality in each area, derived by modelling annual average concentrations of man-made particles less than 2.5 microns in diameter, known as PM<sub>2.5</sub> and their impacts on health. The estimates are made for long term exposure to particulate air pollution (i.e. over many years) rather than short term exposure to high pollution episodes. In summary the figure in Worthing is 5.0% (577 years of life lost) - the England average is 5.6% (South East 5.5%).
- 2.5 Air quality monitoring using NO<sub>2</sub> diffusion tubes at Downlands Parade on the A27 adjacent to Lyons Farm, indicates that the air quality objective for NO<sub>2</sub> is being breached. Air quality modelling for the area carried out by Sussex-air on behalf of the Council confirmed that the NO<sub>2</sub> Annual Mean Objective was being exceeded, exceedance was likely to continue at residential receptors and that an AQMA must therefore be declared. A summary of the Further Assessment is attached as Appendix 2.
- 2.6 Council monitoring shows that levels at Lyons Farm and within the existing AQMA continue to be elevated.

### **3.0 Proposal**

- 3.1 The results of monitoring and modelling confirm levels of NO<sub>2</sub> are exceeding and predicted to continue to exceed, the annual average Air Quality Objective for the pollutant in the area around Lyons Farm (A27) and at Offington Corner. The Council must therefore declare an Air Quality Management Area (AQMA) for NO<sub>2</sub>.
- 3.2 The boundary of the AQMA has been drafted using the results of the modelling in the Detailed Assessment and is shown at Appendix 3. The scale of the proposed AQMA is small in comparison to many in the UK and follows the modelled contours for exceedance of NO<sub>2</sub> levels.
- 3.3 The Council are legally obliged to hold a period of consultation regarding the proposed AQMA before it can be officially declared. It is intended that this will take the form of a short newsletter briefly explaining the background to local air quality management, what an AQMA is, the reasons why an AQMA is being declared, the proposed boundary of the AQMA and how people may comment on the proposal. It is intended to send this to all statutory consultees listed under Schedule 11 of the Environment Act 1995 (the Secretary of State, the Environment Agency, the Highways Agency and West Sussex County Council Highways, neighbouring local authorities, South Downs National Park Authority and local business organisations representing businesses in the area. It will also be made available on the council's website. The consultation will last for 28 days.

- 3.4 The results of the consultation will be reported after the 28 day period. At that time the Order declaring the AQMA will also be placed before the Cabinet Member.

#### **4.0 Legal**

- 4.1 Section 83 of the Environment Act 1995 requires local authorities to designate an AQMA where air quality objectives are not being achieved, or are not likely to be achieved, within the relevant period as set out in the Air Quality (England) Regulations 2000 (as amended). The designation takes place via an Order. The previous order is exhibited at Appendix 5.
- 4.2 Following the consultation period the regulations provide that a nominated Council Officer should make the Order by affixing the local authority official seal to the Order, designating the area. By virtue of delegation 4.10.7 of Worthing's Constitution, this duty (execution of legal documents on behalf of the Council) falls to a Chief Officer or the Executive Head of Legal and Democratic Services

It is good practice to draft the Order so that it comes into effect upon a given future date (approximately 8 weeks hence) to allow for local advertising of the Order. This is in line with the guidance upon the requirement to consult and communicate as part of the process of declaring an Air Quality Management Order. The Local Authority remains under a duty to declare the Order, notwithstanding any objections or representations received. There is also a statutory requirement that copies of the document should be freely available to the public.

#### **5.0 Financial implications**

- 5.1 Any costs associated with declaring an AQMA will be met from within existing budgets. The Order will also be publicised through the Notices section of the local press, with an associated cost. Costs (of an as yet unknown quantity) may arise as a result of the Action Plan and these will be reported as and when they occur. In addition further monitoring (particularly of particulates) may be required resulting in equipment purchase costs.

#### **6.0 Recommendation**

- 6.1 The Cabinet Member is recommended to approve the consultation process outlined in paragraph 3.3 and to receive a further report following the consultation.

#### **Local Government Act 1972**

##### **Background Papers:**

Updating & Screening Assessment 2012 and Grove Lodge AQMA Further Assessment Modelling Report (Sussex-air 2013) available at <http://www.adur-worthing.gov.uk/environmental-health/pollution/air-quality-and-pollution/air-quality-monitoring/>

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## **Schedule of other matters**

### **1.0 Council Priority**

#### **1.1 Protecting front line services**

2) Fulfil statutory obligations for delivery of front line services.

#### **1.2 A mixed economy of Partnership working**

Deliver interventions that improve the health of our communities.

### **2.0 Specific Action Plans**

2.1 The Local Authority has a statutory duty to declare an Air Quality Management Area (AQMA).

### **3.0 Sustainability Issues**

3.1 National Air Quality Objectives are currently being exceeded.

3.2 An Action Plan for the AQMA will be formulated with the aim of ensuring future compliance with the Objectives.

### **4.0 Equality Issues**

4.1 The AQMA Action Plan will be subject to an Equalities Impact Assessment.

### **5.0 Community Safety Issues (Section 17)**

5.1 Matter considered and no issues identified.

### **6.0 Human Rights Issues**

6.1 Matter considered and no issues identified.

### **7.0 Reputation**

7.1 There is likely to be an adverse impact on the reputation of the Council if it fails to comply with its statutory duties.

### **8.0 Consultations**

8.1 (A) The report asks the Cabinet Member to approve a plan for consultation with statutory bodies and other interested parties.

