FAREHAM
BOROUGH COUNCIL

2014 Air Quality Progress Report for Fareham Borough Council

In fulfillment of Part IV of the
Environment Act 1995
Local Air Quality Management

October 2014

Local Authority Officer	Heather Cusack
Department	Regulatory Services
Address	Civic Offices Civic Way Fareham Hampshire PO16 7AZ
Telephone	01329 236100
e-mail	hcusack@fareham.gov.uk
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Prepared by	Alex Moon Technical Officer
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Approved by	Ian Rickman Shared Head of Environmental Health Partnership
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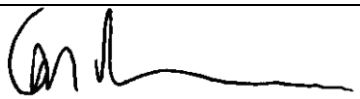
Signature	

Executive Summary

Fareham Borough Council has undertaken this 2014 progress report in fulfilment of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents.

Two Air Quality Management Areas (AQMAs) are still currently in place at Gosport Road and Portland Street for nitrogen dioxide (NO_2). Following the conclusions of this report it is recommended that the present AQMA declarations should remain.

The monitoring data for 2013 has indicated that the annual mean NO_2 objective was achieved at all monitoring locations except for two sites within the existing AQMAs that is, G7 and PS3 and one site outside the existing AQMAs, G10. A detailed assessment was conducted at G10 in 2010 which showed no exceedances at the façade of the properties and the AQMAs were not adjusted. As the exceedance is marginal (40.50µg/m^3), a continuation of monitoring will take place in order to fully assess whether a detailed assessment is required in the future.

The two sites within the existing AQMAs, G7 and PS3, also showed marginally exceedences of the annual mean objective and it is hoped that further monitoring will show a further downward trend as shown in the majority of sites and in the AQMAs. The conversion of the Quay Street roundabout to a “throughabout” in November 2011, the opening of the Eclipse bus route in April 2012 and the opening of the Western Way bus gate in June 2014, should all contribute to this trend in the future.

The 2013 NO_2 diffusion tube results show a slight increase compared to 2012 however, the overall trend shows a regional decrease in ambient NO_2 concentrations. It is not believed that more monitoring sites will be needed; instead the Council will continue to monitor the existing sites to investigate whether the results are a short-term deviation, driven by meteorological and other regional factors.

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1 Introduction

1.1 Description of Local Authority Area

Covering an area of nearly 30 square miles, the Borough of Fareham lies on the south coast of England close to both Southampton and Portsmouth and has an approximate population of 108,000.

With approximately 60% countryside, the Boroughs five main urban areas are Fareham, Portchester, Stubbington, the Western Wards and Whiteley.

Fareham is the largest town in the Borough; Locks Heath, Sarisbury, Park Gate, Warsash and Titchfield Common, collectively known as the Western Wards, are slightly smaller. Urban development over the years has seen Portchester, Stubbington and Hill Head grow from small villages to large residential suburbs with over 6,000 dwellings within each.

With mainline rail stations linked with Portsmouth, Southampton and London as well as the M27 motorway running east to west through the northern part of the Borough, Fareham is easily accessible for residents and tourists alike. In terms of local commerce and employment the Borough has two international sea ports close by: the Portsmouth European Ferryport and the Southampton Cruise Liner and Container Port.

The area is also well served by air via the regional international airports of Southampton Eastleigh Airport and Bournemouth Airport.

With consideration to local air quality, the primary source of air pollution in the Borough is road traffic emissions, notably along the M27, the A27 Eastern Way/Western Way and the A32 Gosport Road which passes through Fareham town centre. Other notable local/regional pollution sources, including commercial, industrial and domestic sources, also make a contribution to background pollution concentrations.

Through the LAQM process the Council has declared two AQMAs; one at the junction of Gosport Road and Newgate Lane, and the second in Portland Street near the Quay Street roundabout. Both declarations were as a result of identified exceedances of the annual mean Air Quality Strategy objective for nitrogen dioxide, with traffic congestion being the main identified source of emissions.

1.2 Purpose of Progress Report

This report fulfils the requirements of the LAQM process as set out in Part IV of the Environment Act (1995), the AQS for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedences are considered likely, the local authority

must then declare an AQMA and prepare an AQAP setting out the measures it intends to put in place in pursuit of the objectives.

Progress Reports are required in the intervening years between the three-yearly more detailed Updating and Screening Assessment (USA) reports. Their purpose is to maintain continuity in the LAQM process.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of micrograms per cubic metre µg/m^3 (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in England

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

1.4 Summary of Previous Review and Assessments

1.4.1 First Round of Review and Assessment

Between 1998 and 2001, Fareham Borough Council undertook its First Round of review and assessments of air quality which assessed the sources of seven air pollutants of concern to health: carbon monoxide, benzene, 1,3 butadiene, lead, nitrogen dioxide, sulphur dioxide and fine particulates (PM_{10}). The First Round assessments (Stages 1, 2 and 3) concluded that all AQS objectives were expected to be met by the target dates, based on the available information at that time.

1.4.2 Second Round of Review and Assessment

The Second Round of Review and Assessment began with a USA in 2003. Fareham Borough Council completed this stage in August 2003. The report concluded that as all AQS objectives were expected to be met, a Detailed Assessment was not required.

Fareham Borough Council completed an air quality Progress Report in May 2004. The report provided an update regarding air quality monitoring with new data from 2003, and concluded that several diffusion tubes were exceeding the annual mean NO_2 objective at Osborne Road, Hartlands Road and Gosport Road (A32), South Fareham. The Council therefore proceeded to a Detailed Assessment in these areas. The assessment was carried out using detailed dispersion modelling based on traffic data provided by Hampshire County Council, and compared the results with 2004 monitoring data.

The report was completed in June 2005 and concluded that the annual mean NO_2 objective for 2005 would be met at Osborne Road. The modelling predicted no exceedance of the NO_2 AQS objectives in Hartlands Road, although diffusion tube results at that location were showing concentrations above the annual mean objective of 40 µg/m^3. Monitoring and dispersion modelling results showed that the annual mean NO_2 objective was likely to be exceeded in both 2005 and 2010 in Gosport Road, at the junction with Newgate Lane and Redlands Lane. It was recommended that the Council install a continuous analyser to monitor NO_X and NO_2 concentrations in the area for a minimum period of 6 months, to confirm whether an AQMA should be declared. However, DEFRA required the Council to declare an AQMA without waiting for the monitoring results. Consequently, an AQMA was declared in April 2006. Continuous monitoring of NO_X and NO_2 concentrations was carried out between December 2005 and July 2006.

Figure 1 depicts the Gosport Road AQMA, an area encompassing the junction of Gosport Road, Redlands Lane and Newgate Lane, and the surrounding area.

Figure 1: Fareham 2006 Gosport Road Air Quality Management Area

Figure 1 map of Gosport Road AQMA

1.4.3 Third Round of Review and Assessment

The Third Round of Review and Assessment began with a USA, completed in 2006. The USA included updated monitoring data for 2005 and showed that several diffusion tubes results were above the annual mean NO_2 Objective of 40µg/m^3 at the following locations (all outside the current boundaries of the Gosport Road AQMA in Fareham):

- Portland Street (PS1);
- 31 Hartlands Rd (Y/HR1);
- Junction of Earl's Road and Gosport Road (G1); and
- Gosport Road (G3).

As the Council was required to proceed to a Further Assessment of the AQMA in Gosport Road, it was suggested that the assessment of the G1 and G3 locations

should be incorporated. It was also concluded that as the diffusion tubes in Portland Street and Hartlands Road were not representative of public exposure, a Detailed Assessment was not required for these locations.

Further study of the area suggested that as local roads were used significantly by buses accessing the bus station in Hartlands Road, an updated traffic count should be undertaken to assist in LAQM decision making. Based on these new traffic data, it was decided to proceed to a new Detailed Assessment in Hartlands Road / Portland Street.

The Further Assessment of Gosport Road AQMA was carried out in 2007 together with the Detailed Assessment of Hartlands Road / Portland Street.

Gosport Road Further Assessment 2007

The report concluded that the AQMA in Gosport Road should remain, although there was no need to extend the AQMA boundaries further.

The results of the source apportionment indicated that background NO_X remained the main contributor, ranging from 45% to 70% of the overall NO_X concentration (depending on the distance of the receptor to the road). Cars and HGVs were the main contributors of traffic related NO_X emissions in the AQMA, with a maximum of nearly 20% each at diffusion tube G7 and specific receptors 12 and 29. LGVs accounted for 5% to 10% of the overall NO_X concentrations, while buses contributed between 3% and 7%. Motorcycles represented less than 1% of the total NO_X concentrations. Buses and HGVs together (HDVs) accounted for up to 25% of the total contribution.

These contributions, when compared to the relative weight of traffic flow from each vehicle category showed that approximately 75% of the traffic was made up of cars, versus 15% of LGVs, 4% of HGVs and 2% to 3% of motorcycles. Buses accounted for 1% to 2% of the total traffic flow.

The report also concluded that a new AQMA was required for NO_2 in Portland Street, following exceedances of the annual mean objective. The Portland Street AQMA was declared in December 2007. The AQMA covers an area encompassing residential properties and the Sacred Heart Catholic Church on Portland Street (see Figure 2).

Figure 2: Fareham 2007 Portland Street Air Quality Management Area

Figure 2 map of Portland Street AQMA

The Council completed an Air Quality Progress Report in March 2008. Updated monitoring data indicated that the annual mean NO_2 objective was still being exceeded in the two AQMAs.

Portland Street Further Assessment 2009

The Further Assessment of Portland Street AQMA was completed in April 2009. Updated monitoring data and modelled results confirmed that the AQMA was still required, as the NO_2 annual mean NO_2 objective was still likely to be exceeded in this area.

The results confirmed that the extents of the AQMA were appropriate. Source apportionment showed that local traffic accounted for 55% to 60% of the overall NO_2 annual mean concentration in Portland Street (including a 30% contribution from HDVs), while local background contributions accounted for 30%. Overall it was concluded that a reduction of 70 $\mu g/m^3$ in NO_X concentration (equivalent to a 16 $\mu g/m^3$ reduction in NO_2) was required to meet the annual mean NO_2 objective.

Joint Area Air Quality Action Plan 2008

In parallel with the Detailed and Further Assessments, the Council developed a joint Air Quality Action Plan for both AQMAs in 2008, which presented mitigation measures to help reduce NO_2 levels along Gosport Road and Portland Street.

1.4.4 Fourth Round of Review and Assessment

The Fourth Round of Review and Assessment started in 2009 with a new USA. The USA 2009 concluded that, although updated NO_2 monitoring showed the annual mean NO_2 objective was still exceeded at a number of sites in the Borough, the majority of these exceedances were monitored either at sites within the AQMAs declared in Fareham for NO_2, or at sites not representative of public exposure. An exceedance of the annual mean NO_2 objective was measured at site G10, north of the AQMA in Gosport Road. As this site was located at the façade of a property, a Detailed Assessment was required.

Subsequent Detailed Assessment work concluded from further monitoring that the site of concern on Gosport Road would meet the annual mean NO_2 objective. Dispersion modelling indicated that the area of exceedance was limited to the Gosport Road and did not include the facades of any properties outside the AQMAs. Monitoring and modelling concentrations indicated that there remained exceedances of the annual mean NO_2 objective at locations relevant of public exposure within the Portland Street and Gosport Road AQMAs. From these results it was concluded that amendments of the existing AQMAs were not required.

As presented in the 2010 Air Quality Progress Report, updated monitoring results for 2009 suggested exceedances of the NO_2 annual mean objective remained in the two AQMAs. A further site outside the AQMAs also showed an exceedance of the annual mean objective. However, the site was not representative of relevant exposure.

The 2010 Progress Report also identified new planned developments in Fareham that could impact on local air quality. These included the new food retail development at Quay Street Fareham and the proposed Bus Rapid Transit. The Council committed to further monitoring in these locations to assess their impact. One future development which was noted in the report was the Strategic Development Area of 10,000 houses planned for the north of Fareham.

Updated monitoring results for 2010, presented in the 2011 Air Quality Progress Report, indicated that exceedances of the annual mean NO_2 objective continued at locations within the two AQMAs. One site outside the AQMA boundaries also showed an exceedance of the annual mean NO_2 objective; this site is representative of relevant exposure. The Council proposed to carry out an additional year of monitoring and review the situation through the 2012 USA and to make a decision at that time on the need to undertake a Detailed Assessment for this location.

The 2011 Progress Report identified no new local developments additional to those detailed in the 2010 Progress Report which were likely to lead to significant increases in any pollutant prescribed in the AQS.

1.4.5 Fifth Round of Review and Assessment

The fifth round of review and assessment started in 2012 with a new USA. The 2012 USA outlined the diffusion tube and continuous analyser data, analysis of which showed there to be no exceedences of the NO_2 objectives at relevant locations outside or inside the existing AQMAs.

In April 2012 a new continuous automatic analyser was installed at Portland Street to measure nitrogen dioxide. This was secured via a section 106 agreement with the developer of a new food retail store at Quay Street. The initial results of this are shown and discussed in this report.

The previous rounds of review and assessment identified no new risk of exceedences from new road sources and update traffic data showed no significant changes in daily traffic flows. The conversion of the Quay Street roundabout to a "throughabout" was completed in November 2011 and will result in traffic coming from Gosport via the A32 and out onto the M27 via Eastern Way. Traffic will no longer pass through Portland Street. This new road layout will hopefully reduce emissions in the Portland Street AQMA. Traffic data for Quay Street indicated no need for a detailed assessment.

The 2012 USA revealed a number of new or previously unidentified local developments which could have impacted on air quality. It was determined that a Detailed Assessment would not be required for these sources.

The 2013 progress report revealed that the exceedances detected were all within the existing AQMAs so detailed assessments were not required. No new developments were identified which would have an impact on air quality.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

During 2013, the Council operated 49 NO_2 diffusion tube sites and 2 continuous automatic sites for monitoring ambient air quality within the Borough.

2.1.1 Automatic Monitoring Sites

The Elms Road continuous automatic site monitors for NO_2 via chemiluminescence using a Thermo 42i analyser and is located at Elms Road, at the junction with the A32 Gosport Road, within the Gosport Road AQMA (Figure 2.1.1). The site has been running since 24th June 2008.

The Portland Street continuous analyser was installed in April 2012 and is a Teledyne Technologies Company model 200E Chemiluminescence $NO/NO_2/NO_x$ analyser housed in a Kaizen enclosure. Its location is shown within the Portland Street AQMA in Figure 2.1.2.

Table 2.1 provides details of both Automatic Monitoring Sites.

Fareham and Gosport Environmental Health Partnership have a contract with an air quality monitoring company for data collection, service and maintenance of the Elms Road and Portland Street Fareham and Tichborne Way Gosport. Calibrations are undertaken fortnightly; monthly data reports are submitted each Council; service and audits are undertaken on a six monthly basis.

Figure 2.1.1 Elms Road Automatic Monitoring Site

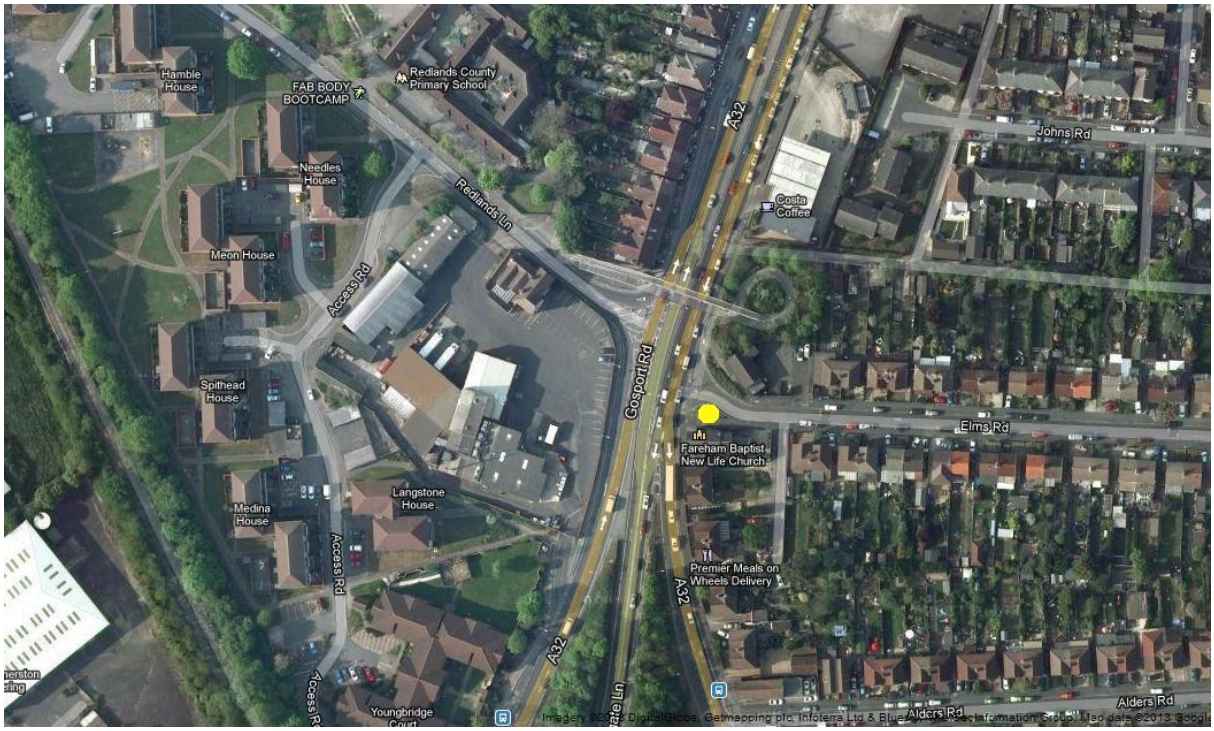

Figure 2.1.2 Portland Street Automatic Monitoring Site

Table 2.1 Details of Automatic Monitoring Sites

Site	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst-Case Exposure?
Elms Road	Road Side	457594 105280	NO_x/NO_2	Y	Chemiluminescence	Y (3.5m)	1.5m	Y
Portland Street	Road Side	457954 106027	NO_x/NO_2	Y	Chemiluminescence	N	1.5m	Y

2.1.2 Non-Automatic Monitoring Sites

The Council has 49 diffusion tubes sited at various locations around the Borough for monitoring $NO_{2;}$ these include triplicate co-location at the continuous sites in Elms Road and Portland Street.

Figure 2.2 maps showing locations of the monitoring sites.

Site details are given in Table 2.2.

