FAREHAM
BOROUGH COUNCIL

2013 Air Quality Progress Report for *Fareham Borough Council*

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

August 2013

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Date	September 2013
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Executive Summary

Fareham Borough Council have undertaken this 2013 progress report in fulfilment of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy 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. Following the conclusions of this report it is recommended that the present AQMA declarations should remain.

The monitoring data for 2012 has indicated that the annual mean NO_2 objective was achieved at all monitoring locations except two, site G7 (193 Gosport Road) and PS3 (Portland Street). These sites only marginally exceeded 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 with the opening of the new Bus Rapid Transit route and the conversion of the Quay Street roundabout to a “throughabout”. The beneficial effects of these developments will not have been fully realised in this round of review and assessment and are expected to reduce local congestion and emissions over the next 2-3 years.

The 2012 NO_2 diffusion tube results show a slight increase compared to 2011 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 where 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 and Stubbington 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 Local Air Quality Management (LAQM) process the Council has declared two Air Quality Management Areas (AQMA); 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 exceedences of the annual mean Air Quality Strategy (AQS) objective for nitrogen dioxide (NO_2), with traffic congestion being the main identified source of emissions.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy 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 Air Quality Management

Area (AQMA) and prepare an Air Quality Action Plan (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 Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in 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 microgrammes 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 exceedence 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 $\mu g/m^3$. 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 reproduced with permission of Fareham Borough Council. Licensed original presented on http://www.fareham.gov.uk/council/departments/healthcommunity/airqualmap.aspx

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, as shown in Table 4.3 (of the Further Assessment report) 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 exceedences 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

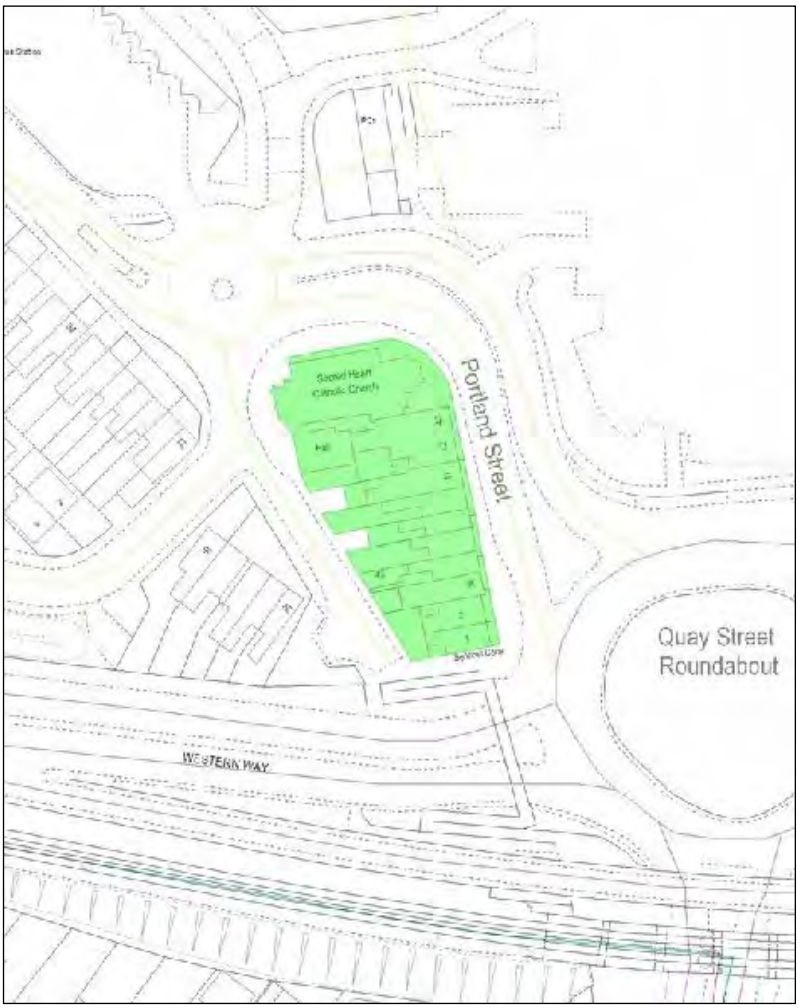

Figure 2 map reproduced with permission of Fareham Borough Council. Licensed original presented on http://www.fareham.gov.uk/pdf/healthregs/portlandmap.pdf

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 µg/m^3 in NO_X concentration (equivalent to a 16 µg/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 Updating and Screening Assessment. 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 exceedences were monitored either at sites within the AQMAs declared in Fareham for NO_2, or at sites not representative of public exposure. An exceedence 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 exceedence 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 exceedences 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 exceedences of the NO_2 annual mean objective remained in the two AQMAs. A further site outside the AQMAs also showed an exceedence 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 exceedences of the annual mean NO_2 objective continued at locations within the two AQMAs. One site outside the AQMA boundaries also showed an exceedence 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 Updating and Screening Assessment 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 Air Quality Strategy.

1.4.5 Fifth Round of Review and Assessment

The fifth round of review and assessment started in 2012 with a new updating and screening assessment. 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.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

During 2012, the Council operated 49 NO_2 diffusion tube sites and 2 continuous automatic sites for monitoring ambient air quality within the Borough. The new continuous site at Portland Street was installed in April 2012 and new data has been collected since then.

2.1.1 Automatic Monitoring Sites

The Elms Road continuous automatic site (Table 2.1) monitors for NO_2 via chemiluminescence 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 new Portland Street continuous analyser was supplied and installed by SupportingU 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.