(B) Following the consultation exercise a further report will be considered by the Cabinet Member for Clean & Green Environment.

### **9.0 Risk Assessment**

9.1 Doing nothing would mean failure to comply with our statutory duty to declare an Air Quality Management Area (AQMA) where national air quality objectives are breached.

### **10.0 Health & Safety Issues**

10.1 Matter considered and no issues identified.

## **11.0 Procurement Strategy**

11.1 Matter considered and no issues identified.

## **12.0 Partnership Working**

12.1 Following the declaration the Council will work with the Highways Agency, West Sussex County Council, neighbouring Local Authorities and others to formulate an Air Quality Action Plan.

**Appendix 1 - Air Quality Objectives included in Regulations for the purpose of LAQM in England**

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

## Appendix 2 - Summary of Further Assessment by Sussex-air

### Modelling results at key sensitive receptors

The modelled NO<sub>2</sub> concentrations are provided in Table 5 as concentrations of NO<sub>2</sub> at key receptors. These key receptors are locations near to the area of Grove Lodge AQMA.

Table 2 provides receptor location, modelled concentration NO<sub>2</sub> (µg/m<sup>3</sup>) and identifies the percentage within the exceedance of the air quality objective (AQO) for NO<sub>2</sub>.

**Table 5. Modelled (predicted) NO<sub>2</sub> concentrations at key receptors at Grove Lodge**

ID	Receptor Location	Modelled NO <sub>2</sub> (µg/ m <sup>3</sup> )	% of AQO (40µg/m <sup>3</sup> )
A	Grove Lodge Cottages	51.7	129%
B	Grove Lodge Vets	40.2	101%
C	22-27 Lamorna Grove	44.4	111%
D	16-21 Lamorna Grove	37.9	95%
E	15 Upper Brighton Road	47.1	118%
F	19 Upper Brighton Road	44.3	111%
G	23 Upper Brighton Road	43.5	109%
H	30 Upper Brighton Road	43.5	109%
I	24 Upper Brighton Road	42.4	106%
J	1 Hillside Lane	39.7	99%
K	1 Warren Road	36.3	91%
L	5 Warren Road	34.5	86%
M	7 Warren Road	35.1	88%
N	317 South Farm Road	31.9	80%
O	319 South Farm Road	31.0	78%
P	27 The Templars	30.1	75%
Q	Kinnall Court	32.2	80%
R	156 Upper Brighton Road	32.8	82%
S	1 Downlands Gardens	45.1	113%
T	8A Downlands Parade	45.8	115%
U	1 Downlands Parade	40.7	102%
V	121 Upper Brighton Road	41.0	102%

### 4.3. Modelling results

The modelled nitrogen dioxide (NO<sub>2</sub>) concentrations within the area of Grove Lodge are illustrated in figures 8.1 and 8.2. Figure 8.1 shows the modelled concentrations of NO<sub>2</sub>, whereas figure 8.2 shows the modelled results for areas of likely exceedance of the air quality objectives (±10% of 40µg/m<sup>3</sup>).

Figure 8.1 Annual average modelled NO2 concentration (2010)



Figure 8.2 Areas of likely exceedence modelled NO2 concentration (2010)





Figure 9 identifies NO2 concentrations at the key modelled sensitive receptor locations.

**Figure 9. Annual average modelled NO2 concentrations (2010) at key receptors in the area**



#### **4.4 Modelling summary**

Air quality modelling for nitrogen dioxide (NO<sub>2</sub>) in and around the Grove Lodge AQMA in Worthing was undertaken using monitoring and traffic data for 2010.

- There were exceedences in the monitored NO<sub>2</sub> in 2010 in the area, the modelled NO<sub>2</sub> was high at most of the key sensitive receptors, as demonstrated in table 2 and figure 9.
- The modelled NO<sub>2</sub> results showed that 26 of the modelled 113 receptors exceed the above 40µg/m<sup>3</sup> air quality objective (40µg/m<sup>3</sup>).
- The highest modelled NO<sub>2</sub> concentrations were found at the Grove Lodge Cottages at 51.7µg/m<sup>3</sup>.

# Appendix 3 – Draft AQMA Boundary



## Appendix 4 – Grove Lodge Air Quality management Order No.1



Environment Act 1995 Part IV Section 83(1)

### Worthing Borough Council Air Quality Management Area Order

Worthing Borough Council, in exercise of the powers conferred upon it by Section 83(1) of the Environment Act 1995, hereby makes the following Order:

This Order may be cited as the Worthing Borough Council Air Quality Management Area No.1 and shall come into effect on 13 July 2010.

The area shown on the attached map in red is to be designated as an air quality management area (the designated area). The designated area incorporates Upper Brighton Road from First Avenue to the Grove Lodge Roundabout, 22-27 Lamorna Grove, the Grove Lodge Roundabout and Warren Road from the Grove Lodge Roundabout to the northern slip road of Warren Court. The map may be viewed at the Council Offices.

This Area is designated in relation to a likely breach of the nitrogen dioxide (annual mean) objective as specified in the Air Quality Regulations 2000.

This Order shall remain in force until it is varied or revoked by a subsequent order.

The Common Seal of Worthing Borough Council was hereto affixed on 18 May, 2010 and signed in the presence of /on behalf of said Council:

A handwritten signature in black ink, appearing to read "Jeremy Lead", written over a dotted line.

Executive Head of  
Legal and Democratic Services

5416