Figure 2.2 Map(s) of Non-Automatic Monitoring Sites


5N
3N
2N
DC1
HR3A
HR2
HR1
HR4
PS3
PS5
PS4
PS1
PS6
BL1
Osborn Rd
Gordon Rd
New Rd
Derby Rd
Grove Rd
Trinity St
Russell Pl
Station Rd
Westbury Rd
Palmerston Ave
Westbourne Rd
Civic Way
High St
Union St
Lysses Path
Bridgefoot Dr
East St
Bath Ln
West St
Crescent Rd
Kings Rd
Harper Way
Queens Rd
Western Rd
Clay St
A27
Eastern Way
Belvoir Close
Elmhurst Rd
Upper Wharf
A32
Gosport Rd
Holbrook Rd
Briarwood Close
Coombe Farm Ave
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GR/RL
E1
E2
E3
G4
G7
G6
G2A
G14
G8Z
G5
G11
G10
G12
G3
G1A
G9
10NA
10N
Gosport Rd
Palmerston Dr
Access Rd
Hackett Way
Fielder Dr
Newgate Ln
Geoffrey Crescent
Beaconsfield Rd
Fayre Rd
Mill Rd
Coombe Farm Ave
Holbrook Rd
Eden Rise
Johns Rd
Earls Rd
Seabird Way
Marsail Dr
Alders Rd
Salterns Ln
Elms Rd
The Halliards
Laburnum Rd
Old Gosport Rd
Lower Quay Rd
B3385
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S1
S2
11NL
B3334
B3385
Titchfield Rd
Longs Ln
Metcalfe Ave
Croftlands Ave
Park Ln
Mayfield Close
Dale Rd
Queens Crescent
Oakdown Rd
Beresford Rd
Ravens Close
Eric Rd
Harold Rd
Elizabeth Rd
Fay Close
Martin Ave
Westways
Southways
Victory Rd
William Close
Nursery Ln
Marks Rd
Albert Rd
Woodcote Ln
Newgate Ln
Broom Way


P1B
P7A
P2
P6
P5
A27
Cams Hill
The Ridgeway
Alum Way
St Catherines Way
Downend Rd
The Thicket
The Spinney
The Pines
Tama Close
Oysel Gardens
Swan Close
Magpie Close
Nagtail Way
Rockingham Way
Dore Ave
Juie Close
Hawthorn Close
Linden Lea
Redwood Dr
Redlands Ave
The Crossway
The Queensway
The Kingsway
The Fairway
The Close
West St
Hatherley Crescent
Quintrel Ave
Beaulieu Ave
Grebe Close
Eagle Close
Gordon Ave
The Pegrines
Shearwater Ave
Peacock Close
Birdwood Grove
Hatherley Dr
Nelson Ave
Central Rd
Brenchley Close


M27
Beacon Bottom
Beacon Cl
Duncan Rd
Wagbrook Close
Lindway
Eastbrook Close
Station Rd
Bastins Close
Lower Duncan Rd
Collingwood Close
Park Mews
LH3
Pine Walk
Bridge Rd
A27
LH1
Badger Copse
Botley Rd
Holybrook Gardens
Honeysuckle Close
Locks Rd
Southampton Rd
Little Fox Dr
Telford Way


RM1
M27
T2
T1
AV/BF
A27
B3334
Segensworth Rd
Fontley Rd
Henry Cort Dr
Wynton Way
Thorni Ave
Park Farm Ave
Fareham Park Rd
Iron Mill Close
Nashe Way
Nashe Close
Stow Crescent
Winnington
Hill Park Rd
Kennedy Ave
Inverness Ave
Frosthole Crescent
Gifford Close
Argyle Crescent
Bentley Crescent
Wakefield Ave
Mavings Farm Rd
Oak Rd
Greyfriars Rd
Abbey Rd
Priory Rd
Margarita Rd
Beech Rd
Nicholas Crescent
Newlands
Bradly Rd
Meadowbank Rd
Gudge Heath Ln
Appleton Rd
Heathfield Ave
Catisfield Rd
Catisfield Ln
Fishers Hill
Highlands Rd
Cherrygarth Rd
Hunters Lodge
Mill Ln
Mill St
East St
High St
Peak Ln
Oldbury Way
Cleveland Dr
Wild Ridings
Hollam Dr
Park Ave
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Google earth


7N
Morshead Crescent
Mallory Crescent
Bruce Close
Norton Dr
© 2013 Google
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Table 2.2 Details of Non- Automatic Monitoring Sites

Site Ref.	Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Co-located with a Continuous Analyser ?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case Location?
10N	Farrier Way	B	457800, 104833	NO_2	N	N	Y - (8m)	0.4m	Y
10NA	3 Farrier Way	R	457775, 104846	NO_2	N	N	Y - (0m)	9.5m	Y
3N	14 Osborne Road	R	457643, 106326	NO_2	N	N	Y - (0m)	6m	Y
5N	Grove Road	R	457234, 106329	NO_2	N	N	Y - (4.5m)	0.5m	Y
7N	Norton Road	B	457235, 107156	NO_2	N	N	Y - (6m)	0.5m	Y
Av/Bf	Avenue / Bishopfields Road	R	456408, 106125	NO_2	N	N	N	2.2m	Y
BL1	11 Bath Lane	NR	458376, 106109	NO_2	N	N	N	16.0m	N
G10	107 Gosport Road	R	457675, 105616	NO_2	N	N	Y - 0m	14m	Y
G11	2 Earls Road	R	457668, 105461	NO_2	N	N	Y - (0m)	5m	Y
G1A	30 Old Gosport Road	R	457732, 105625	NO_2	N	N	Y - (0m)	10m	Y
G2A	138 Gosport Road	NR	457627, 105138	NO_2	Y – Gosport Road	N	Y - (0m)	9.5m	Y
G3	202 Gosport Road	R	457726, 104869	NO_2	N	N	Y - (0m)	9m	Y
G4	122 Gosport Road	R	457598, 105213	NO_2	Y – Gosport Road	N	Y - (0m)	6m	Y
G5	275 Gosport Road	R	457681,	NO_2	N	N	N	13m	Y

Site Ref.	Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Co-located with a Continuous Analyser ?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case Location?
			104907						
G6	171 Gosport Road	R	457599, 105410	NO_2	Y – Gosport Road	N	Y – (0m)	6m	Y
G7	193 Gosport Road	R	457583, 105354	NO_2	Y – Gosport Road	N	Y – (0m)	6.5m	Y
G8Z	156 Gosport Road	R	457656, 105049	NO_2	N	N	Y – (0m)	4m	Y
G9	11 Eden Rise	R	457745, 105730	NO_2	N	N	N	13m	Y
HR1	Lamppost, 8 Hartlands Road	K	457870, 106071	NO_2	N	N	Y – (3.5m)	1.8m	Y
HR2	17 Hartlands Road	R	457822, 106107	NO_2	N	N	N	11m	Y
HR3A	7 Hartlands Road	R	457787, 106140	NO_2	N	N	Y – (0m)	7m	Y
HR4	25 Hartlands Road	R	457860, 106077	NO_2	N	N	Y – (0m)	6.5m	Y
LH1	41 Bridge Road	R	451584, 108270	NO_2	N	N	Y - (5m)	2m	Y
LH3	36 Botley Road	R	451720, 108361	NO_2	N	N	Y – (0m)	5m	Y
P1B (was P1A)	3 The Ridgeway	R	459446, 106106	NO_2	N	N	N	20m	Y
P2	141 The Crossways	R	461134, 105806	NO_2	N	N	Y - (10m)	1m	Y
P4	22 Cams Hill	R	459054, 106162	NO_2	N	N	N	2m	Y

Site Ref.	Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Co-located with a Continuous Analyser ?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case Location?
P5	Silvermist, Portchester	R	461139, 105532	NO_2	N	N	N	1.5m	Y
P6	169 West Street	R	461046, 105594	NO_2	N	N	Y - (3.5m)	1.5m	Y
P7A (was P7)	77 West Street, Portchester	R	460272, 105831	NO_2	N	N	Y - (5m)	1.5m	Y
PS1	1 Sentinel Cottages	R	457939, 106012	NO_2	Y - Portland Street	N	Y - (0m)	6.5m	Y
PS1A									
PS1B									
PS2	2 Sentinel Cottages	R	457937, 106021	NO_2	Y - Portland Street	N	Y - (0m)	6.5m	Y
PS3	38 Portland Street	R	457935, 106033	NO_2	Y - Portland Street	N	Y – (0m)	3.5m	Y
S2	Stubbington Lane (Erice Road)	R	455398, 102811	NO_2	N	N	N	2m	Y
T1	South St Dental Health, Titchfield	R	453996, 105758	NO_2	N	N	Y – (0m)	1.5m	Y
E1	Co-located with Elms Road Monitor	R	457590, 105281	NO_2	Y – Gosport Road	Y	N – (3.5m)	1.5m	Y
E2									
E3									
G12	Two Saints, 101 Gosport Road	R	457684, 105630	NO_2	Y – Gosport Road	N	Y – (1 m)	1.1m	Y
G14	Bottom of Beaconsfield Road	NR	457631, 105494	NO_2	N	N	Y – (5m)	6.9m	Y

Site Ref.	Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Co-located with a Continuous Analyser ?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case Location?
DC1	Maytree Drive (lamppost) opposite Delme Court	R	457182, 106203	NO_2	N	N	N	0.5m	Y
RM1	Runnymede	R	455745, 107825	NO_2	N	N	N	49m	N
PS4	Portland Street Continuous Monitor	R	457954, 106027	NO_2	Y – Portland Street	Y	Y – (18m)	1.8m	Y
PS5									
PS6									
GR/RL	Corner of Gosport Road & Redlands lane	R	457564, 105300	NO_2	Y – Gosport Road	N			Y
11NL	11 Newgate Lane	R	457114, 102689	NO_2	N	N	N	16m	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide (NO_2)

In order to assess the measured concentrations against the annual mean nitrogen dioxide air quality objective, both the tubes and the data need to be subject to quality assurance/quality control protocols. These allow for inherent uncertainty in the measured concentrations to be minimised.

The purpose of reviewing the monitoring data is to identify any possible exceedances of the relevant air quality objectives. In doing so, it is vital to consider not only the measured concentrations in relation to the objectives, but also whether the locations represent relevant exposure.

In cases where monitoring locations do not represent relevant exposure the façade distance calculation method, as described in LAQM.TG(09), has been used. This has been clearly stated in the report.

The two air quality objectives that ambient concentrations of NO_2 need to be assessed against are as follows:

- An annual mean of 40 µg/m^3; and
- The number of exceedances of the 1 hour mean of 200 µg/m^3 (18 allowable exceedances in total).

It should be noted that it is only possible to directly assess against the 1 hour objective if hourly monitoring data is available. As most local NO_2 monitoring within the Borough is conducted with diffusion tubes the approach suggested in LAQM.TG(09) has been adopted. The approach, based on empirical studies, suggests that where the annual mean is less than 60 µg/m^3, exceedances of the short term objective are unlikely.

2.2.2 Automatic Monitoring Data

The Council has undertaken continuous monitoring of NO_2 at the Elms Road site since 2008. The site is located within the Gosport Road AQMA at the junction with the A32 Gosport Road. As the site is 3.5 metres closer to the A32 than the nearest receptor, measurements can be considered worst case.

The station was installed in June 2008, so the data for the 2008 monitoring data (June to December 2008) were period adjusted, in accordance with LAQM TG.09, using local AURN background sites at Bournemouth and Portsmouth to estimate the annual mean NO_2 concentration.

The Portland Street automatic analyser has only been in operation since April 2012.

Data capture of 86.0% was achieved at Elms Road in 2013 slightly down from 2012 (91.3%). The annual mean NO_2 concentration for 2013 was 33.8 µg/m^3, which is similar to the annual mean concentrations recorded in 2009, 2011 and 2012 (Table

2.3 and Figure 2.3). The higher NO_2 annual mean result in 2010 should be treated with caution due to a lower data capture as a result of incorrect filters being used.

Data capture from the new Portland Street site was very good for the period (95.7%). The annual mean concentration is below the objective at 34.6 µg/m^3.

Figure 2.3 provides an indication of the downward trend in annual mean NO_2 concentration since monitoring began in 2008.

There have been no monitored exceedances of the hourly NO_2 standard of 200 µg/m^3 since monitoring began at Elms Road in 2008. The new Portland Street site recorded 7 exceedances during 2013 an increase from 2012 (2 exceedances). The hourly NO_2 objective allows for 18 hours of NO_2 greater than 200 µg/m^3 per year, therefore there have been no exceedances of the hourly NO_2 objective since monitoring began at Elms Road or Portland Street (Table 2.4).

All details of the QA/QC procedures for the monitors are given in section 2.1 and Appendix A.

Table 2.3 Results of Automatic Monitoring for NO_2: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2013 % [b]	Annual Mean Concentration (µg/m^3)				
					2009* [c]	2010* [c]	2011* [c]	2012* [c]	2013 [c]
Elms Road, Fareham	R	Y	86.0%	86.0%	35.9	41.8	33.2	35.5	33.8
Portland Street	R	Y	95.7%	95.7%	N/A	N/A	N/A	34.9 (Annualised *0.82)	34.6

In bold, exceedence of the NO_2 annual mean AQS objective of 40µg/m^3

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

[c] Means should be "annualised" as in Box 3.2 of TG(09) (http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38), if valid data capture is less than 75%

* Annual mean concentrations for previous years are optional

Figure 2.3 Trends in Annual Mean NO_2 Concentrations Measured at Automatic Monitoring Sites

A trend chart providing NO_2 annual mean results over the past 5 years (or more if available) may be inserted . Please discuss any trends shown.

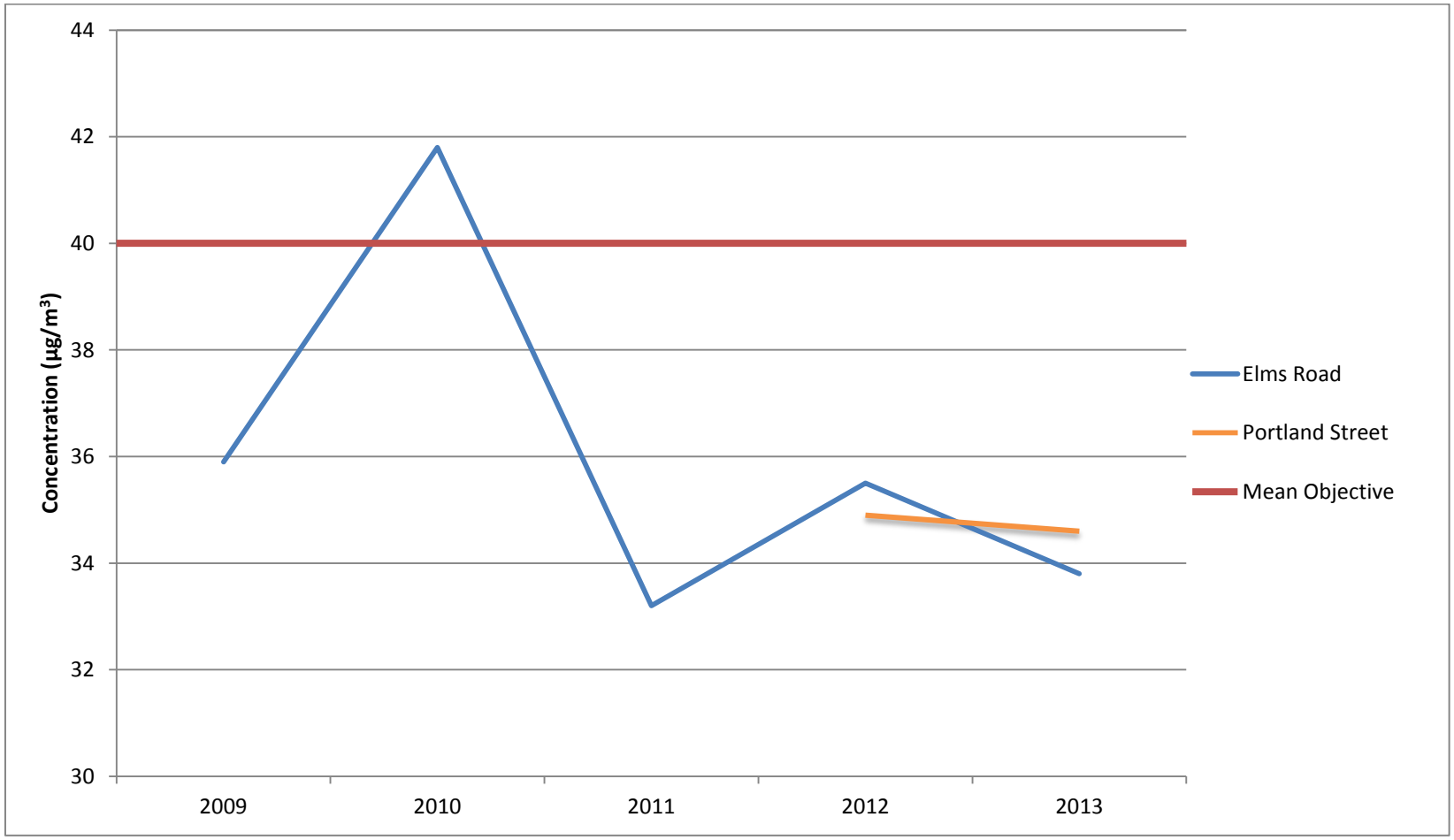


Table 2.4 Results of Automatic Monitoring for NO_2: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2013 % [b]	Number of Hourly Means > 200µg/m^3				
					2009* [c]	2010* [c]	2011* [c]	2012* [c]	2013 [c]
Elms Road Fareham	R	Y	86.0%	86.0%	0	0	0	0	0
Portland Street	R	Y	95.7%	95.7%	N/A	N/A	N/A	2	7

In bold, exceedence of the NO_2 hourly mean AQS objective (200µg/m^3 – not to be exceeded more than 18 times per year)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

[c] If the data capture for full calendar year is less than 90%, include the 99.8th percentile of hourly means in brackets

* Number of exceedences for previous years is optional

2.2.3 Diffusion Tube Monitoring Data

The Council has been monitoring NO_2 using passive diffusion tubes for a number of years.

All details of the QA/QC procedures for the diffusion tubes that have been applied to the diffusion tube monitoring are given in Appendix A.

The details of the diffusion tube bias adjustment factor are discussed in Appendix B. The bias adjustment factor is used to improve the accuracy of the diffusion tube results. This may be determined from a local study that has co-located diffusion tubes with a chemiluminescence analyser or the factor may be derived from the national database of co-location studies. Local authorities are advised to report both factors. In this report, Fareham Borough Council has used the locally derived factor.

There were no sites below the 75% (9 months) data capture criterion in 2013 so there was no need for annualisation. The 2013 results for all sites including data capture percentages are given in Table 2.5. The full dataset (raw monthly values) are included in Appendix C.

The results in Table 2.5 show that there were two marginal exceedances of the annual mean NO_2 objective in the existing AQMAs in 2013 at G7 and PS3 . Both sites, G7 and PS3, have a history of exceedances of the annual mean objective.

Site G10 also shows a marginal exceedance and is situated outside of the AQMA area. During the updating and screening assessment in 2009, an exceedance of the annual mean NO_2 objective was measured at site G10, north of the AQMA in Gosport Road. The subsequent Detailed Assessment in 2010 work concluded from further monitoring, that the site of concern on Gosport Road would meet the annual mean NO_2 objective.

Dispersion modelling indicated that the area of exceedance was limited to the Gosport Road and did not include the facades of any properties outside the AQMAs. Monitoring and modelling concentrations indicated that there remained exceedances of the annual mean NO_2 objective at locations relevant of public exposure within the Portland Street and Gosport Road AQMAs. From these results it was concluded that amendments of the existing AQMAs were not required.

A further detailed assessment at this site is not considered necessary at this time due to the marginal nature of the exceedance which could be related to the new local bias adjustment gained from the relatively new Portland Street automatic site. Since the last exceedance at this site was in 2010 it is recommended that this site continue to be monitored and if it shows a further breach of the objective in future years, then examine the need to proceed to a detailed assessment.

Table 2.6 below shows annual results for existing tubes since 2009 and Figure 2.4 below shows annual results since 2009 for all the long term sites. There is an overall increase this year compared with last year in NO_2 concentrations from 2011 which showed no exceedances of the annual mean. The fact that most sites show a similar

pattern, suggest these increases may be as a result of meteorological effects over a wider regional area.

Table 2.5 Results of NO_2 Diffusion Tubes 2013

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2013 [a]	2013 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 1.07 [b]
10N	Farrier Way	B	N	N	N	N	83.3%	22.69
10NA	3 Farrier Way	R	N	N	N	N	91.7%	22.97
3N	14 Osborne Road	R	N	N	N	N	100.0%	25.00
5N	Grove Road	R	N	N	N	N	91.7%	24.75
7N	Norton Road	B	N	N	N	N	91.7%	20.34
Av/Bf	Avenue / Bishopfields Road	R	N	N	N	N	100.0%	27.97
BL1	11 Bath Lane	NR	N	N	N	N	100.0%	38.48
G10	107 Gosport Road	R	N	N	N	**Y**	**100.0%**	**40.50**
G11	2 Earls Road	R	N	N	N	N	100.0%	29.61
G1A	30 Old Gosport Road	R	N	N	N	N	75.0%	33.46
G2A	138 Gosport Road	NR	Y – Gosport Road	N	N	N	100.0%	32.14

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2013 [a]	2013 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 1.07 [b]
G3	202 Gosport Road	R	N	N	N	N	75.0%	30.81
G4	122 Gosport Road	R	Y – Gosport Road	N	N	N	100.0%	29.21
G5	275 Gosport Road	R	N	N	N	N	100.0%	28.87
G6	171 Gosport Road	R	Y – Gosport Road	N	N	N	100.0%	35.87
G7	193 Gosport Road	R	Y – Gosport Road	N	N	**Y**	**100.0%**	**40.08**
G8Z	156 Gosport Road	R	N	N	N	N	100.0%	33.44
G9	11 Eden Rise	R	N	N	N	N	91.7%	28.82
HR1	Lamppost, 8 Hartlands Road	K	N	N	N	N	91.7%	37.80
HR2	17 Hartlands Road	R	N	N	N	N	91.7%	34.00
HR3A	7 Hartlands Road	R	N	N	N	N	91.7%	29.46
HR4	25 Hartlands Road	R	N	N	N	N	100.0%	31.73

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2013 [a]	2013 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 1.07 [b]
LH1	41 Bridge Road	R	N	N	N	N	91.7%	27.63
LH3	36 Botley Road	R	N	N	N	N	100.0%	30.56
P1B	3 The Ridgeway	R	N	N	N	N	100.0%	23.60
P2	141 The Crossways	R	N	N	N	N	100.0%	24.09
P4	22 Cams Hill	R	N	N	N	N	83.3%	28.02
5	Silvermist, Portchester	R	N	N	N	N	100.0%	31.34
P6	169 West Street	R	N	N	N	N	100.0%	25.26
P7A	77 West Street, Portchester	R	N	N	N	N	91.7%	22.41
PS1	1 Sentinel Cottages	R	Y-Portland Street	N	N	N	100.0%	35.66
PS1A					N	N	100.0%	37.07
PS1B					N	N	100.0%	36.01
PS2	2 Sentinel Cottages	R	Y - Portland Street	N	N	N	91.7%	36.01

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2013 [a]	2013 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 1.07 [b]
PS3	38 Portland Street	R	Y - Portland Street	N	N	**Y**	**91.7%**	**41.60**
S2	Stubbington Lane (Erice Road)	R	N	N	N	N	91.7%	26.78
T1	South St Dental Health, Titchfield	R	N	N	N	N	100.0%	26.13
E1	Co-located with Elms Road Monitor	R	Y – Gosport Road	Y	N	N	100.0%	36.55
E2					N	N	100.0%	37.07
E3					N	N	100.0%	37.18
G12	Two Saints, 101 Gosport Road	R	Y – Gosport Road	N	N	N	100.0%	37.35
G14	Bottom of Beaconsfield Road	NR	N	N	N	N	91.7%	36.59
DC1	Maytree Drive (lamppost) opposite Delme Court	R	N	N	N	N	100.0%	30.28
RM1	Runnymede	R	N	N	N	N	100.0%	29.48

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2013 [a]	2013 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 1.07 [b]
PS4	Portland Street Continuous Monitor	R	Y	Y	N	**Y**	**100.0%**	**35.20**
PS5					N	**Y**	**100.0%**	**34.50**
PS6					N	**Y**	**100.0%**	**34.60**
GR/RL	Corner of Gosport Road & Redlands lane	R	Y	N	N	N	100.0%	28.43
11NL	11 Newgate Lane	R	N	N	N	N	100.0%	21.90

In bold, exceedence of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedence of the NO_2 hourly mean AQS objective

[a] Means should be "annualised" as in Box 3.2 of TG(09)(http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38), if full calendar year data capture is less than 75%

[b] If an exceedence is measured at a monitoring site not representative of public exposure, NO_2 concentration at the nearest relevant exposure should be estimated based on the "NO_2 fall-off with distance" calculator (http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html), and results should be discussed in a specific section. The procedure is also explained in Box 2.3 of Technical Guidance LAQM.TG(09) (http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30).

Table 2.6 Results of NO_2 Diffusion Tubes (2009 to 2013)

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)	2013 (Bias Adjustment Factor = 0.98)
10N	Farrier Way	N	22.2	24.3	21.2	24.20	22.69
10NA	3 Farrier Way	N	21.5	24.5	18.7	21.36	22.97
3N	14 Osborne Road	N	23.5	26.6	21.1	24.68	25.00
5N	Grove Road	N	25	27.6	22.8	26.76	24.75
7N	Norton Road	N	17.7	20.8	16.5	18.45	20.34
Av/Bf	Avenue / Bishopfields Road	N	21.8	29.9	21.8	26.49	27.97
BL1	11 Bath Lane	N	N/A	N/A	30.7	35.88	38.48
G10	107 Gosport Road	N	35.5	**40.8**	32.0	37.48	**40.50**
G11	2 Earls Road	N	25.9	28.7	24.3	29.23	29.61

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)	2013 (Bias Adjustment Factor = 0.98)
G1A	30 Old Gosport Road	N	30.7	34.7	28.5	32.14	33.46
G2A	138 Gosport Road	Y – Gosport Road	**40.6**	**41.5**	27.3	29.90	32.14
G3	202 Gosport Road	N	26.4	30.7	25.4	30.20	30.81
G4	122 Gosport Road	Y – Gosport Road	26.4	30.5	24.8	28.81	29.21
G5	275 Gosport Road	N	25.4 [e]	33.5 [e]	23.5	26.17	28.87
G6	171 Gosport Road	Y – Gosport Road	28.3	32.9	29.1	34.18	35.87
G7	193 Gosport Road	Y – Gosport Road	33.2	39.6	33.6	**40.57**	**40.08**
G8Z	156 Gosport Road	N	25.7	31.0	26.9	32.24	33.44

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)	2013 (Bias Adjustment Factor = 0.98)
G9	11 Eden Rise	N	25.1	28.5	24.7	26.28	28.82
HR1	Lamppost, 8 Hartlands Road	N	38.2	**41.8**	35.9	38.50	37.80
HR2	17 Hartlands Road	N	28.2	32.5	27.6	32.06	34.00
HR3A	7 Hartlands Road	N	25.2	34.8	23.2	27.28	29.46
HR4	25 Hartlands Road	N	26.4	30.7	26.0	28.52	31.73
LH1	41 Bridge Road	N	23.8	27.3	22.8	27.10	27.63
LH3	36 Botley Road	N	31.3	31.4	25.9	30.11	30.56
P1B (was P1A)	3 The Ridgeway	N	20.8	24.0	20.2	23.07	23.60
P2	141 The Crossways	N	21.2	23.7	20.3	21.72	24.09

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)	2013 (Bias Adjustment Factor = 0.98)
P4	22 Cams Hill	N	26	28.9	25.5	29.14	28.02
P5	Silvermist, Portchester	N	21.2	23.7	24.6	29.26	31.34
P6	169 West Street	N	26	28.9	21.0	25.70	25.26
P7A (was P7)	77 West Street, Portchester	N	27.7	22.5	17.0	20.11	22.41
PS1 PS1A PS1B	1 Sentinel Cottages	Y - Portland Street	36.0	**42.0**	34.8	35.05	36.99
PS2	2 Sentinel Cottages	Y - Portland Street	38.7	**43.3**	35.8	35.84	36.01
PS3	38 Portland Street	Y - Portland Street	**42.0**	**47.9**	35.0	**40.43**	**41.60**
S2	Stubbington Lane (Erice Road)	N	22.3	27.3	19.8	23.24	26.78

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)	2013 (Bias Adjustment Factor = 0.98)
T1	South St Dental Health, Titchfield	N	20.6	28.1	21.8	23.97	26.13
E1 E2 E3	Co-located with Elms Road Monitor	Y – Gosport Road	36.5	**41.8**	33.0	36.70	36.93
G12	Two Saints, 101 Gosport Road	Y – Gosport Road	N/A	N/A	31.2	37.00	37.35
G14	Bottom of Beaconsfield Road	N	N/A	N/A	29.2	33.29	36.59
DC1	Maytree Drive (lamppost) opposite Delme Court	N	25.3	29.1	24.2	28.25	30.28
RM1	Runnymede	N	N/A	N/A	21.7	28.97	29.48

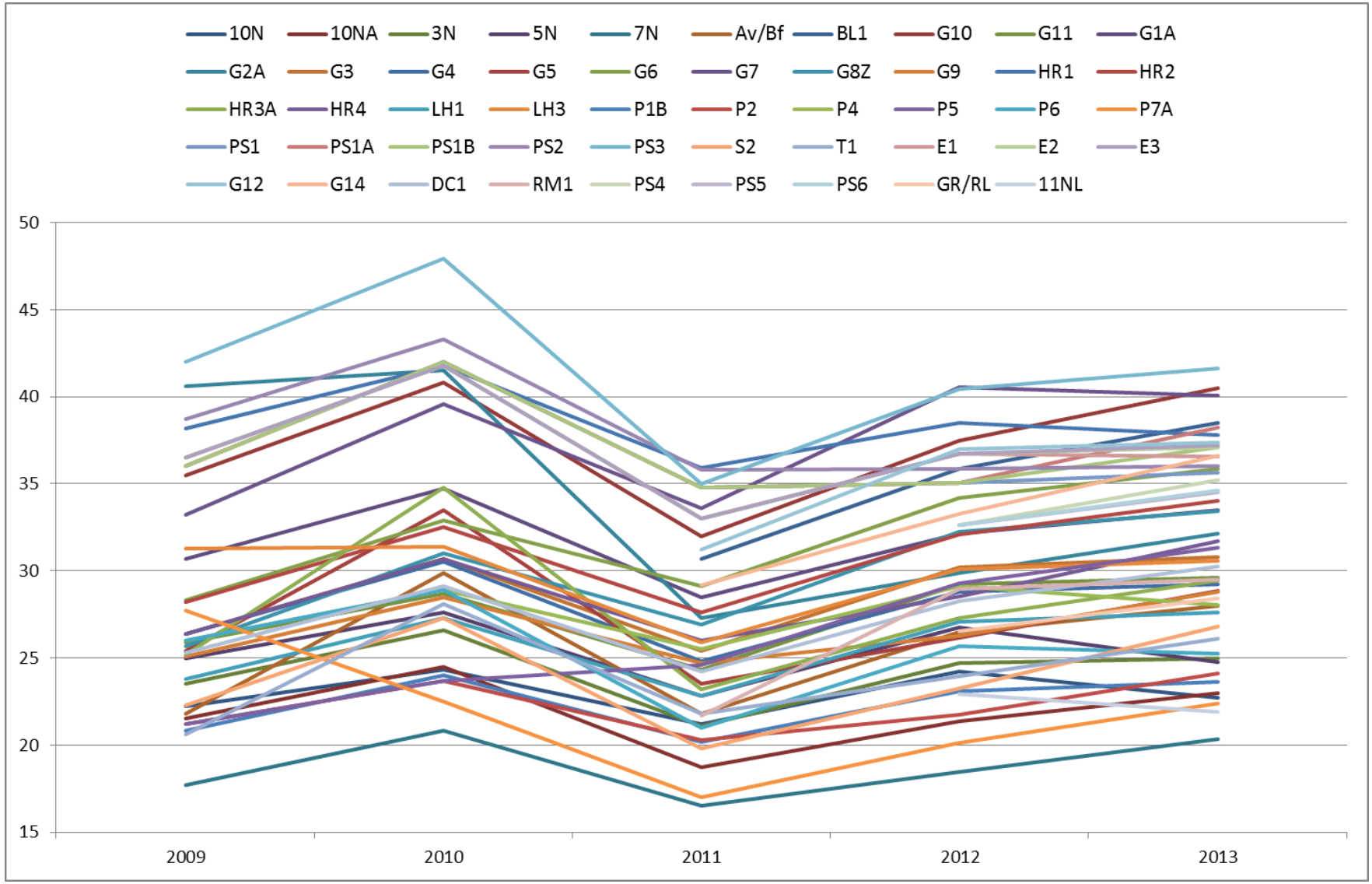
Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)	2013 (Bias Adjustment Factor = 0.98)
PS4 PS5 PS6	Portland Street Continuous Monitor	Y	N/A	N/A	N/A	32.60	34.77
GR/RL	Corner of Gosport Road & Redlands lane	Y	N/A	N/A	N/A	26.55	28.43
11NL	11 Newgate Lane	N	N/A	N/A	N/A	22.94	21.90

In bold, exceedence of the NO_2 annual mean AQS objective of 40µg/m^3

Underlined, annual mean > 60µg/m^3, indicating a potential exceedence of the NO_2 hourly mean AQS objective

[a] Means should be "annualised" as in Box 3.2 of TG(09) (http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38), if full calendar year data capture is less than 75%

Figure 2.4 Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites



2.2.4 Other Pollutants Monitored

Fareham Borough Council does not currently monitor for any other pollutant other than NO_2.

2.2.5 Summary of Compliance with AQS objectives

Fareham Borough Council monitors for the pollutant NO_2 by way of two continuous analysers and 49 diffusion tubes.

Assessment of the 2013 dataset showed there to be three monitoring sites measuring annual mean NO_2 concentrations above the objective. Two of these sites (G7 and PS3) are within existing AQMAs so no detailed assessment is required. The third site G10 is outside the Gosport Road AQMA. A previous detailed assessment for this site in 2010 showed no exceedances at the facades of the houses and therefore no need to adjust the AQMA.

Fareham Borough Council has examined the results for monitoring within the Borough and although there are three exceedences of the NO_2 air quality objective, no detailed assessments are required this year.

3 NEW LOCAL DEVELOPMENTS

The Council has reviewed the key changes in the Local Authority area that have the potential to impact significantly on local air quality. In line with the criteria set out below, only those changes deemed to have been significant have been detailed. The assessment of any significantly changed sources have been considered in terms of whether the Council needs to move to a Detailed Assessment.

3.1 Road Traffic Sources

The report has assessed any changes to the following since the last updating and screening assessment:-

- Narrow congested streets with residential properties close to the kerb;
- Busy streets where people may spend one hour or more close to traffic;
- Roads with a high flow of buses and/or HGVs;
- Junctions;
- New roads constructed or proposed since the last updating and screening assessment;
- Roads with significantly changed traffic flows;
- Bus or coach stations.

With consideration to the above, no significant changes have been identified which require assessment. However, a number of local/regional schemes have been identified as possibly providing beneficial impacts on local congestion and emissions. These are:-

- The Quay Street roundabout was redeveloped to a "throughabout" in November 2011. It was a new type of traffic light junction for Hampshire with traffic lights placed on the roundabout as well as on a number of approaches to it. The new layout takes traffic heading from Gosport to the M27 straight through the middle of the roundabout away from the houses on Portland Street. It is hoped that the resulting "throughabout" in close proximity to the Portland Street AQMA will assist in reducing nitrogen dioxide levels and lead to a revocation of the latter. The "throughabout " may also be helping to reduce congestion on the A32.

- The Eclipse Busway is a 4 km long dedicated busway and cycle route on the 8km stretch between Gosport and Fareham, using a former railway corridor. It opened in April 2012. The busway allows high specification low emission buses to avoid congested parts of the busy A32 and reduce the percentage of bus traffic on these roads. At present, First have 17 Euro V buses using the route. Relevant exposure is not within 10m of this high flow of buses. The annual bus patronage on all the Fareham & Gosport corridors has increased by 11% since the opening of the busway. The busway has also become very popular with cyclists.

- Two new dedicated bus lanes opened in Fareham in April 2012 as part of Hampshire County Council's Fareham Town Access Plan (Western Way and Portland Street). It is hoped that the new bus infrastructure and the new busway will improve journey times and make bus travel a more attractive alternative to the car thereby helping to reduce congestion and reduce pollution on local roads. The bus lanes are operational 7 days a week 24 hours a day. Since September 2013, the end of the Western Lane bus lane approaching Station Roundabout has been drawn back to allow two lanes to feed onto the roundabout and The Avenue section of the bus lane has been removed.

- A “bus gate” was opened in June 2014 to create a bus only exit, controlled by traffic signals, from Western Road, westbound, onto Western Way. This will allow access for buses direct onto the A27 for westbound services. This will effectively remove all westbound bus services from the Market Quay roundabout close to the Portland Street AQMA, giving lane space back to traffic and Gosport bound services. This will ensure journey time reliability for public transport services which are currently experiencing significant delays at the roundabout. It should also have an impact on NO_2 levels in the Portland Stret AQMA in the future.

- The Western Way bus lane will eventually become in late 2014, an off-carriageway, using verge space between the railway and the road, to return the two westbound lanes to normal traffic.

- A planning application for the opening of the Yew Tree Drive bus gate at Whiteley to cars was submitted by Hampshire County Council last year. The provision of the bus gate to increase the use of buses between Fareham and Whiteley was an original AQAP target. Permission was granted for a year-long trial opening. Advice has been given to Hampshire County Council in respect of possible air quality and noise impact assessments. The Council recently assisted the air quality consultant in providing 12 nitrogen dioxide diffusion tubes in the area changed on a monthly basis for a total monitoring period of 5 months.

3.2 Other Transport Sources

No other significant local transport sources have been identified since the previous LAQM assessment.

3.3 Industrial Sources

The report has assessed that there are no significant changes to the following industrial sources since the last Progress Report in 2013:-

- New or proposed installations for which an air quality assessment has been carried out;
- Existing installations where emissions have increased substantially or new relevant exposure has been introduced;
- New or significantly changed installations with no previous air quality assessment;

- Major fuel storage depots storing petrol;
- Petrol stations and
- Poultry farms.

Changes to industrial processes governed under the Local Authority Environmental Permitting regime are:-

- Two coating permits to be surrendered this year.

3.4 Commercial and Domestic Sources

No significant sources have been identified since the previous LAQM assessment including the change of use of the old composter site since it closed in December 2012. It is currently being used as a site for wood waste sorting, storage and transfer, highways salt store and bin storage.

3.5 New Developments with Fugitive or Uncontrolled Sources

Fareham Borough Council previously identified the following local developments which may impact on air quality in the local authority area in the future:-

- Industrial, commercial and residential development at Daedalus airfield;
- The residential, commercial and industrial development north of Fareham in 2016 to be known as Welborne.

These will be taken into consideration in future LAQM reports.

4 LOCAL/REGIONAL AIR QUALITY STRATEGY

4.1 Air Quality Action Plan - Steering Group

The AQAP was approved by Fareham Borough Council Executive on 8 December 2008 with the recommendation that a member led implementation group be developed to pursue the improvement actions.

The group is chaired by Councillor T Cartwright, Deputy Executive Leader and Executive Portfolio holder for Public Protection. Councillor Mrs K Mandry, Chairman of PPPDRP (Public Protection Policy Development and Review Panel) and Councillor P J Davies are also members of the group as is Councillor K D Evans, Executive Member for Strategic Planning and Environment. The group has met regularly since 2008 and continues to receive updates in respect of the actions from the following sub groups:-

- **Public Transport** - led by Alison Hull, Hampshire County Council, Principal Transport Officer, Passenger Transport Infrastructure & Information.
- **Road Network Infrastructure** - led by Steve Faulkner, Hampshire County Council, Transport Planner, Strategic Transport Team.
- **Sustainability** - led by Mark Chevis, Fareham Borough Council, FBC Sustainability Officer (20 hours a month).
- **Promotion/Publicity** - led by Heather Cusack, Fareham Borough Council, Principal Environmental Health Officer (EHO).
- **Monitoring** - led by Heather Cusack, Fareham Borough Council, Principal EHO.

The Council has applied for air quality grants for the AQAP and so far £4,400 has been used to assist in the purchase of two fuel saving devices for the refuse vehicles and £1,300 of a further grant of £12,600 received in 2010, was used for the administration of the Big Green Commuter Challenge (BGCC) in 2011 and 2012. The grant was also used to produce a health and air quality leaflet compiled by the Steering Group and NHS Hampshire with printing costs of £420. This leaflet is on our website and has been distributed to local GP surgeries, libraries etc. The provision of green travel awareness banners on the A32 should take place in the next year now that certain lamp columns have been replaced by the PFI contractor. Hampshire County Council is currently assessing what columns are available to display the banners safely.

5 Planning Applications

The following are forthcoming major project planning developments which have the potential to affect local air quality:-

5.1 The Daedalus Redevelopment – Solent Enterprise Zone

The Council granted outline planning permission for the use of the HMS Daedalus site for employment based development in December 2013. This will be known as the Solent Enterprise Zone. The Daedalus site is around 200 hectares, of which the Solent Enterprise Zone area covers 82 hectares. There was no need for a condition relating to air quality monitoring/assessment as this had been investigated at the EIA stage.

It is hoped that the Daedalus redevelopment will create 3500 new jobs by 2026, providing a vital boost to the sub regional economy, particularly in view of the dockyard closures in Portsmouth.

One of the first developments completed at the Daedalus site was Fareham College's Centre of Excellence for Advance Engineering Skills Training (CEMAST). CEMAST opened to students in September 2014. CEMAST has training space for over 600 students and up to 200 apprentices a year, who have access to modern engineering workshops, teaching classrooms and a learning resource centre. An air quality assessment was not requested at the planning stage as the site will only have 140 parking spaces and will have a travel plan. The latter provides for a dedicated bus service; a minibus service between the site and the railway station in Fareham; parking permits will favour car sharers. Facilities for cyclists including 60 cycle parking spaces are also planned.

Planning permission was granted in March 2014 for an Innovation Centre in the Solent Enterprise Zone at Daedalus. This project will create 150 jobs with new office space and workshop facilities for new businesses. The focus will be on engineering, aerospace, aviation and marine industries. The Innovation Centre will be located next to CEMAST. The planning process did not give rise to air quality concerns in respect of the Innovation Centre.

5.2 Yew Tree Drive bus gate

Earlier this year, the Council assisted Hampshire County Council with a five month programme of air quality monitoring in the Yew Tree Drive area using nitrogen dioxide diffusion tubes. This will provide their air quality consultant with data to assess the impact of the one year trial of opening the bus gate to cars. HGVs are still prohibited from using the gate. It appears the opening of the bus gate does not cause the local levels of nitrogen dioxide to exceed the air quality objective.

5.3 Change of use of composter site

The 10 year commercial composting activities on the old Down End Road quarry site more or less ceased at the end of 2012 but a variation of condition 2 of planning

permission P/10/1152/MW allowed a further period of time to operate the site for wood waste storage, sorting and transfer, highways salt store and bin storage. The operator Veolia has recently applied to continue these uses on site.

5.4 Longfield Avenue application

In 2014, the Council received an outline application for the redevelopment of an area of land off Longfield Avenue to provide up to 1550 dwellings, a new health centre, a primary school, a public house/restaurant plus the provision of green infrastructure (to include public open space, equipped areas of play, suds, meadowland, permissive footpaths, cycle ways, structural woodland planting, allotments and general landscaping) including a new bypass between Stubbington and Fareham. The application is EIA development and represents a departure from the local plan. The application included an air quality assessment.

In response to the consultation, Environmental Health advised that they had no adverse comments in respect of this application. However, any application that increases the concentration of nitrogen dioxide from traffic in the Borough albeit in negligible terms, is of concern. As stated, the Borough has two AQMAs for nitrogen dioxide that we are aiming to revoke over time. Although the increase in nitrogen dioxide from the proposed development is not of a magnitude that could be objected to, they are concerned that the development will do nothing to assist in lowering the future levels of nitrogen dioxide. Traffic from the development will pass through the two AQMAs and therefore will be directly affected by the proposed development.

6 Air Quality Planning Policies

6.1 Fareham Borough local Plan (Saved Policies)

On commencement of the Planning and Compulsory Purchase Act 2004, the Local Plan Review was incorporated within the Local Development Framework (LDF) with policies saved for three years. As of the 27th September 2007 expiry date, the Council sort the Secretary of State's approval to save several key of policies until the approval of the Development Plan Documents. Of the saved policies, the following covers the potential for development to impact on local air quality.

Policy DG1: Environmental Impact

Development will be permitted provided that:

(A) It does not detract from the use and enjoyment of adjacent land or have an adverse impact on the wider environment by reason of noise, dust, fumes, heat, smoke, liquids, vibration or light.

6.2 The Development Plan

The Development Plan is the complete set of documents that set out the local authority's policies and proposals for the development and use of land in their area. Currently the Development Plan for Fareham Borough Council is comprised of the following:

- The Development Plan Documents in the Fareham Local Development Framework (LDF) incorporating the saved policies of the Fareham Borough Local Plan Review 2000 and the Core Strategy August 2012 (Local Plan part 1);
- Hampshire Minerals and Waste Plan 2013

6.3 Core Strategy - Local Plan Part 1

The Core Strategy is a Development Plan Document (DPD) that sets out the key elements of the planning framework for the Borough. It includes policies for areas and issues requiring development or protection. Proposals for strategic sites will provide the principles to be worked up in more detail through specific plans for the New Community North of Fareham to be known as Welborne, Fareham Town Centre and the Coldeast and Daedalus sites.

The Core Strategy was adopted by the full Council on 4 August 2011. The Core Strategy now forms part of the Development Plan and replaces, in whole or part, a number of policies in the Fareham Borough Local Plan Review (June 2000).

Construction at Welborne should commence in 2016.

The key objectives and policies within the Core Strategy pertinent to air quality are set out below:-

6.3.1 Strategic Objectives

SO12

To safeguard and ensure the prudent use and management of natural resources, increase energy and water efficiency and encourage and promote the use of renewable energy sources to help adapt to climate change, and manage pollution and natural hazards, avoid inappropriate development in areas at risk of flooding, secure improvements in air and water quality and ensure effective waste management.

6.3.2 Key Policies

CS4 Green Infrastructure, Biodiversity and Geological Conservation

Habitats important to the biodiversity of the Borough, including Sites of Special Scientific Interest, Sites of Importance for Nature Conservation, areas of woodland, the coast and trees will be protected in accordance with the following hierarchy of nature conservation designations:

(i) International - Special Protection Areas (SPA), Special Areas of Conservation (SAC) and RAMSAR;
(ii) National - Sites of Special Scientific Interest (SSSI) and National Nature Reserves;
(iii) Local - Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above;
(iv) Sites of Nature Conservation Value.

..... The Council will, through its Annual Monitoring Report, Local Air Quality Management and on-going visitor surveys and related activities, scrutinise the effectiveness of the joint strategic approach to avoidance and mitigation of effects on European sites. It will adjust the rate, scale and/or distribution of development across the borough to respond to the findings of new evidence where appropriate, in order to preserve the integrity of European sites.

CS7 Development in Fareham
Development will be permitted within the Fareham settlement boundary where it contributes to (one or more of) the following:

.....development of the Bus Rapid Transit South East Hampshire Harbour Link and improvements to air quality.

Development will only be permitted where it does not significantly affect the setting and landscape character of the town or diminish the town's, community, historic, biodiversity and cultural resources nor have an adverse impact on air quality.

The Fareham Town Centre Area Action Plan (see Policy CS8, in the Core Strategy) will identify development sites, transport and environmental improvements and define the town centre boundary.

CS12 Daedalus Airfield Strategic Development Allocation
The former HMS Daedalus Airfield is allocated for strategic employment development. Development will be permitted where:

.....it does not have an adverse impact on air quality.

CS13 North of Fareham Strategic Development Area
Permission will be granted for the development of a Strategic Development Area to the north of Fareham following the adoption of an Area Action Plan and the preparation of a comprehensive master plan for the development.

The development will include provision for between 6,500- 7,500 dwellings, unless it is found that this level of housing cannot be delivered without adversely affecting the integrity of protected European conservation sites. If any potential adverse effects cannot be avoided or adequately mitigated, the level and scale of development might need to be reduced accordingly to ensure that there are no adverse effects on the integrity of any European sites.

The development will also provide supporting social and physical infrastructure, retail and employment floor space to both support the development and to contribute towards meeting the economic development objectives of the South Hampshire Sub-Region. The new community will aim to be as self-contained as possible, whilst complementing and supporting the established town centre of Fareham and adjoining settlements.

Documents aimed at delivering Policy CS13, will need to be clear on the expected outcomes, and be sufficiently flexible to respond to changing opportunities and circumstances. They will also need to demonstrate how the National Air Quality Standards will be met.

6.4 Development Sites & Policies Plan - Local Plan Part 2

The Local Plan Part 2 - Development Sites & Policies, is being prepared as part of the overall Fareham Development Plan. The latter also includes the Local Plan Part 1 (Core Strategy) and the Local Plan Part 3 (New Community North of Fareham Area Action Plan). The Fareham Core Strategy sets out the vision, objectives and overall development strategy for the Borough up to 2026. Once adopted, the Development Sites & policies Plan, the Core Strategy and the new Community North of Fareham Plan will fully replace the Fareham Local Plan Review (June 2000).

The Development Sites & Policies Plan sets out the Council's preferred approach to managing and delivering development set out in the Core Strategy for the Borough to 2026, except for the New Community North of Fareham Area which will be covered by a separate Area Action Plan.

The Development Sites & Policies Plan will allocate sites and land for housing, retail, economic development, leisure, recreation and community uses, whilst also recommending areas for protection such as green spaces and conservation areas. The plan also sets out a vision for the future of Fareham Town Centre and sets outs a number of policies which will influence the way and is developed around the Borough and help guide decisions on planning applications.

A draft of the Development Sites & Policies Plan went through a period of public consultation in the Autumn of 2012. Following further consultation the Council invited people to comment on the Plan between 28 February 2014 – 11 April 2014. Following the representation period the Plan will be submitted to the Secretary of State and an independent inspector will be appointed to hold a public examination in the ”soundness” of the Plan. This is expected to be held later in 2014.

The Environmental Health Department were consulted in the development of the draft Development Sites & Policies Plan and the possible need for noise and air quality assessments for various sites were included in the site specific requirements.

6.5 Welborne - Publication Draft Plan - Local Plan Part 3

This Plan will form the third part of the Borough's local plan suite, alongside the adopted Core Strategy (Local Plan Part 1) and draft Development Sites and Policies Plan (Local Plan Part 2).

The Welborne Plan (currently known as the Publication Draft Plan) is a development plan to set out what the new community, named Welborne, will be like. It will include planning policies as well as a concept master plan setting out the broad type, location, amount and character of the development including housing (6000 houses by 2036), employment, roads, schools, community facilities and a green infrastructure strategy. A sustainability appraisal will be undertaken to assess social, economic and environmental effects of the Plan.

Between 28 February and 11 April 2014, the Council invited people to comment on Welborne Publication Draft Plan. Following the representation period the Plan will be submitted to the Secretary of State by early summer 2014 and an independent planning inspector will be appointed to examine the “soundness” of the Plan. The examination of the Plan will include public hearing sessions, which are expected to be held early in autumn 2014.

Under policy WEL 23, proposals to develop all or part of Welborne must be accompanied by a full Transport Framework and Transport Assessment for the site as a whole which should demonstrate how the following measures will be achieved;

- The delivery of high quality sustainable public transport system, including the extension of the existing Bus Rapid Transit (BRT) network to serve the new community;
- Implementation of travel planning to reduce the reliance on the private car;
- Delivery of access via the A32 and an improved junction 10 of the M27;
- The rate of development will be linked to the funding and provision of necessary transport infrastructure;
- The incorporation of transport interventions to mitigate traffic impacts on the local and strategic road network and to mitigate any environmental impacts.

Existing air quality in the plan area is dominated by the road network and in particular, is affected by the proximity of the M27 motorway to the site. This means

that traffic-derived air quality issues pose a development constraint to the adjoining land. The concept master plan recommends that a minimum buffer of 40 metres should be maintained in addition to mitigation measures that are likely to be needed to minimise air quality issues for new residents in the southern parts of the site.

The allocation of employment land within Welborne has been designed to make an efficient use of land which would be unsuitable for residential uses because of air quality and noise impacts emanating from the motorway. However, air quality may worsen in locations close to new or upgraded road junctions or roads which are predicted to receive significantly increased volumes of traffic.

There are two AQMAs in Fareham – Gosport Road and Portland Street. The impacts of additional traffic in these areas in particular will be closely monitored. The National AQS will need to be met in these two locations. Strategic modelling results have so far shown limited impacts on these two locations in terms of traffic increase. The measures contained within the Transport Strategy, both in terms of infrastructure provision to reduce congestion and measures to reduce the level of private car use, will serve to mitigate impacts on these two locations.

The final Welborne Sustainability Report January 2014 includes objectives such as:-

- To promote accessibility and encourage travel by sustainable means;
- To minimise air...pollution affecting the new community;

and sustainability themes such as:-

- Air quality

and decision making criteria such as:-

- Encourage walking and cycling;
- Provide appropriate travel choices for all of the new residents;
- Actively encourage "smarter choices";
- Provide high quality rapid transit links;
- Provide good public transport to nearby centres;
- Promote mixed use development with good accessibility to local services that will limit the need to travel;
- Maintain and where possible improve air quality;

The Welborne Plan’s focus on improving accessibility and supporting sustainable modes of transport will help to limit the effect on air quality in the area. This will be further supported by the development hierarchy promoted by the Plan which, in addition to promoting the use of sustainable modes of transport, will help reduce the need to travel by car. The Plan’s promotion of high quality open space provision and green infrastructure provision will also support improved air quality in the area by reducing the effects of airborne pollutants.

Welborne will be served by excellent public transport links to Fareham Town Centre and employment centres at Fareham, Portsmouth and Southampton. An extension to the BRT system, linking the site to and through Fareham Town Centre to Fareham

train station and Gosport and linking to new routes to Portsmouth via the A27 and M27.

The BRT route through the area will be supplemented by a series of local bus services providing an integrated and coordinated network. Interchange from BRT to local bus services at each of the main BRT stops will be facilitated by the provision of high quality infrastructure and onward travel information.

Welborne will deliver additional routes, providing links between the new community and various destinations. Local bus priority measures will be investigated to ensure public transport has a time advantage over private vehicles wherever possible.

Welborne is bounded to the west by the Fareham to Eastleigh rail line. This route is currently single track and the opportunities to develop a new rail halt on this line to directly serve Welborne are limited due to line access, single track operation, level changes and the proximity to the existing Fareham station. However, there is the potential for a new halt to come forward in the latter phases of the development and the concept master plan allows for this. In the shorter term, strong links will be developed from the start between Welborne and Fareham Station through the BRT and bus network enhancements. Smart ticketing would assist in providing a seamless journey for passengers, incentivising public transport travel.

A Public Transport Plan will be agreed as part of any section 106 agreement for the development.

To encourage sustainable travel choices, an area wide Framework Travel Plan will be required to demonstrate how modal shares of walking, cycling and public transport and the encouragement of more sustainable transport will be achieved. Subsequent travel plans will be required to support planning applications for residential, employment, education, retail and leisure developments.

Proposals for development at Welborne will be permitted only where they provide for a network of strategic pedestrian and cycleway routes. This network will be supplemented by a series of good quality, local pedestrian and cycleway links to be agreed prior to the determination of planning applications for each land parcel.

7 Local Transport Plans and Strategies

7.1 Hampshire Local Transport Plan (LTP3) 2011- 2031

Hampshire County Council's Local Transport Plan (LTP3) was formally approved at a full meeting of the County Council on 24 February 2011.

Originally, the LTP3 consisted of two key parts:-

- a 20 year strategy setting out the long term vision for how the transport network of Hampshire will be developed and
- a three year Implementation Plan setting out planned transport expenditure over the period April 2011 to March 2014.

The latter has now been replaced by a new Implementation Plan for the period April 2013 - March 2016. It will be refreshed in 2014 and annually thereafter, as the levels of funding available to deliver the Plan are established.

The County Council has delivered a number of large and complex projects such as the Eclipse busway between Fareham and Gosport, completed within budget by April 2012. At the other end of the scale, as part of it's Capital Programme, it is delivering a number of low-cost improvements to connect communities and make it easier for pedestrians to get to local schools and facilities.

Between July 2011 and March 2015, the DfT is making £560million available to Local Transport Authorities like Hampshire County Council in England to deliver 96 projects from the Local Sustainable Transport Fund (LSTF). Hampshire County Council is a partner in four successful LSTF bids, which are now in the project delivery stage. One large project is a joint LSTF project led by HCC, PCC and SCC, working together as Transport for South Hampshire. The project is entitled "A Better Connected South Hampshire" and involves an investment of £31.2m, of which £17.8m is DfT LSTF grant, supported by £13.3m of local contributions. The package comprises three interlocking layers:-

1) Low cost physical improvements along nine corridors to ensure that public transport provides a realistic, reliable and attractive alternative to the private car, linking people to jobs;

2) Integration of public transport with an inter-operable South Hampshire smartcard ticketing system and

3) A highly targeted marketing approach to achieve behavioural change involving the use of "My Journey" travel awareness campaign visual identity.

HCC was also one of the successful partners in the "Walk To School Outreach" joint LSTF project. This project is a partnership of eleven authorities who have secured £4.76m of LSTF funding to deliver increased levels of walking to school.

The Better Bus Area Fund will provide grants of up to £5m to a minimum of 10 local authorities working in partnership with local bus operators between 2012 and 2014. The aim of the funding is to increase bus patronage in busy urban areas. TfSH successfully bid for £4.48m for a package of improvements including:-

- to fit WiFi terminals to 500 buses (83% of the fleet);
- bus refurbishment;
- Customer Charter whereby a free travel voucher will be provided for late buses;
- Development of a South Hampshire Smartphone 'app';
- NFC tags at 4500 bus stops to provide timetable information directly to smart phones;
- Bus priority improvement at the A32 Rowner roundabout on the Eclipse busway;

Regional Growth Funding and Growing Places Funding has been secured to attract businesses to the Solent Enterprise Zone at Daedalus. The off-site infrastructure improvements will include £8.5m of investment to improve the whole length of Newgate Lane the most direct access route from the Zone to the M27 at junction 11. This route currently experiences high levels of traffic congestion in both AM and PM peaks as indicated by the declared AQMAs. The scheme will improve traffic flows, increase the capacity of the corridor and separate motor vehicles from pedestrians and cyclists.

8 Implementation of Action Plans

8.1 Overview of Action Planning to date

In light of the AQMA declarations (Figures 1 and 2) under Section 84(2) of the Environment Act 1995, the Council was required to prepare an AQAP.

The aim of this AQAP was to identify a package of relevant measures for reducing levels of NO_2 within the AQMAs in line with meeting the air quality objectives. In doing so careful consideration was also given to any secondary impacts which could have positive or negative effects on other services or stakeholders in the Borough.

The Council created an AQAP Implementation Group based on five sub-groups: public transport, road network infrastructure, sustainability, promotion and monitoring, with each action area having a technical lead officer (from either the Borough or County Council) to report both progress and significant developments, back to the group. Since its inception the group has proved a very effective way of managing the individual elements of the plan.

The Council was initially required to report annual progress on the AQAP to Defra in 2010 detailing how each measure is being progressed as well as reporting on those measures which have been successfully completed. Further progress reports were submitted in 2011, 2012 and 2013.

8.2 Air Quality Action Plan Progress Report 2013

In response to the statutory consultation on the 2013 AQAP update report in the above document, Defra, in accepting the overall findings of the report, responded with the following comments:-

The Action Plan Progress Report sets out new information on air quality obtained by Fareham Borough Council as part of the Review & Assessment process required under the Environment Act 1995 and subsequent Regulations.

The 2012 Action Plan update report has reviewed progress with the implementation of the Action Plan. The report presents detailed information on progress with each measure to date and includes updated information on the indicators and targets to be used to measure progress. A specific update is provided on the Eclipse Busway which opened in 2012 and is hoped to encourage bus transport as a favoured mode over personal vehicles. Early signs suggest a 10% increase in bus use, as well as benefits on numbers of cyclists.

The annual AQAP progress report submitted by Fareham Borough Council is consistent with the guidance contained in LAQM.TG(09), LAQM.PG(09) and presents an update on progress on the implementation of the AQAP.

The report is well structured, comprehensive and covers all of the minimum requirements specified in the Guidance. The following specific items are drawn to the local authority's attention to help inform future work:

- Significant progress has been made in a number of actions and updated timescales are presented where actions are on-going. It is recommended that remaining actions could be prioritised in order to achieve maximum benefit with available funds.

- The Council are considered to be demonstrating a strategic approach and are working with a number of stakeholders to progress against the stated actions, which is supported.

- The Council should now attempt to quantify the impact of plan implementation on local air quality. It is noted that the Council is hoping continued actions highlighted in the APPR will lead to revocation of the AQMAs in the future. This is supported and it will therefore be of benefit to the Council to start collecting evidence of what is driving pollution reductions in the coming years.

8.3 Detailed updates of AQAP actions

8.3.1 Portland Street and the redevelopment of the Quay Street roundabout (Action 10)

As required by the Environment Act 1995, a further assessment of the Portland Street AQMA in 2009 concluded that the main contributor to the nitrogen dioxide levels in the AQMA is local traffic and cars and buses are both responsible for 15% - 20% of the total nitrogen dioxide concentrations.

During 2011, the Quay Street roundabout was redeveloped in association with the construction of the food retail store on the old foundry site. The new roundabout was opened in November 2011. It is a new type of traffic light junction for Hampshire with traffic lights placed on the roundabout as well as on a number of approaches to it.

The new layout takes traffic heading from Gosport to the M27 straight through the middle of the roundabout away from the houses on Portland Street. It is hoped that the resulting "throughabout" in close proximity to the Portland Street AQMA, will assist in reducing nitrogen dioxide levels and lead to the revocation of the latter.

The annualised mean concentration for Portland Street for the operational 8 months in 2012 was 34.9 ug/m^3; the annual mean figure for 2013 is 34.6 ug/m^3. In 2010, diffusion tubes within this AQMA exceeded the NO_2 annual mean objective; in 2013 only one tube exceeded the 40 ug/m^3 level.

8.3.2 Eclipse busway (Action 2a, 16, 19a)

The South Hampshire Bus Rapid Transit (BRT) phase 1 route, a 3.4km long dedicated off-road busway between Redlands Lane Fareham and Tichborne Way Gosport, using the former railway corridor, was opened on 22 April 2012. It is hoped that the use of this busway known as the Eclipse Busway by commuters to and from Gosport will reduce pollution levels on the Gosport

Road Fareham.

The busway is part of what is to be known as Eclipse, Hampshire's new priority bus network. It will ultimately link key towns and destinations in South East Hampshire, providing a viable alternative to car travel. Bus services that already serve the Gosport peninsula use the traffic free busway for part of their journey, avoiding the most congested part of the A32 in Fareham, to improve journey time and reliability. The buses using the busway connect Fareham town centre to Fareham railway station, Gosport town centre and Gosport ferry. Depending on financial resources, there are plans to continue the route further into Gosport from Tichborne Way to Military Road.

Future phases of the busway scheme linking Fareham with Welborne, the new community north of Fareham and Portsmouth and possibly Havant, Waterlooville, Segensworth and Whiteley, will depend on future funding availability.

Seventeen Euro V buses now serve the Eclipse route. They are low emission, easily accessible buses with both audio and on-screen next stop announcements and free on board WiFi. They are also fitted with Drive Green technology with driver training to encourage environmentally sensitive driving and lower emissions. Real time bus arrival information is also available at the high quality waiting facilities on the new route. At peak times, a bus is expected up to every 7 minutes. Cyclists can also use the busway.

Nearly all of the 55 buses based at the Hoeford depot in Fareham have been fitted with real time information technology for use in the future when further bus stops in the local area are updated. A real time information screen is also fitted at the bus station terminus points in Fareham and Gosport.

The first and second year passenger targets for the Eclipse busway have been achieved. Passenger numbers on the E1 & E2 Eclipse busway routes are up 24%. There has been a rise in commercial fares of over 27% which indicates that that fare paying passengers who travel at peak times are using the buses in increasing numbers and possibly leaving their cars at home.

A cycling survey of the busway in September 2012 noted nearly 800 cyclists using the route in a 12 hour period. A further survey of around 500 bus passengers will take place this summer.

First Bus Company have organised and funded a Fareham & Gosport bus panel, chaired by a non-First person.

8.3.3 Bus lanes (action 15)

Two new dedicated bus lanes on Western Way and Portland Street, opened in Fareham in April 2012 as part of Hampshire County Council's Fareham Town Access Plan (adopted in September 2012). It is hoped that the new bus infrastructure and the new busway will improve journey times and make bus travel a more attractive alternative to the car thereby helping to reduce

congestion and reduce pollution on local roads. The bus lanes are operational 7 days a week 24 hours a day.

A “bus gate” was opened in June 2014 to create a bus only exit, controlled by traffic signals, from Western Road, westbound, onto Western Way. This will allow access for buses direct onto the A27 for westbound services. This will effectively remove all westbound bus services from the Market Quay roundabout, giving lane space back to traffic and Gosport bound services. This will ensure journey time reliability for public transport services which are currently experiencing significant delays at the roundabout and take buses away at a rate of 13 per hour, from the Portland Street AQMA.

The Western Way bus lane will eventually become in late 2014, an off-carriageway using verge space between the railway and the road, to return the two westbound lanes to normal traffic.

8.3.4 Portland Street Air Quality Monitoring Unit (Action 33)

A section 106 agreement with the Quay Street retail developer provides funding for the operation of a continuous nitrogen dioxide monitor in this area for at least 3 years. A consultant was employed to purchase and install the unit and to monitor and maintain the unit. A new three year air quality monitoring contract in partnership with Gosport Borough Council includes the operation and maintenance of this unit.

The monitoring unit was installed and became operational on 20 April 2012, just prior to the opening of the Eclipse busway route. Real time information from this unit is available on the Council's website similar to the existing unit on Gosport Road.

Results from this monitoring will be used in the future review and assessment of the local air quality. It will assist in the assessment of whether or not the Portland Street AQMA can be revoked.

8.3.5 My Journey Commuter Challenge 2014 (Action 41)

Following participation in the previous two Big Green Commuter Challenges and My Journey Commuter Challenge in May 2013, the Council took part again in the My Journey Commuter Challenge in May 2014. This was organised by Sustrans for local organisations. The aim of the Challenge was to reduce the number of journeys undertaken by a single person in a car. During the Challenge, Fareham Borough Council organised for Sustrans’ local bike doctor to come to the Civic Offices to offer a basic bike servicing and repair service for employees in the new bike store area.

Fareham Borough Council again came third in the large organisation category. 140 local organisations took part, with 1650 people logging journeys online. Together they travelled 313,373 miles sustainably and saving £45,870 on regular car based commutes.

8.3.7 Strategic Access to Gosport (Action 10)

A key development in the transport planning for the wider region including Fareham since the 2008 AQAP, is the Strategic Access to Gosport study (StAG). The study undertaken by Transport for South Hampshire (TfSH) on behalf of the Partnership for Urban South Hampshire (PUSH)), identified actions and measures for improving strategic access to the Gosport Peninsula up to 2026. The study inputs into both Gosport Borough Council and Fareham Borough Council Local Development Framework (LDF) processes and also subsequent rounds of Hampshire County Council's (HCC) Local Transport Plan (LTP), with LTP 3 covering 2011-2016 and beyond.

TfSH has defined the overall focus for this study to be on deliverable measures which could contribute to the management of issues related to journey delays and accessibility by all modes, within the context of combating climate change, supporting the economy and accommodating the planned growth up to 2026.

8.3.7.1 StAG Aims and Objectives

The study set the overall aim as to define a set of high level deliverable measures, which would contribute to:-

- *Managing existing and predicted future access issues, including safety and the environment, for the Gosport Peninsula; and*
- *Supporting the local economy and growth agenda proposed for the Gosport Peninsula*.

The study also set out the following objectives:-

- *To identify deliverable actions/measures to contribute to the reduction of car trips for short journeys (i.e. less than 5 miles) at key strategic access links on the highway network, in the peak periods for travel to and from the Gosport Peninsula;*
- *To identify deliverable actions/measures to improve journey time reliability in the peak periods by all modes for trips to and from the Gosport Peninsula;*
- *To identify deliverable actions/measures to improve access to non-car modes in the peak periods to, from and within the Gosport Peninsula; and*
- *To identify deliverable actions/measures which will improve access to key existing and proposed development sites by all modes in the peak periods to, from and within Gosport Peninsula.*

Appendix D sets out the 19 key measures to be implemented identified through current transport policy for the Gosport peninsula. It is through these measures that the current Action 10 (and superseded Actions 11 and 12) will be delivered. Completed/nearing completion StAG schemes: –

- Quay Street roundabout (3);
- Brockhurst roundabout (6);
- BRT Phase 1 (7) opened 22 April 2012;
- Stokes Bay cycle route (17);
- Tichborne Way to Holbrook Leisure centre cycle route (17);
- Marine Parade East cycle route (17);
- Marine Parade West cycle route (17).

Early construction phase:

- A32 Newgate lane(northern section) (1a)

Feasibility/Detailed design stage:-

- Newgate Lane (southern section) (1b);
- Peel Common roundabout (2);
- Stubbington bypass

(Note figures in brackets relate to StAG scheme number).

Further details on the potential benefits to local air quality and especially in relation to the existing AQMA's will be delivered and reported through subsequent Air Quality Progress Reports.

8.3.8 Local Sustainable Transport Fund (LSTF) and other funding streams (Action 2a/16)

Better Area Bus Fund has provided funding for bus lanes on the Brockhurst roundabout together with new signalisation and a bus contraflow at the Crossways junction.

This summer, LSTF funding will be used to upgrade 14 bus stops off the Eclipse busway along the routes of the E1 & E2 with Eclipse style shelters, CCTV and Real Time Passenger information. A further 7 stops may be updated at a later stage. Bus Information Departure Screens have also be provided at both Fareham and Gosport bus stations. Personal Travel Planning for households along the Eclipse busway route.

Through the Better Connected South Hampshire project, Solent Transport are working with a number of employers in Fareham and Gosport to deliver sustainable transport initiatives. These include developers of the Daedalus site, employers affected by road improvements along Newgate Lane and Fareham Rail Station where a station travel plan has been developed.

The FBC AQAP steering group has been provided with a copy of the HCC 12/13 Better Connected South Hampshire Highlights so they have an overview of delivery during the first year of the programme. The 13/14 report should be available in October 2014.

8.3.9 Fareham Borough Council Environmental Sustainability Action Pan (ESAP) (Action 4)

The Fareham Borough Council ESAP continues to be developed. Current topics of interest include the on-going purchase low emission refuse vehicles; reducing energy consumption in the vehicle fleet; GPS tracking; co-ordinating sustainable travel initiatives for staff; solar panels on Council buildings; installation of Smart meters etc. 5% of staff are registered on the Council's car share database.

Currently, 25 members of staff have laptops for homeworking. A new cycle store opened for staff in the Civic Offices in April 2014 and provides greater space for bikes, improved security and better access. There are also plans to install showers and lockers in this area in the future.

8.3.10 A32 Lamp column banners

A Hampshire County Council (HCC) officer is investigating the situation regarding the lighting columns and gaining the necessary planning and highway authority permissions to display them on the new columns that are sturdy enough to support the banners. Partners such as Fareham Borough Council (FBC), Gosport Borough Council (GBC) and the local ferry company, will be involved in the production of the banner messages.

8.3.11 Electric vehicle charging points

HCC, in conjunction with Fareham Borough Council, installed two electric vehicle charging points in two car parking spaces in one of the main surface car parks in Fareham town centre in 2014. These two points are to be part of a network of rapid charge points to be developed in Hampshire using £315,000 Government funding. It is hoped that the network will provide charge points within 30 miles of each other. These points will hopefully become operational in November 2014.

Table 8.1 Action Plan Progress

Fareham Borough Council Air Quality Action Plan Table (Appendix 6 of the original AQAP) - UPDATE OCT 2014

FBC=Fareham Borough Council; HCC=Hampshire County Council; GBC=Gosport Borough Council; TfSH=Transport for South Hampshire
PCT=Primary Care Trust; HIOW=Hampshire & Isle of Wight; ECAC=Environmental Control Advisory Committee;
LAQM=Local Air Quality Management; SDA=Strategic Development Area
Cost: Low - up to £1000; Medium - up to £10000; High - over £10000

<table>
<tr><th>ACTION</th><th>DESCRIPTION</th><th>LEAD ROLE</th><th>TIMESCALE</th><th>TARGET</th><th>INDICATOR</th></tr>
<tr><td colspan="6">REDUCE VEHICLE EMISSIONS</td></tr>
<tr><td>1.</td><td>To improve the emission standards of Council fleet vehicles by the use of cleaner and alternative fuelled vehicles</td><td>FBC</td><td>2013/14</td><td>To replace two refuse vehicles each year with new Euro compliant vehicles</td><td>Two new Euro V refuse vehicles to be purchased in 2013/14</td></tr>
<tr><td>UPDATE</td><td colspan="5">Following a successful trial by Building Services, Street Scene has procured vehicle tracking devices for the whole vehicle fleet to monitor vehicle speeds, harsh braking and acceleration and vehicle emissions. Fitting was complete March 24 2014.

The Carbon Emissions report for 2013/14 is currently being compiled. The draft figures (kg CO_2e) are as follows:-

<table>
<tr><th></th><th>2011/12</th><th>2012/13</th><th>2013/14</th><th>Annual change</th><th>Overall change</th></tr>
<tr><td>Gas (Scope 1)</td><td>351,360</td><td>442,251</td><td>382,690</td><td>-13.5%</td><td>+8.9%</td></tr>
<tr><td>Vehicle fleet(Scope 1)</td><td>845,830</td><td>865,201</td><td>861,461</td><td>- 0.4%</td><td>+1.8%</td></tr>
<tr><td>Total scope 1</td><td>1,197,191</td><td>1,307,452</td><td>1,244,150</td><td>- 4.9%</td><td>+3.9%</td></tr>
<tr><td>Electric (Scope 2)</td><td>1,376,721</td><td>1,221,336</td><td>1,322,803</td><td>+8.3%</td><td>- 3.9%</td></tr>
<tr><td>Total (Scope 1 & 2)</td><td>2,573,912</td><td>2,528,788</td><td>2,566,953</td><td>+1.5%</td><td>- 0.3%</td></tr>
</table>
Apart from electric usage in 2013/14, the other sources are heading in the right direction.

The Council now has 12 Euro V refuse vehicles. The housing maintenance team still has 4 Euro IV vans and street cleaning still has 2 Euro IV vehicles. A fuel saver pack is now fitted to 6 refuse vehicles. Eco drive assistants which limit engine RPM only fitted to two vehicles so far. The purchase of a hybrid van for car park patrols and a refuse vehicle with battery operated hydraulics is still on hold due to funding restrictions.</td></tr>
<tr><td colspan="6"></td></tr>
</table>

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
2.	To seek a reduction in emissions from the local bus fleet (also see action 14)	HCC/Bus operator	2012/13	To increase the % of Euro III/IV/V buses from a baseline in 2008/9 of 17% to 33% in 2012/13	The number of Euro III, IV & V vehicles in the local fleet.
UPDATE	**Completed by April 2013.**				
NEW 2A	To seek a reduction in emissions from the local bus fleet (also see action 14)	HCC/Bus operator	2015	To increase the % of Euro III/IV/V buses from a baseline in 2013 of 33% to 40% by 2015	The number of Euro III, IV & V vehicles in the local fleet.
UPDATE	**Completed 2014** New target for original action 2. Dec 2013 - With effect from 6 October 2013 First have added 3 more Euro V buses to the Eclipse fleet. At the same time, they have reduced the buses on the A32 through the Gosport Road AQMA to one bus every two hours with a consequent lessening of emissions at the AQMA. From July 2014, First have added 9 x Euro V Optare Solo SR midibuses on service 9 & 9A via Bridgemary & Rowner. From 1st Sept 2014 First will be running 24% Euro 2 and 76% Euro 3-5.				
3.	To review the regulation of private hire and hackney carriage emissions and where appropriate, integrate improvements into the taxi licensing regime	FBC	2011	Completed.	
UPDATE	**Completed.**				
4.	To continue to implement the FBC Sustainable Travel Plan (STP)	FBC	2013/14	To deliver those measures identified in the Council's STP Action Plan	Annual progress against the key measures and timeframes set out in the STP (AQAP, 2008). Action updates will make direct

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
					reference to these key objectives, citing any changes.
UPDATE	The Council has just completed work on phase 1 of improvements to the basement to allow for additional bike storage. This involves creating a new access point from the current bike store into the former archives (now relocated) into the basement which will be fitted with additional storage facilities. This will improve security of employees' bikes and equipment. Phase 2 will consider the installation of showers and lockers in the basement area, and a more efficient bike storage solution to allow cyclists to have the facilities to shower, change and store their clothing/equipment in one location. FBC took part in My Journey Commuter Challenge 2014 organised by Sustrans and came third in the large organisation category. Portsmouth CC are currently working on an EASIT project, which is a private-public sector partnership involving a wide group of employers that join together to offer all staff travel discounts, discounts on bikes, car sharing information etc. Visit www.easit.org.uk for more information on the general principles. Whilst Fareham is unlikely to have the critical mass to warrant setting up our own EASIT programme, there is an opportunity to join with the Portsmouth CC scheme if it proves successful. Currently, 25 members of staff have laptops for homeworking. Thirteen employees took advantage of the salary sacrifice cycle purchase scheme in 2013/14, one employee claimed 124 cycling miles for work journeys and 5 employees purchased season ticket travel loans. There are 24 active participants in the FBC car share scheme, 5% of the work force.				
5.	To pursue voluntary or VOSA vehicle emission testing in or near the AQMAs	FBC	2009/10	Completed. No action possible at the present time as VOSA does not have mobile resources.	
UPDATE	**Completed.**				
6.	To seek to reduce emissions from badly maintained vehicles by continuing to promote the smoky diesel hotline	FBC	2009/10	Completed.	
UPDATE	**Completed.**				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
7.	Signing of waiting areas/bus station/bus stops/taxi ranks etc instructing drivers to "Turn off engines" when stationary	FBC/Bus operator	2009/10	Completed.	
UPDATE	**Completed.**				
8.	To examine the feasibility of erecting signs to identify the AQMAs	FBC/HCC	2013/14	To raise awareness of air quality and inform/educate drivers on A32 Gosport Road that they are entering an AQMA.	Report on both the identified locations and progress in erecting signage along the A32 Gosport Road.
UPDATE	HCC have recently appointed two new Transport planning assistants. Dan Read has been given the task of investigating the situation regarding the lighting columns, and gaining the necessary planning and highway authority permissions to display. Dan will liaise with FBC, GBC, HCC Major schemes and the ferry company to produce some draft messages, and a budget and action programme. Update – Sept 2014 – Unfortunately one of the two assistants didn't take up their post, so Dan has been fully occupied working on the Whitely bus gate consultation and response. Once this project is complete then it is envisaged that Dan can start work on the AQAP project.				
ROAD NETWORK ALTERATIONS					
9.	To work in partnership with the Gosport Transport and Sustainability Partnership to identify and assist in the delivery of schemes to reduce road congestion on the A32.	GBC	2011	The GTSP group and the Gosport LSP no longer exist.	
UPDATE	A32 Air quality and Travel congestion messages HCC have recently appointed two new Transport planning assistants. Dan Read has been given the task of investigating the situation regarding the lighting columns, and gaining the necessary planning and highway authority permissions to display. Dan will liaise with FBC, GBC, HCC Major				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	schemes and the ferry company to produce some draft messages, and a budget and action programme. Update – Sept 2014 – Unfortunately one of the two assistants didn't take up their post, so Dan has been fully occupied working on the Whitely bus gate consultation and response. Once this project is complete then it is envisaged that Dan can start work on the AQAP project.				
10.	To assist the Highway Authority in promoting and implementing those schemes identified within the Highway Authority's "Strategic Access to Gosport (2010-2026)" (STAG) transport study for the Gosport peninsula.	HCC	2013/14	Completion of key schemes set out in the STAG Implementation Plan. Air quality and AQMA impacts to be assessed qualitatively where possible.	Annual progress towards the programmed 19 schemes listed in the study.
UPDATE	STAG schemes (Note Figures in brackets relate to STAG scheme number) update:- April 2014 - The Marine Parade cycle schemes are nearing completion. The majority of the works around Lee and car parks are complete. The Salterns promenade scheme is with FBC. **September 2014** –the Marine Parade Scheme is essentially complete. HCC further investigating improvements to the other side of Marine Parade by the Café using similar palette. There has been some local criticism of the surface treatment at Salterns, decisions led by budget, environment and Councillors wishes. April 2014 - A32 Newgate Lane (northern section) Clearance and utility works have started early 2014. Southern section, Peel Common Roundabout, and Stubbington bypass remain in design and investigation. **September 2014** – the construction works have begun. Further public consultations on the Newgate Lane (south), Peel common Rbt and Stubbington Bypass proposals are proposed in the summer of 2014 HCC has commissioned a cycle route investigation from Fareham to the proposed site of Welborne, and onwards to Wickham. It is anticipated that this route will follow the current cycle network to Broad cut, with off road verge conversion into the Industrial Estate, and improvements to the existing Bridleway leading onto Pook Lane. Temporary measures will be put in place to aid crossing over the A32 pending any future changes to Junction 10. An informing design and cost exercise will be undertaken on improvement and conversion of the footway on the western side of the A32 to shared use through to Wickham. **April 2014** – preliminary designs have been complete and outline costs are around £240k. The report has highlighted issues of land ownership to resolve.				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	HCC and FBC officers will also be undertaking a desktop study to identify off-road routes to connect both of the residential and employment centres of Whiteley and the proposed site of Welborne. It is anticipated that the routes will consist mainly of improved bridleways, and provide a shorter, realistic and sustainable connection between the two centres. The outcomes of this investigation will be used to inform Welborne Master planning, and future HCC schemes. (April 2014) Preliminary investigations demonstrated that this is difficult to achieve, though some fore planning has been positive. The railway and river present significant difficulties, and limit connection options. Further discussions to be held with Development planning and Countryside service which will focus on Mayles Lane, and Tapnage where the Whiteley Bridleway emerges. **September 2014** - Investigations and planning on-going HCC has commissioned a route and junctions transport study of the A27 corridor from Windhover to Delme. As part of these investigations a supplementary report is being drafted that considers the needs of on-road and off-road cyclists, plus enhancing connections to existing cycle networks and key destinations. **September 2014** - Investigations and planning on-going				
11.	To implement those ITS improvements within FBC as detailed in the LTP2 to reduce congestion and improve air quality in the AQMAs	HCC	2012	Deleted - ITS improvements are STAG scheme 5 so will be combined with Action 10.	
UPDATE	**Deleted.**				
12.	To undertake appropriate improvements to the Quay Street roundabout in conjunction with the nearby retail development and negotiate with the developer a financial contribution for future air quality monitoring in the area	HCC FBC Developer	2012	Completed	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
UPDATE	**Completed.**				
13.	To develop the climbing lanes between junctions 11 and 12 of the M27	HA	2008	Completed	
UPDATE	**Completed.**				
PUBLIC TRANSPORT IMPROVEMENTS					
14.	Develop a Quality Bus Partnership for the A32 including a reduction in emissions from local buses	HCC Bus operators	2010/11	Completed. See new action 19a.	
UPDATE	**Completed.** Target achieved as bus patronage rose by 11% between 2003/4 and 2009/10.				
15.	Provide a bus/rail interchange facility at Fareham rail station	HCC/ Transport for South Hampshire (TfSH)	2014/20 (subject to funding)	HCC to develop a transport interchange at Fareham rail station.	Provision of a transport interchange at Fareham rail station.
UPDATE	The existing Western Way bus lane was shortened in September 2013 to ease traffic flow. This has had some success and complaints about the bus lane have reduced. The changes to the Western Way Bus lane are under construction. This will utilise the verge space and return the existing two lanes to normal use. The proposed Western Road Bus gate opened in June 2014. This allows direct access onto the A27 for westbound services. The bus/rail interchange facility at the rail station is at the design option stage and will be constructed in 2015/16.				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
16.	To provide a suitable alternative to the light rapid transit system linking Fareham, Gosport and Portsmouth	HCC/ TfSH	2011/12	Build and open the BRT system (HCC to develop the BRT phase 1 route between Gosport and Fareham by 2011/12)	Annual progress against the key measures and timeframes set out for the BRT phases.
UPDATE	**ACTION COMPLETED AS AGREED BY THE STEERING GROUP AT THEIR MEETING ON 10 SEPTEMBER 2013** This target was met with the opening of the Eclipse busway Sunday 22 April 2012. Action target and indicator will be updated again once any further phases are clarified eg Fareham to Strategic Development Area. The Draft Welborne Plan has now been produced. It has some very interesting transport concepts, including all-moves junction 10 of the M27, as well as junction improvements in North Fareham. There are numerous references to the importance of linkages for the BRT as well as additional pedestrian and cycle links to Fareham. A FBC planner working on this project is to attend the April 2014 meeting of the AQAP group. The Better Area Bus Fund (nearly £1.6m of government funding awarded to TfSH in 2012) has provided funding for bus lanes on the Brockhurst roundabout together with new signalisation and a bus contraflow at the Crossways junction. The bus lanes are now operational but improved passenger waiting facilities are still to be provided.				
17.	To monitor the progress of providing real time information (RTI) at bus stops in Fareham and Gosport	HCC	2011/12	To have 100% RTI (Real Time Information) when the BRT opens. All 14 sites along Phase 1 of the BRT to be fitted with RTI.	Annual reporting of progress in line with meeting the target.
UPDATE	**Completed. See new action 17a.** This particular target was met with the opening of the Eclipse busway on Sunday 22 April 2012**.**				
New 17a	To monitor the progress of providing real time information (RTI) at bus stops in Fareham	HCC	2013/14	To upgrade 11 bus stops off the Eclipse busway along the routes of the E1 & E2 buses with Eclipse style	Reporting of progress at AQAP meetings in line with meeting the target.

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	and Gosport			shelters, CCTV and RTPI (bus,train and ferry)	
UPDATE	New target agreed at the 16 April 2013 AQAP meeting. In summer 2014 LSTF funding is being used to upgrade 14 stops off the Eclipse busway along the routes of the E1 & E2 with Eclipse style shelters, CCTV and Real Time Passenger Information. 8 of the 14 have had shelters installed with RTI being fitted during Sept/Oct 2014.. The rest are being fitted in Dec 2014/Jan 2015. New Bus Information Departure Screens have been provided at both Fareham and Gosport bus station and are now operational. The Avenue bus stop on Redlands Lane has been fitted with an RTI screen in an Eclipse style shelter for the benefit of students attending Fareham College. RNIB talking fobs are being sent out to blind and partially sighted bus users.				
18.	To provide bus priority measures as part of the Vision for West Street	TfSH	2013/14	Undertake traffic modelling to establish feasibility of scheme, qualifying air quality impacts where possible.	Reported progress of feasibility traffic modelling and air quality impact review. Subsequent indicators for project implementation to be determined post traffic modelling.
UPDATE	The existing Western Way bus lane was shortened in September 2013 to ease traffic flow. This has had some success and complaints about the bus lane have reduced. The changes to the Western Way Bus lane are under construction. This will utilise the verge space and return the existing two lanes to normal use. The proposed Western Road Bus gate opened in June 2014. This allows direct access onto the A27 for westbound services. The bus/rail interchange facility at the rail station is at the design option stage and will be constructed in 2015/16.				
19.	To work with local bus operators to provide improved services for people working in Whiteley via the now complete	HCC	2009/10	Complete. Further work is not expected to increase public transport over existing.	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	Yew Tree Drive bus link				
UPDATE	**Completed.** Planning permission for a year's trial for cars to use the Yew tree Drive bus gate was given in September 2013. A need for an air quality and noise assessment was included in this permission. FBC assisted with the air quality monitoring exercise over 5 months at 12 diffusion tube sites. On May 6 2014, a shopping bus for Whiteley was introduced which will be funded by the Whiteley businesses and run between Fareham and Whiteley.				
19A	Increase numbers of people using local bus services	HCC/First	2011/13	Increase annual bus patronage on BRT services operating between Gosport bus station and Fareham bus station by 10% after one year and an aggregate 15% after two years	Annual number of passenger trips using BRT services
UPDATE	**Completed** To celebrate the Eclipse 2nd birthday First decorated Fareham bus station with balloons on 23rd April, and provided free breakfasts to passengers. First have provided the following passenger figures: In 2012, the Eclipse services carried 1,424, 580 passengers; in 2013, it carried 1,865,946 passengers and so far in 2014, more than 91,000 passengers, a grand total of more than 3, 313,000 passengers across the 2 years. At the year to the end of November 2013 passengers were up by 24% compared with the previous 12 months on E1 & E2. Over this period concessionary fares rose by 21.8% and commercial fares rose by 27.5%. The rise in commercial fares indicates that fare paying passengers who travel at peak times are using the bus in increasing numbers. HCC are again undertaking a survey of bus users on the Eclipse busway in June 2014. They hope to interview 500 passengers.				
20.	To continue to subsidise bus travel beyond the statutory minimum to further encourage bus usage	FBC	2009/10	Completed.	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
UPDATE	**Completed.**				
ALTERNATIVE TRANSPORT IMPROVEMENTS					
21.	To review progress in respect of the FBC Cycle Strategy 2005-11 and the LTP2 and implement those measures likely to have an impact on air quality in the AQMAs	FBC	2013/14	The Cycling Action Plan 2005-11, being in its final year of implementation, is to be reviewed. New targets and indicators will be developed as part of the review. Additionally, the Town Access Plan (TAC) is also being developed through the LDF. Relevant cycling measures from the TAP will also be detailed in future AQAP Reports.	
UPDATE	The Fareham Cycle Strategy 2005-2011 will be updated in due course to represent recent developments in cycleway infrastructure and new initiatives in the Borough. Hampshire County Council have recently confirmed that they will be developing a county-wide cycling strategy which will involve consultation with key stakeholders including FBC, and a formal public consultation later this year. HCC has commissioned a cycle route investigation from Fareham to the proposed site of Welborne, and onwards to Wickham. It is anticipated that this route will follow the current cycle network to Broadcut, with off road verge conversion into the Industrial Estate, and improvements to the existing Bridleway leading onto Pook Lane. Temporary measures will be put in place to aid crossing over the A32 pending any future changes to Junction 10. An informing design and cost exercise will be undertaken on improvement and conversion of the footway on the western side of the A32 to shared use through to Wickham. HCC and FBC officers will also be undertaking a desktop study to identify off-road routes to connect both of the residential and employment centres of Whiteley and the proposed site of Welborne. It is anticipated that the routes will consist mainly of improved bridleways, and provide a shorter, realistic and sustainable connection between the two centres. The outcomes of this investigation will be used to inform Welborne Master planning, and future HCC schemes. HCC has commissioned a route and junctions transport study of the A27 corridor from Windhover to Delme. As part of these investigations a supplementary report is being drafted that considers the needs of on-road and off-road cyclists, plus enhancing connections to existing cycle networks and key destinations.				
22.	To continue to promote public transport and alternative travel arrangements such as the	FBC	2008/9	Completed.	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	Gosport Ferry and local bus services on the FBC website				
UPDATE	**Completed and still active.** FBC took part in My Journey Commuter Challenge May 2014 organised by Sustrans.				
23.	Promote the development and implementation of work travel plans amongst companies that use the roads in and around the AQMAs particularly through the use and enforcement of planning conditions	FBC/HCC	2013/14	Target to be developed once success of LSTF bid is know. LSTF is now the primary resource mechanism for travel planning projects.	Indicators to be developed once success of LSTF bid is know. LSTF is now the primary resource mechanism for travel planning projects
UPDATE	**ACTION COMPLETED AS AGREED BY THE STEERING GROUP AT THEIR MEETING ON 10 SEPTEMBER 2013** Through the Better Connected South Hampshire project, Solent Transport are working with a number of employers in Fareham and Gosport to deliver sustainable transport initiatives. These include developers of the Daedalus site, employers affected by road improvements along Newgate Lane and Fareham Rail Station where a station travel plan has been developed. The FBC AQAP steering group has been provided with a copy of the HCC 12/13 Better Connected South Hampshire Highlights so they have an overview of delivery during the first year of the programme. The 13/14 report should be available in October 2014.				
24.	To continue to work with schools in Fareham close to the AQMAs for the development, implementation and the annual review of School Travel Plans	HCC	2013/14	Target to be developed once success of LSTF bid is known. LSTF is now the primary resource mechanism for travel planning projects.	Indicators to be developed once success of LSTF bid is known. LSTF is now the primary resource mechanism for travel planning projects

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
UPDATE	**ACTION COMPLETED AS AGREED BY THE STEERING GROUP AT THEIR MEETING ON 10 SEPTEMBER 2013** Redlands car use level is still low, with a further decrease to 16.1% (50 pupils) from 19.4% (60 pupils) and walking is still high at 83% (258 pupils). Cycling remains low at 1% (3 pupils). Fareham Academy (previously Neville Lovett) – 2013/14 data car alone use has slightly increased from last year from 14% (94pupils) to 15.2% (99 pupils) and walking has remained approximately the same from 73.6% (493 pupils) to 73.3% (478 pupils). Cycling has been decreasing from 10.1% (68 pupils) to 7.52% (49 pupils). HCC are also working with Fareham College on updating their travel plan for their existing site, which is linking with their plan for the CEMAST site too. In more general terms:- - Of the five LSTF bids for funding in 2015/16, only four were successful, and three contained school work. Unfortunately the unsuccessful bid covered Fareham and at present, school travel planning work will discontinue in March 2015. However, the team is looking into possible funding from Public Health that maybe able to support this part of the county. - Living Streets bid will see three 'Walk to…Coordinators' allocated to Hampshire and would work with businesses, schools and communities on encouraging more walking for shorter journeys or part of longer journeys. There will be a partners bid in October, and as we reach March 2015, the areas to focus on will be confirmed. - In September, every parent with a child starting in Reception will receive a booklet called 'how could you travel to school?'. This supports the wider Back to School campaign which include radio adverts on Heart and Breeze, plus four events around the county to promote the messages and engage with parents.				
25.	To implement the Town Access Plan proposals where they have an impact on air quality in the AQMAs	HCC/FBC	2013/14	The Town Access Plan (TAP) is also being developed through the LDF. Relevant cycling measures from the TAP will also be detailed in future Air Quality Action Plan Progress Reports.	
UPDATE	The Town Access Plan was adopted in September 2012, along with the Fareham Borough Transport Statement. Designs are completed for the A32 Hoeford Toucan Crossing, Cycle lane exit East St, Wickham Rd Toucan Conversion. Implementation due mid 2013. During 2013, TAP inspired studies of Fareham North – South, and East - West cycle routes will be commissioned, and LSTF funded cycle schemes around Daedalus and Stubbington.				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
STATUTORY FUNCTIONS					
26.	To continue to inspect premises and take appropriate enforcement action in respect of the Environmental Permit risk assessment regime	FBC	Annual	To ensure that premises are inspected in accordance with the risk assessment regime	DEFRA return
UPDATE	Defra return completed for 2013/14 on time.				
27.	To use Environmental Permit inspections to encourage the provision of alternative fuels at petrol stations forecourts	FBC	2013/14	Work towards maximising local uptake of alternative fuels, having leafleted all petrol stations	Number for alternative fuelling pumps and evidence of continued Council encouragement.
UPDATE	**Original target completed.** Two electric vehicle charging points installed in surface car park in Fareham in November 2014 as part of a Hampshire wide scheme. **POSSIBLE NEW ACTIONS:-; Alternative fuel campaign; Eco driver training for all essential car users; Low emission pool cars for staff and residents; Pool bikes for staff;**				
28.	Promote the use of planning policies, alongside other planning and transport measures, to promote sustainable transport choices and reduce reliance on the car	FBC/GBC	2013/14	Implementation of the relevant policies set out in the LDF to influence local and regional air quality.	Examples of where FBC requires higher provision of cycle facilities or lower car parking facilities than the HCC standards for new developments.
UPDATE	The Draft Welborne Plan has now been produced. It has some interesting transport concepts, including all-moves junction 10 of the M27, as well as junction improvements in North Fareham. There are numerous references to the importance of linkages for the BRT as well as additional pedestrian and cycle links to Fareham. Once the evidence on transport issues has been finalised and the Welborne Plan brought forward, the details will be discussed at the next AQMA steering group meeting. Both the Development Sites & Policies Plan (Local Plan Part 2) and the Welborne Plan (Local				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	Plan Part 3) are due to be submitted to the planning inspectorate at the end of May; with enquiry in public due at some point over the summer (planning inspectorate will decide dates). The DSP Plan includes a policy on BRT which safeguards the proposed route through the Borough as well as setting a policy framework for improvements to the strategic road network (Newgate Lane, Stubbington bypass etc). The Welborne Plan has a number of detailed transport policies including setting broad transport principles, providing access to the strategic road network, the parameters for an internal spine network, public transport, encouraging sustainable choices and walking and cycling. Both the DSP Plan and the Welborne Plan have been submitted to the Secretary of State and will now go through an examination in public later this year (Welborne Plan in October, DSP Plan in November). If found sound by an independent Planning Inspector the Plans can be adopted by the Council. The Council is currently working on a Design SPD which will cover issues such as the importance of pedestrian and cycle routes in new developments, proximity to facilities and links to the movement network. The SPD will emphasise that layout and location of new development can have a major role in residents' choices to use the private car. This is currently in production and due for a period of consultation towards the end of the Autumn. The Council is also working on a Non-residential Parking Standards SPD which will set parking standards for all new non-residential developments in the Borough. This provides an opportunity to examine the role parking has in people's decision to travel by different means. This is currently in production and due for a period of consultation towards the end of the Autumn.				
29.	To ensure that the new LDF incorporates planning policy that will not adversely impact on air quality but furthermore enhances air quality where possible.	FBC	2013/14	Member of the pollution team to continue to attend the LDF officers' meetings	Examples of LDF provisions related to air quality
UPDATE	See 28 above. Ongoing with new Core Strategy policies now being adhered to.				
30.	Regulatory Services will continue to work with the Development Control section to ensure that air quality is taken into account in the planning development process	FBC	2013/14	Structured communication between Regulatory Services and Development Control on plans potentially affecting air quality.	Weekly bulletins, listing planning applications issued to Regulatory Services.

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
UPDATE	Work is ongoing. Current examples include the planning application for the Daedalus, Coldeast and Longfield Avenue developments and the year long trial opening of the Yew Tree Drive bus link. Environmental Health undertook a five month monitoring programme with diffusion tubes at 12 sites on behalf of Hampshire County Council at Yew Tree Drive with the bus link open in 2014. The extra traffic travelling along Yew Tree Drive does not appear to have had a significant effect on air quality and all tubes at relevant exposure points were below the nitrogen dioxide objective.				
31.	To review the existing FBC parking strategy and implement any measures that may result in reduced congestion in the AQMAs	FBC	2013/14	In line with 2012 update for this Action, once scheme/policy options going forward have been clarified, targets and indicators can be developed.	
UPDATE	**ACTION COMPLETED AS AGREED BY THE STEERING GROUP AT THEIR MEETING ON 10 SEPTEMBER 2013** A revised Non-Residential Car and Cycling Parking Standards SPD is currently in preparation, which will apply to new developments in Welborne as well as sites in the rest of the Borough. This follows the County Council's withdrawal of its own standards which formed the basis of previous guidance by FBC, and recent changes in national planning policy which encourage consideration of local circumstances when setting standards.				
32.	To continue to review and consult on air quality in the Borough in line with statutory requirements	FBC	2013/14	To ensure compliance with the DEFRA timetable	(a)To submit Progress Report 2013 (b) To maintain air quality reports on the FBC website
UPDATE	Progress report 2013 compiled in-house by the Environmental Health Partnership and approved by Defra. The AQMAs remain declared. Progress report 2014 will also be complied in-house. Air quality report to the FBC PPPDR Panel in September 2014.				
33.	To enhance the nitrogen dioxide monitoring network by providing continuous nitrogen dioxide monitors in the AQMAs	FBC	2011/12	Completed	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
UPDATE	**Completed.** Majority of our 40+ diffusion tubes on now on the facades of residential properties where exposure is relevant. There is no Defra grant available for the ongoing monitoring costs. Therefore, the Council will need to look at other funding sources to carry on monitoring at the Gosport Road site. New cost saving three year air quality monitoring partnership contract signed for three sites, two in Fareham and one in Gosport. New air quality monitor for nitrogen dioxide installed at Portland Street April 2012 with funding from a section 106 agreement. Also, agreed a new three year contract for the purchase of diffusion tubes with a saving of £700. £9,000 still available for AQAP work eg A32 banners.£2,000 spent on the administration of the Big Green Commuter Challenges 2011 and 2012 (BGCC) and the air quality leaflets developed by the AQAP steering group and NHS Hampshire in 2011.				
34.	To continue to work in partnership with neighbouring authorities and others for the control of air pollution and continued improvement of air quality eg to attend HIOW air quality group	FBC	2013/14	The HIOW air quality officers' group to meet annually as a sub group of the HIOW Environmental Control Advisory Committee (ECAC)	Minutes of meetings
UPDATE	Report to PPPD&R Panel in September 2014. Annual meeting of the regional air quality group July 2014. FBC registered to take part in My Journey Commuter Challenge 2014 organised by Sustrans. The Council was awarded a trophy for third place in the 250 – 499 employee category.				
35.	To monitor the performance of the AQAP and review actions having regard to the air quality objectives and implement additional actions where necessary	FBC	Annual progress reports to DEFRA	To meet the AQ objective annual mean for NO_2 and ultimately revoke the AQMA for both locations.	Outcomes of the annual LAQM reporting of annual mean improvements. Also set out a position statement within the annual action plan progress report on any required changes to the existing measures and the need for further actions.
UPDATE	The AQAP steering group last met on 29 April 2014. £9,000 still available for AQAP work eg A32 banners.£2,000 spent on the administration of the Big Green Commuter Challenges 2011 and 2012 (BGCC) and the air quality leaflets developed by the AQAP steering group and NHS Hampshire in 2011, now on the website and circulated to GP surgeries etc. Air quality grant progress report submitted to Defra March 2014. Progress report 2013 approved by Defra. Current work includes the monitoring of the effect on air quality of the now opened Quay Street throughabout and the Eclipse				

<table>
<tr><th>ACTION</th><th>DESCRIPTION</th><th>LEAD ROLE</th><th>TIMESCALE</th><th>TARGET</th><th>INDICATOR</th></tr>
<tr><td></td><td colspan="5">busway including the use of the new continuous monitoring unit that was installed at Portland Street in April 2012; the production of sustainable travel type A32 banners in Gosport and Fareham on lamp columns; monitoring for the planning application for the permanent Yew Tree Bus link; electric charging points to be installed in Fareham car parks in 2014. Annual average concentration for nitrogen dioxide at the Gosport Road monitor: 33 ug/m3 in 2008; 36 ug/m3 in 2009; 42 ug/m3 for 2010; 33ug/m3 in 2011;35 ug/m3 in 2012; 34 ug/m3 in 2013. The annual mean for Portland Street for 2013 34.6 ug/m3.</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td>36.</td><td>To continue to educate and enforce in respect of domestic, agricultural and industrial smoke nuisances and dark/black smoke</td><td>FBC</td><td>2013/14</td><td>To respond to complaints of smoke and odour</td><td>(a)Customer service centre to continue to respond automatically to complaints in the first instance where complaint letters are appropriate

(b)Pollution officers to react to more urgent complaints 24 hours a day 365 days a year</td></tr>
<tr><td>UPDATE</td><td colspan="5">Completed but active. Around 50 complaints a year are received on this subject.</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td>37.</td><td>To monitor as a Council data in respect of NI 194 and implement actions to achieve target set</td><td>FBC</td><td>2013/14</td><td colspan="2">Whilst NIs 185 and 194 are no longer to be formally reported, the Council is still to report NI 185.</td></tr>
<tr><td>UPDATE</td><td colspan="5">To reduce the Council's target by 20% by 2020 from a 2012 baseline. This target was agreed by the CXMT in 2013 and then by members of the SP&E Panel in July 2013. The Carbon Emissions report for 2013/14 is currently being compiled. The draft figures (kg CO_2e) are as follows:-

<table>
<tr><th></th><th>2011/12</th><th>2012/13</th><th>2013/14</th><th>Annual change</th><th>Overall change</th></tr>
<tr><td>Gas (Scope 1)</td><td>351,360</td><td>442,251</td><td>382,690</td><td>-13.5%</td><td>+8.9%</td></tr>
<tr><td>Vehicle fleet(Scope 1)</td><td>845,830</td><td>865,201</td><td>861,461</td><td>- 0.4%</td><td>+1.8%</td></tr>
<tr><td>Total scope 1</td><td>1,197,191</td><td>1,307,452</td><td>1,244,150</td><td>- 4.9%</td><td>+3.9%</td></tr>
<tr><td>Electric (Scope 2)</td><td>1,376,721</td><td>1,221,336</td><td>1,322,803</td><td>+8.3%</td><td>- 3.9%</td></tr>
<tr><td>Total (Scope 1 & 2)</td><td>2,573,912</td><td>2,528,788</td><td>2,566,953</td><td>+1.5%</td><td>- 0.3%</td></tr>
</table>

Apart from electric usage in 2013/14, the other sources are heading in the right direction.</td></tr>
</table>

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
PROMOTION AND PUBLICITY					
38.	To continue to place air quality reports on the FBC website	FBC	2012/13	To ensure that all appropriate bodies are kept aware of LAQM progress	Annually (or as required) e-mail stakeholder bodies and send a message each time there is a website report update.
UPDATE	Defra approved 2013 air quality progress report on the Council's website.				
39.	To investigate the most effective method of disseminating air quality information to the public and assess the feasibility of employing this method for FBC	FBC	2013/14	To raise awareness of local and national air quality matters	Annual review of information dissemination options in line with UK best practice and discussions with neighbouring authorities.
UPDATE	There was a UK air quality alert in April 2014. There is a link on the FBC website to continuous results from our two monitoring stations **POSSIBLE NEW ACTIONS:- Local air quality alerts similar to SCC.**				
40.	To promote awareness via the FBC website of other air quality information web sites	FBC	2013/14	To provide an up to date, useful and informative public resource for air quality and to raise awareness of local and national air quality matters.	Annual review of the Council website content in line with accepted UK best practice.
UPDATE	Ongoing process of updating website including links from the air quality page to sustainable travel information.				
41.	Support locally, national campaigns to raise awareness of air quality, alternative	FBC	2013/14	To support where appropriate, a national air quality campaign at least	Evidence of this action

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	transport choices etc			once a year via the FBC website	
UPDATE	FBC took part in My Journey Commuter Challenge 2014 organised by Sustrans. Environmental Health gave a talk on air quality to a local group in Portchester in May 2014. **POSSIBLE NEW ACTIONS:-Air quality day; Bike campaign; Radio campaign; CAT presentation**				
42.	To promote the use of alternative fuels eg LPG, hybrid	FBC	2011/12	Now combined with Action 27	
UPDATE	**Deleted.** Two electric charging points installed in Fareham car park in July 2014. **POSSIBLE NEW ACTIONS:- Alternative fuel campaign; Eco driver training for all essential car users; Low emission pool cars for staff and residents;**				
43.	To produce a leaflet on the AQAP and distribute to libraries, GP surgeries etc	FBC	2011/12	Completed	
UPDATE	**Completed.**				
44.	To liaise closely with the PCT in respect of identifying any linkage between areas with poor air quality and ill health	FBC HCC PCT	2009/10	Deleted as now covered with Action 43.	
UPDATE	**Deleted.**				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
45.	To continue to promote energy awareness and efficiency in the Borough	FBC	2011/12	Completed	
UPDATE	**Deleted.**				
IMPROVEMENTS IN THE QUALITY OF LIFE AND HEALTH					
46.	To reduce car dependency and facilitate transport choice by encouraging alternatives to the car alongside changes in working arrangements through the Smarter Choices regime of the LTP3.	HCC	2013/14	Target to be developed once success of LSTF bid is known. LSTF is now the primary resource mechanism for travel planning projects. Examples such as LTP3 policy objectives such as 7,10,11 &12.	Indicators to be developed once success of LSTF bid is known. LSTF is now the primary resource mechanism for travel planning projects. Examples such as LTP3 policy objectives such as 7,10,11 &12.
UPDATE	**ACTION COMPLETED AS AGREED BY THE STEERING GROUP AT THEIR MEETING ON 10 SEPTEMBER 2013** In 2012/13, through the "My Journey" Personal Travel Planning project, over 1,000 residents in Gosport have accepted the Sustainable Travel Challenge, pledging to try a non-car alternative for a regular journey for a small reward. The project has consequently reached more households, and the feedback used by the County Council and transport operators to inform future investment decisions. A similar exercise is to be undertaken in Fareham during 2014. **Apr 2014 update** – A major promotional exercise is planned for Summer 2014 with travel advisors and my Journey publicity across the town for the duration of the Household interview period. Adult cycle training - **Apr 2014 update** - This is not being continued through into 14/15 due to restricted budget and low take up. My Journey Commuter Challenge - **Apr 2014 update** – The 2014 Challenge is took place in May 2014. Transport for South Hampshire in partnership with Southampton, Gosport and Cosham Job Centre Plus have been operating pilot projects offering free public transport and travel advice to young job seekers where travel, and the cost of transport, have been identified as barriers to employment. The project intends to broaden transport horizons and support the use of public transport. Since the start of the project 700 free Solent Travel Cards have been distributed to 500 young people. During the pilot period each month between 40% and 49% of young people participating in the scheme accessed work. Full evaluation is being carried out in August but early analysis seems positive. **Apr 2014 update** - Between Dec 2013 and Mar 2014, travel advisors were operating out of the Fareham and Havant job centres where take up of their services was well received. Data on the				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	number of individuals supported will be provided when it becomes available.				
47.	To continue to promote cycling and walking as healthier alternatives to the car on the FBC website	FBC	2011/12	Deleted as now covered with Action 4	
UPDATE	**Deleted**.				
48.	To implement Environmental Sustainability Strategy (ESS) and ensure that NO_2 is considered in the development of the FBC Sustainability Strategy	FBC	2013/14	To implement FBC's ESS	(a) Appoint an ESS coordinator (b) Progress of the ESS action plan
UPDATE	**Completed.** See action 4.				

9 Conclusions and Proposed Actions

9.1 Conclusions from New Monitoring Data

Fareham Borough Council has historically monitored for the pollutant NO_2 by way of continuous analysers and diffusion tube sites. The new continuous automatic site for monitoring nitrogen dioxide installed at Portland Street has now provided a complete year of reliable monitoring data. Both continuous sites showed no exceedances of the annual mean NO_2 objective.

The analysis of the 2013 diffusion tube data showed two sites at which there were annual mean NO_2 concentrations in excess of the annual mean objective of 40 ug/m^3. These sites G7 and PS3 only marginally exceeded and may be attributed to the effect of regional meteorological conditions during 2013 as there is an increase in all sites compared with 2012 data (see figure 2.4). The exceedances are in locations already declared as AQMAs, site G7 being within the Gosport Road AQMA and site PS3 within the Portland Street AQMA.

The AQMAs will remain declared for the time being.

Site G10 which is to the North of the Gosport AQMA was shown to marginally breach the annual mean NO_2 objective. As a recent detailed assessment for the same site in 2010 for G10 showed no exceedances at the facades of the houses and therefore no need to adjust the AQMA. It is recommended that continued monitoring be undertaken and if necessary in the future, a further detailed assessment undertaken at this site.

No PM_{10} monitoring was undertaken in 2013.

9.2 Conclusions relating to New Local Developments

9.2.1 Road Traffic Sources

Most new road traffic sources were identified in the 2012 Updating Screening and Assessment. The Council identified no new significant changes that require assessment. There were a number of local/regional schemes that have been identified which are anticipated to have beneficial impacts on local congestion and emissions in the future:-

- The Quay Street “throughabout”.
- The Eclipse Busway
- Two new dedicated bus lanes
- Western Way bus gate

9.2.2 Other Transport Sources

No other significant local transport sources have been identified since the previous LAQM assessment.

9.2.3 Industrial Sources

- Two coating premits surrendered.

9.2.4 Commercial and Domestic Sources

- Down End Road composting site closed in December 2012.

9.2.5 New Developments with Fugitive or Uncontrolled Sources

- Industrial, commercial and residential development at Daedalus airfield;
- The residential, commercial and industrial development north of Fareham in 2016 to be known as Welborne.

9.3 Proposed Actions

Fareham Borough Council proposes the following actions;

- Continue to undertake monitoring at the existing locations including in the Gosport Road and Portland Street AQMAs due to marginal exceedances in both;

- The Gosport Road and Portland Street AQMAs will be retained and NO_2 diffusion tube monitoring will continue to determine long term trend of air quality;

- Continue to assess diffusion tube data at site G10 in light of a marginal exceedance for possible detailed assessment in the next round

- Continuous monitors to be retained to assess the need for retention of both Portland Street and Gosport Road AQMAs

- Prepare and submit, in line with the requirements of LAQM, an Air Quality USA 2015, which will update on all the elements set out in this report.

10 References

Local Air Quality Management Technical Guidance LAQM.TG(09). February 2009. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.

Diffusion Tubes for Ambient NO_2 Monitoring: Practical Guidance for Laboratories and Users, Report to Defra and the Devolved Administrations, Feb 2008.

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Local Air Quality Management - Further Assessment of Portland Street AQMA 2009. Fareham Borough Council

Local Air Quality Management - USA 2009. Fareham Borough Council

Air Quality Action Plan Update – March 2010. Fareham Borough Council

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The South East Plan – Regional Spatial Strategy for the South East: 2009-2026. Sec State HMSO.

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Air Quality Updating and Screening Assessment 2012. Fareham Borough Council

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Bus Rapid Transport webpages. Hampshire County Council. http://www3.hants.gov.uk/tfsh/bus-rapid-transit.htm

Defra. Nitrogen Dioxide Diffusion Tube National Bias Adjustment. July 2014. http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html

Defra. Nitrogen Dioxide Diffusion Tube Local Bias Adjustment. April 2014. http://laqm.defra.gov.uk/bias-adjustment-factors/local-bias.html

Defra. Background Maps. April 2014. http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html

Local Authority Air Quality Support, NO_2 Diffusion Tube QA/QC, WASP Rounds 116 – 123. WASP – Annual Performance Criteria for NO_2 Diffusion Tubes used in

Local Air Quality Management (LAQM), 2007 onwards, and Summary of Laboratory Performance in Rounds 116-123. June 2013.
http://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html

Appendices

Appendix A: QA:QC Data

QA/QC of Automatic Monitoring

Monitoring in Fareham was performed in accordance with the guidelines outlined in Technical Guidance Notes LAQM.TG(03) ,LAQM.TG1(00) and LAQM.TG(09). All the analysers were set up and calibrated in strict accordance with the manufacturers' recommended procedures prior to and during use. Details of automatic monitoring QA/QC is given in Section 2.1.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes were supplied and analysed by Gradko International Ltd. To maintain consistency with previous monitoring the preparation method used was 20% v/v triethanolamine in water.

Gradko International Ltd. participate in the Health and Safety Laboratory's Workplace Analysis Scheme for Proficiency (WASP) scheme, which provides a Quality Assurance / Quality Control framework for local authorities carrying out diffusion tube monitoring as a part of their local air quality management process. This scheme is based on a z-score system where if 95% of the laboratory results occur within the z-score <± 2 for each WASP round, then this is deemed a satisfactory laboratory result. If this percentage is substantially lower than 95% then one can conclude that the laboratory in question may have significant systematic sources of bias in their assay and the results are questionable or unsatisfactory.

Table 1 shows Gradko International Ltd. summary performance for WASP NO2 PT rounds R120 – R123 which cover the 2013 monitoring period. The performance summary shows that Gradko International Ltd. achieved 100% ratings from January to December 2013.

Table 1: Laboratory Summary Performance for WASP Rounds R116-119

WASP Round	WASP R120	WASP R121	WASP R122	WASP R123
Round conducted in the period	**Jan-March 2013**	**April-June 2013**	**July – Sept 2013**	**Oct – Dec 2013**
Gradko International	100%	100%	100%	100%

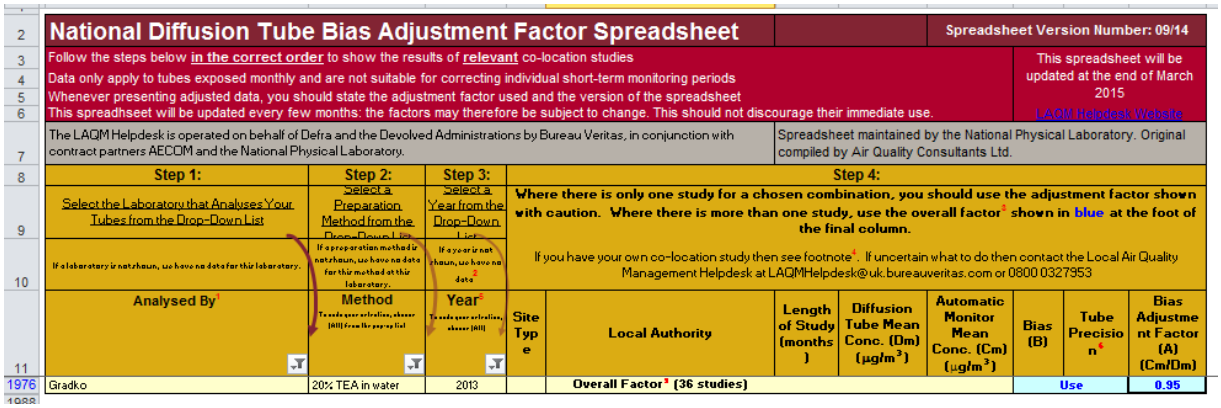
APPENDIX B: Diffusion Tube Bias Adjustment Factors

A national bias adjustment factor of 0.95 was obtained from the national spread sheet of bias adjustment factors version 09/14 using the following inputs:

- Analysed by: Gradko International
- Method: 20% TEA / Water
- Year: 2013

Output shown in figure A.1.

Figure A.1: NO_2 Diffusion Tube National Bias Adjustment Calculation, Fareham 2013



National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 09/14

Follow the steps below in the correct order to show the results of relevant co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadhseet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of March 2015
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List
Step 2: Select a Preparation Method from the Drop-Down List
Step 3: Select a Year from the Drop-Down List
Step 4: Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

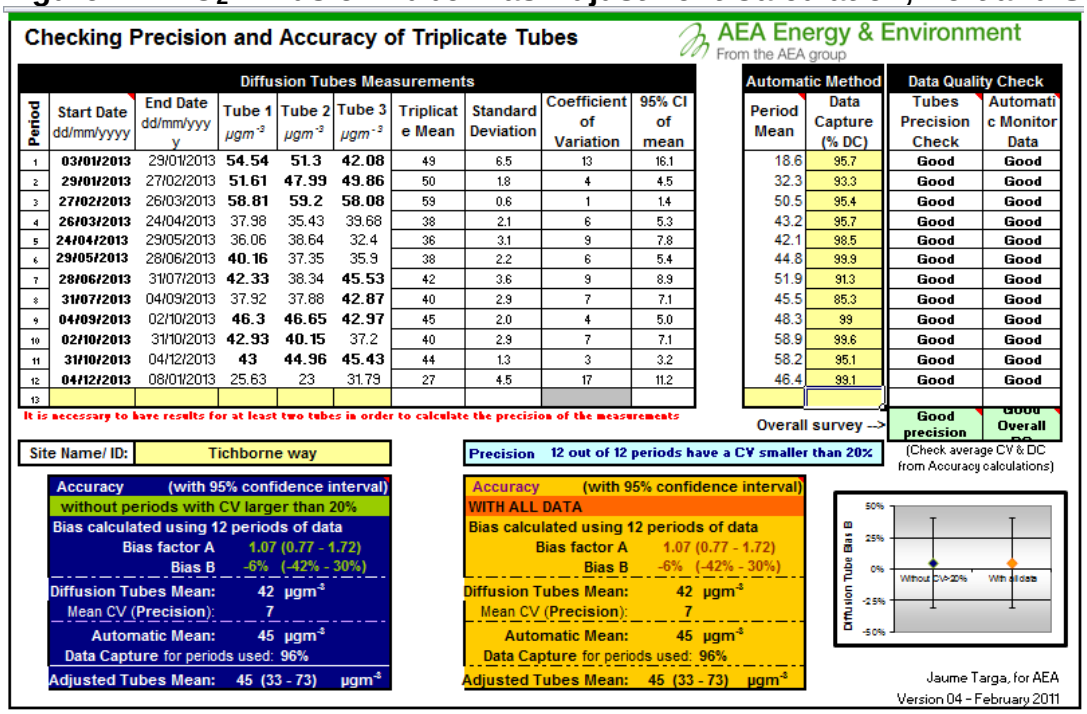
If a laboratory is not shown, we have no data for this laboratory.
If a preparation method is not shown, we have no data for this method at this laboratory.
If a year is not shown, we have no data[2]
If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@uk.bureauveritas.com or 0800 0327953

	Analysed By[1]	Method	Year[2]	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[4]	Bias Adjustment Factor (A) (Cm/Dm)
1976	Gradko	20% TEA in water	2013		Overall Factor[3] (36 studies)					Use	0.95

Factor from Local Co-location Studies

A local bias adjustment factor for NO_2 Diffusion Tube monitoring was derived from a co-location study. Triplicate tubes were placed alongside the NO_X Analyser at Portland Street Monitoring Site and the Elms Road site the co-location used to calculate a local bias adjustment factor. It was decided to use the new Portland Street co-location site as it presented better data capture. Details of the local bias adjustment calculation are shown in Figure A.2/3. The local bias adjustment calculation resulted in a local bias adjustment factor of 1.07.

Figure A.2 NO_2 Diffusion Tube Bias Adjustment Calculation, Portland Street



Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements

Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm⁻³	Tube 2 µgm⁻³	Tube 3 µgm⁻³	Triplicate Mean	Standard Deviation	Coefficient of Variation	95% CI of mean
1	03/01/2013	29/01/2013	54.54	51.3	42.08	49	6.5	13	16.1
2	29/01/2013	27/02/2013	51.61	47.99	49.86	50	1.8	4	4.5
3	27/02/2013	26/03/2013	58.81	59.2	58.08	59	0.6	1	1.4
4	26/03/2013	24/04/2013	37.98	35.43	39.68	38	2.1	6	5.3
5	24/04/2013	29/05/2013	36.06	38.64	32.4	36	3.1	9	7.8
6	29/05/2013	28/06/2013	40.16	37.35	35.9	38	2.2	6	5.4
7	28/06/2013	31/07/2013	42.33	38.34	45.53	42	3.6	9	8.9
8	31/07/2013	04/09/2013	37.92	37.88	42.87	40	2.9	7	7.1
9	04/09/2013	02/10/2013	46.3	46.65	42.97	45	2.0	4	5.0
10	02/10/2013	31/10/2013	42.93	40.15	37.2	40	2.9	7	7.1
11	31/10/2013	04/12/2013	43	44.96	45.43	44	1.3	3	3.2
12	04/12/2013	08/01/2013	25.63	23	31.79	27	4.5	17	11.2
13									

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Automatic Method: Period Mean	Data Capture (% DC)	Data Quality Check: Tubes Precision Check	Automatic Monitor Data
18.6	95.7	Good	Good
32.3	93.3	Good	Good
50.5	95.4	Good	Good
43.2	95.7	Good	Good
42.1	98.5	Good	Good
44.8	99.9	Good	Good
51.9	91.3	Good	Good
45.5	85.3	Good	Good
48.3	99	Good	Good
58.9	99.6	Good	Good
58.2	95.1	Good	Good
46.4	99.1	Good	Good
Overall survey -->		Good precision	Good Overall DC

(Check average CV & DC from Accuracy calculations)

Site Name/ ID: Tichborne way

Precision: 12 out of 12 periods have a CV smaller than 20%

Accuracy (with 95% confidence interval) without periods with CV larger than 20%
Bias calculated using 12 periods of data
Bias factor A: 1.07 (0.77 - 1.72)
Bias B: -6% (-42% - 30%)
Diffusion Tubes Mean: 42 µgm⁻³
Mean CV (Precision): 7
Automatic Mean: 45 µgm⁻³
Data Capture for periods used: 96%
Adjusted Tubes Mean: 45 (33 - 73) µgm⁻³

Accuracy (with 95% confidence interval) WITH ALL DATA
Bias calculated using 12 periods of data
Bias factor A: 1.07 (0.77 - 1.72)
Bias B: -6% (-42% - 30%)
Diffusion Tubes Mean: 42 µgm⁻³
Mean CV (Precision): 7
Automatic Mean: 45 µgm⁻³
Data Capture for periods used: 96%
Adjusted Tubes Mean: 45 (33 - 73) µgm⁻³

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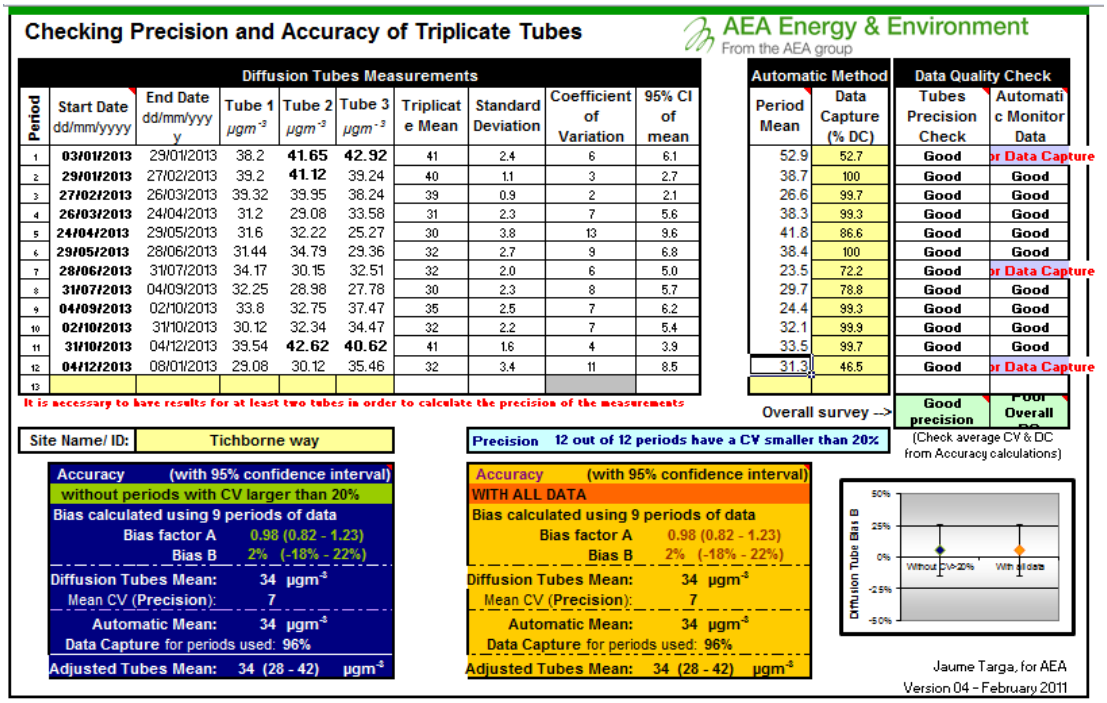
Figure A.3 NO_2 Diffusion Tube Bias Adjustment Calculation, Elms street



Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements

Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm⁻³	Tube 2 µgm⁻³	Tube 3 µgm⁻³	Triplicate Mean	Standard Deviation	Coefficient of Variation	95% CI of mean
1	03/01/2013	29/01/2013	38.2	41.65	42.92	41	2.4	6	6.1
2	29/01/2013	27/02/2013	39.2	41.12	39.24	40	1.1	3	2.7
3	27/02/2013	26/03/2013	39.32	39.95	38.24	39	0.9	2	2.1
4	26/03/2013	24/04/2013	31.2	29.08	33.58	31	2.3	7	5.6
5	24/04/2013	29/05/2013	31.6	32.22	25.27	30	3.8	13	9.6
6	29/05/2013	28/06/2013	31.44	34.79	29.36	32	2.7	9	6.8
7	28/06/2013	31/07/2013	34.17	30.15	32.51	32	2.0	6	5.0
8	31/07/2013	04/09/2013	32.25	28.98	27.78	30	2.3	8	5.7
9	04/09/2013	02/10/2013	33.8	32.75	37.47	35	2.5	7	6.2
10	02/10/2013	31/10/2013	30.12	32.34	34.47	32	2.2	7	5.4
11	31/10/2013	04/12/2013	39.54	42.62	40.62	41	1.6	4	3.9
12	04/12/2013	08/01/2013	29.08	30.12	35.46	32	3.4	11	8.5
13									

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Automatic Method		Data Quality Check	
Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
52.9	52.7	Good	Poor Data Capture
38.7	100	Good	Good
26.6	99.7	Good	Good
38.3	99.3	Good	Good
41.8	86.6	Good	Good
38.4	100	Good	Good
23.5	72.2	Good	Poor Data Capture
29.7	78.8	Good	Good
24.4	99.3	Good	Good
32.1	99.9	Good	Good
33.5	99.7	Good	Good
31.3	46.5	Good	Poor Data Capture
Overall survey -->		Good precision	Poor Overall DC

(Check average CV & DC from Accuracy calculations)

Site Name/ ID: Tichborne way

Precision: 12 out of 12 periods have a CV smaller than 20%

Accuracy (with 95% confidence interval) without periods with CV larger than 20%
Bias calculated using 9 periods of data
Bias factor A: 0.98 (0.82 - 1.23)
Bias B: 2% (-18% - 22%)
Diffusion Tubes Mean: 34 µgm⁻³
Mean CV (Precision): 7
Automatic Mean: 34 µgm⁻³
Data Capture for periods used: 96%
Adjusted Tubes Mean: 34 (28 - 42) µgm⁻³

Accuracy (with 95% confidence interval) WITH ALL DATA
Bias calculated using 9 periods of data
Bias factor A: 0.98 (0.82 - 1.23)
Bias B: 2% (-18% - 22%)
Diffusion Tubes Mean: 34 µgm⁻³
Mean CV (Precision): 7
Automatic Mean: 34 µgm⁻³
Data Capture for periods used: 96%
Adjusted Tubes Mean: 34 (28 - 42) µgm⁻³

Jaume Targa, for AEA
Version 04 - February 2011

Discussion of Choice of Factor to Use

Both local and national bias adjustment factors were derived for the purpose of bias adjusting Fareham Borough Council's NO_2 diffusion tube results. It was decided to use the local factor for bias adjustment for the following reasons:

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- Local bias adjustment factor is considered to be the most representative of local conditions in Fareham;
- The local bias adjustment factor provides a worst case scenario compared to the national bias adjustment although they are very similar.

Short-term to Long-term Data adjustment

The long term continuous monitoring sites chosen for annualisation of the Portland Street continuous analyser and diffusion tube sites were Tichborne way in Gosport, Elms Road in Fareham, Southampton Centre and Portsmouth. These monitoring sites were chosen because of their proximity to the Borough and good data capture rates (>90%).

Appendix C: Nitrogen Dioxide diffusion tube results 2013

Site Ref.	NO_2 Concentration (µg/m^3)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Annualised? (Y-value / N)	Corrected Annual Mean 2013 (Bias Factor 1.07)
10N	29.27	27.47	25.97	-	17.92	9.69	18.6	18.28	22.18	-	26.87	15.76	21.20	n	22.69
10NA	29.45	25.41	25.32	21.14	17.35	15.33	17.05	16.96	20.55	*8.39	24.79	22.8	21.47	n	22.97
3N	31.84	27.44	29.7	22.28	19.43	18.78	20.09	19.67	24.15	22.95	26.31	17.75	23.37	n	25.00
5N	-	30.75	33.49	21.28	21.08	20.55	9.53	21.18	26.48	25.7	28.68	15.77	23.14	n	24.75
7N	24.69	25.89	27.34	17.68	13.27	13.62	15.87	**15.12	18.54	16.56	22.19	13.48	19.01	n	20.34
AV/BF	39	35.96	**40.88**	24.54	23.24	20.31	14.29	20.36	24.35	22.73	35.98	12	26.14	n	27.97
BL1	**43.41**	**45.59**	**48.32**	**40.18**	30.04	29.29	34.01	28.23	36.23	35.32	33.63	27.3	35.96	n	38.48
G10	**41.37**	**43.03**	**46.42**	36.95	32.4	36.93	36.09	30.52	38.51	37.44	**45.84**	28.33	37.82	n	40.47
G11	30.58	33.45	32.12	25.47	21.93	23.37	24.1	25.27	26.8	25.13	37.65	26.16	27.67	n	29.61
G1A	37.96	**40.22**	39.76	32.66	32.71	24.5	25.86	21.87	*0.36	-	31.96**	25.9	31.27	n	33.46
G2A	32.43	34.38	33.81	26.29	24.7	24.11	28.41	29.43	28.22	28.21	38.08	32.4	30.04	n	32.14
G3	-	34.2	38.34	25.07	21.9	24.39	25.57	26.86	25.07	*0.45	37.77	-	28.80	n	30.81
G4	34.4	32.08	34.53	25.48	24.23	23.19	25.37	26.33	25.89	25.9	31.01	19.13	27.30	n	29.21
G5	29.79	35.1	37.67	26.78	25.42	24.12	23.41	20.29	25.42	23.04	30.09	22.7	26.99	n	28.87
G6	**40.6**	37.27	**48.39**	34.37	25.93	28.66	34.9	30.62	34.95	31.09	34.24	21.22	33.52	n	35.87
G7	**40.73**	39.77	**49.99**	37.69	37.1	34.16	38.74	30.11	**43.63**	31.95	**41.21**	24.46	37.46	n	40.08
G8Z	**43.3**	35.16	37.11	29.47	30.58	23.36	29.56	28.37	28.39	29.37	35.52	24.8	31.25	n	33.44
G9	29.37	29.02	38.41	27.39	20.49	25.48	29.65	23.4	27.21	24.95	21.88*	20.91	26.93	n	28.82
HR1	**49.86**	**43.26**	**48.11**	34.48	31.99	37.04	39.29	37.35	38.17	-	37.67	32.6	39.07	n	41.81
HR2	**40.11**	35.37	**40.87**	31.57	26.53	26.73	30.15	26.75	31.12	-	33.82	26.48	31.77	n	34.00
HR3A	36.17	33.82	**40.29**	29.47	20.66	23.01	24.17	22.74	**46.32	24.86	32.02	15.62	27.53	n	29.46

Site Ref.	NO_2 Concentration (µg/m^3)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Annualised? (Y-value / N)	Corrected Annual Mean 2013 (Bias Factor 1.07)
HR4	38.12	37.77	**45.39**	31.24	20.67	23.93	27.28	23.65	30.76	24.29	32.01	20.79	27.83	n	31.73
LH1	33.26	34.18	36.56	23.42	20.84	21.02	16.41	-	25.96	23.88	31	17.53	29.10	n	27.63
LH3	34.94	32.86	36.53	25.43	24.6	24.07	25.43	23.77	28.88	25.13	33.76	27.35	27.65	n	30.56
P1B	23.5	25.41	26.58	20.94	18.92	17.67	22.06	18.96	22.4	21.81	25.88	20.59	30.72	n	23.60
P2	33.46	28.57	28.93	19.96	15.83	16.72	20.53	18.65	23.56	20.13	28.64	15.15	23.54	n	24.09
P4	34.29	27.52	-	25.57	25.58	20.64	27.06	**24.93	27.16	27.81	30.21	16.04	22.16	n	28.02
P5	36.31	35.98	**41.12**	24.01	22.64	24.51	26.28	25.78	33.06	27.39	32.14	22.24	29.73	n	31.34
P6	32.59	33.7	30.69	20.62	19.93	16.81	21.45	20.35	24.38	22.84	26.94	13.03	29.86	n	25.26
P7A	27.67	25.73	29.01	18.1	16.26	15.71	10.23?	17.68	21.08	17.31	28.36	13.49	26.23	n	22.41
PS1	**42.26**	**44.32**	**46.78**	32.52	30.81	28.13	10.78	31.43	38.18	31.29	35.19	28.18	20.52	n	35.66
PS1A	38.73	**41.11**	**44.43**	37.27	31.55	30.44	37.52	29.94	38.65	27.44	35.84	35.95	36.31	n	38.24
PS1B	36.4	39.56	**49.66**	34.18	30.03	30.27	32.98	31.24	38.57	33.64	39.49	19.73	35.20	n	37.07
PS2	38.79	**41.72**	**44.5**	35.13	27.63	30.24	34.44	34.15	0.18	62.34	35.9	18.87	35.79	n	36.01
PS3	**40.69**	38.8	**47.29**	34.46	30.11	35.87	-	34.78	**42.77**	38.39	**40.38**	**44.3**	36.57	n	41.62
S2	33.51	32.56	**40.87**	-	19.2	19.92	21.94	18.58	24.95	20.27	29.61	13.93	**41.26**	n	26.78
T1	30.63	31.91	34.46	23.57	17.76	20.16	21.65	16.92	24.76	20.05	31.25	19.96	23.71	n	26.13
E1	38.2	39.2	39.32	31.2	31.6	31.44	34.17	32.25	33.8	30.12	39.54	29.08	24.46	n	36.55
E2	**41.65**	**41.12**	39.95	29.08	32.22	34.79	30.15	28.98	32.75	32.34	**42.62**	30.12	37.83	n	37.07
E3	**42.92**	39.24	38.24	33.58	25.27	29.36	32.51	27.78	37.47	34.47	**40.62**	35.46	36.09	n	37.18
G12	33.72	**40.49**	**43.47**	33.14	28.34	32.62	36.97	33.92	36.31	32.74	38.08	29.04	38.42	n	37.35
G14	**42.2**	**44.28**	**58.11**	38.76	27.87	31.23	34.84	27.83	-	25.64	31.8	13.57	37.76	n	36.59
DC1	37.57	34.77	**40.84**	25.91	24.21	23.01	25.06	23.88	28.6	26.49	31.27	18	33.97	n	30.28
RM1	33.01	36.95	**41.13**	27.12	24.52	25.35	25.8	22.7	26.32	23.34	31.37	13.04	28.83	n	29.48
PS4	**54.54**	**51.61**	**58.81**	37.98	36.06	**40.16**	**42.33**	37.92	**46.3**	**42.93**	**43**	25.63	29.56	n	46.12

Site Ref.	NO_2 Concentration (µg/m^3)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Annualised? (Y-value / N)	Corrected Annual Mean 2013 (Bias Factor 1.07)
PS5	**51.3**	**47.99**	**59.2**	35.43	38.64	37.35	38.34	37.88	**46.65**	**40.15**	**44.96**	23	**42.30**	n	44.66
PS6	**42.08**	**49.86**	**58.08**	39.68	32.4	35.9	**45.53**	**42.87**	**42.97**	37.2	**45.43**	31.79	**42.86**	n	44.92
GR/RL	33.54	34.75	38.76	27.29	21.93	21.33	23.7	19.98	25.3	20.77	33.71	17.83	**42.99**	n	28.43
11NL	28.92	28.2	30.82	21.37	12.69	17.76	9.9	17.63	21.8	18.27	24.21	14.08	25.80	n	21.90
10N	29.27	27.47	25.97	-	17.92	9.69	18.6	18.28	22.18	-	26.87	15.76	23.41	n	22.69

APPENDIX D: StAG Measures Identified Through Transport Policy

Measure	Description of Measure	Reference Document(s)
Newgate Lane Improvement A	Replacement of roundabouts at Longfield Ave and Speedfields Retail Park with signalised junctions.	Gosport Draft Core Strategy Preferred Options/LTP2.
Newgate Lane Improvement B	Widening of the southern end of Newgate Lane on the eastern side and provision of a shared use cycle track.	Gosport Draft Core Strategy Preferred Options/LTP2.
Peel Common Roundabout	Specific details yet to be decided, but likely to include traffic control measures and road widening to improve conditions for buses, goods vehicles, pedestrians and cyclists.	Gosport Draft Core Strategy Preferred Options/LTP2.
Quay Street / Fareham AQMA	Proposal from Tesco to redesign roundabout and introduce pedestrian and cycle crossing Facilities.	Gosport Draft Core Strategy Preferred Options/LTP2.
Brockhurst Roundabout	Provision of a Toucan Crossing and cycle track.	LTP2.
Access to Daedalus	No specific proposals as yet, but could include an internal east/west link road along the southern site boundary linking Marine Parade and B3385 (Broom Way) and associated improvements off site to routes through Stubbington Village along Newgate Lane.	Daedalus Visionary Framework SEEDA (Jan 2009).
ITS Strategy	Various measures including review of and developing the operation and maintenance regime of traffic signalled junctions and formal pedestrian crossings and developing strategies to improve the monitoring and operation of traffic signal junctions and traffic control techniques.	LTP2.
Phase 1 - South East Hampshire Bus Rapid Transit (BRT)	Phase 1, off road busway running on a section of disused rail line between Redlands Lane and Titchbourne Way, with planning permission to extend southwards to Military Road. Also providing an advisory cycle route. Part of South East Hampshire BRT Network.	PUSH Business Plan 2009/11 / TfSH Towards Delivery / Gosport Draft Core Strategy.
BRT Vision / Future Phases	Future phases of BRT to provide connections to Fareham Town Centre, Fareham Rail Station, North Fareham SDA, Gosport Waterfront, Queen Alexandra Hospital and A3 corridor to form South East Hampshire BRT Network.	PUSH Business Plan 009/11 / TfSH Towards Delivery / Gosport Draft Core Strategy.
New transport interchange at Gosport Waterfront	High quality bus / ferry interchange as part of the Waterfront redevelopment.	TfSH Towards Delivery/ Gosport Draft Core Strategy Preferred Options.
Western access to Gosport	Bypass of Stubbington village. Historical alignment from Newgate Lane (B3385) to north of Stubbington Titchfield Road (B3334).	LTP2 / Gosport Draft Core Strategy Preferred Options.
A32 Access to	Pedestrian and cycle provision. ITS optimisation solutions	TfSH Towards

Measure	Description of Measure	Reference Document(s)
Gosport	including VMS and Traffic Management. Including Wych Lane provision of a right turn lane from the A32 onto Wych Lane.	Delivery/ Gosport Draft Core Strategy Preferred Options.
New Ferry Service – Portsmouth to Southampton	Serving intermediate communities including Gosport.	TfSH Towards Delivery/ LTP2.
Delme Roundabout	Measures to address traffic congestion, road safety and severance.	Gosport Draft Core Strategy Preferred Options.
Stubbington Village Centre Improvements	Improve pedestrian and cycle links, including provision of crossing facilities to address accessibility, segregation and safety issues.	Gosport Draft Core Strategy Preferred Options.
A27 Bus Priority and Traffic Management	Range of measures to address heavy traffic flows, including public transport, walking, cycling and road based improvements.	LTP2 / Fareham Borough Council.
Access to North Fareham Strategic Development Area	Proposals including the realignment of the A32 to Junction 11, converting existing A32 to bus only route and only allowing HOVs and Buses to use east facing slips on to M27 Junction 10 (presently being evaluated).	PUSH Business Plan 09/11 / TfSH Towards Delivery/LTP2.
Fareham Rail Station Interchange	New public transport interchange at Fareham Rail Station.	PUSH Business Plan/ Fareham Borough Council Preferred Options.
Walking and Cycling improvements (Gosport)	Provision of cycle facilities at Holbrook – Titchborne Way, Newgate Lane, Gomer Lane and Stokes Bay No. 2 Battery, Browndown Road, Marine Parade East and West Lee-on-the- Solent.	TfSH Towards Delivery / Gosport Draft Core Strategy Preferred Options.