Fareham and Gosport subsequently joined SupportingU in a joint three year contract for data collection, service and maintenance of the Elms Road, Portland Street and Tichborne Way (Gosport) from April 2012.

Figure 2.1.1 Elms Road Automatic Monitoring Site

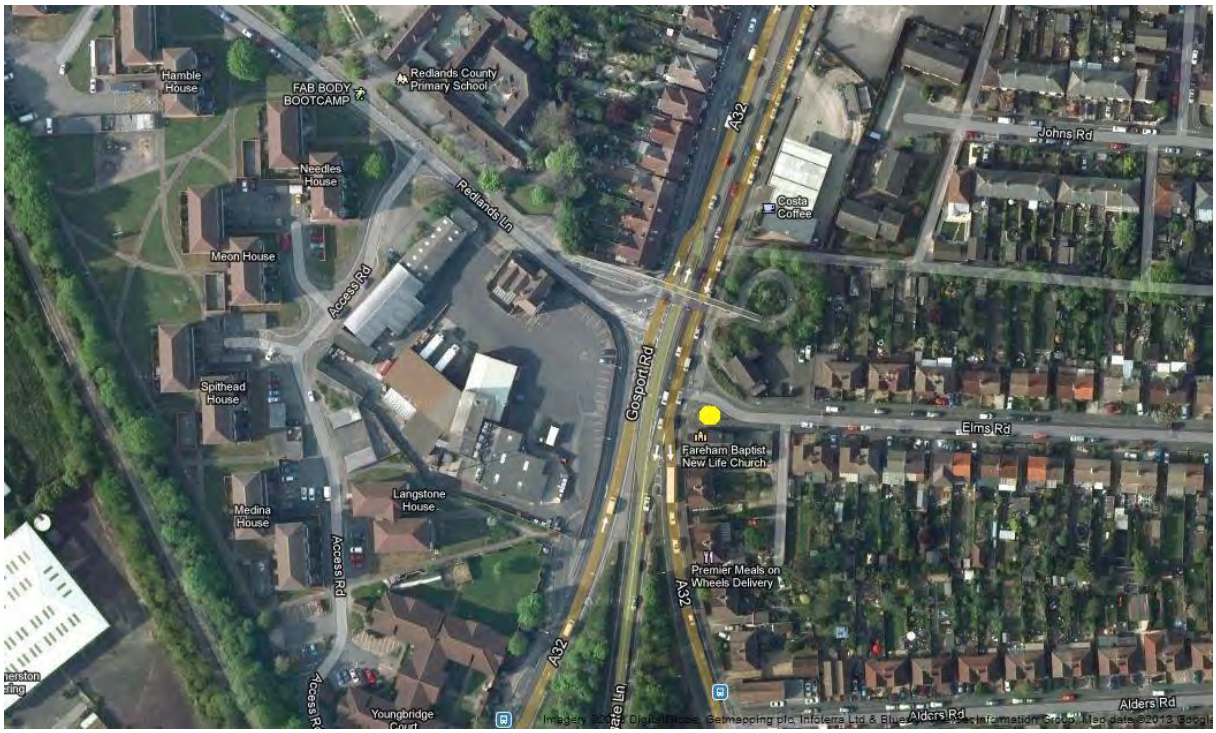

Figure 2.1.2 Portland Street Automatic Monitoring Site

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	N (3.5m)	1.5m	Y
Portland Street	Road Side	457954 106027	NO_x/NO_2	Y	Chemiluminescence	N (17.30m)	1.5m	Y

2.1.2 Non-Automatic Monitoring Sites

The Council now 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. There are 3 new sites PS4, PS5, PS6 which is the new triplicate site located at the newly installed Portland street continuous monitor. The other 2 sites are located at the corner of Gosport Road and Redlands lane (GR/RL) and 11 Newgate Lane (11NL). Figure 2.2 maps showing locations of the monitoring sites. Site details are given in Table 2.2.

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


5N
3N
2N
DC1
HR3A
HR2
HR1
HR4
PS3
PS5
PS4
PS6
PS1
BL1
Gordon Rd
Osborn Rd
West St
East St
Western Rd
Eastern Way
A27
A32
Upper Wharf
Gosport Rd
Google earth
© 2013 Google
© 2013 Infoterra Ltd & Bluesky


GR/RL
E1
E2
E3
G4
G2A
G6
G7
G14
G8Z
G5
G3
G11
G10
G12
G1A
G9
10NA
10N
Newgate
Fielder Dr
Sharlands Rd
Hackett Way
Palmerston Dr
Access Rd
Gosport Rd
B3385
Geoffrey Crescent
Beaconsfield Rd
Fayre Rd
Mill Rd
Coombe Farm Ave
Briarwood Close
Holbrook Rd
Edenrise
Johns Rd
Earls Rd
Marshall Dr
Seabird Way
The Halliards
Laburnum Rd
Farrier Way
Saltens Ln
Alders Rd
Elms Rd
Old Gosport Rd
Lower Quay Rd
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Google earth


Longs Ln
Metcalfe Ave
Queens Crescent
Mayfield Close
Dale Rd
Oakdown Rd
Park Ln
Beresford Rd
Alfred Rd
Ravens Close
Harold Rd
Eric Rd
S2
B3334
Fay Close
Elizabeth Rd
Glyn Dr
Martin Ave
Marks Rd
Westways
Southways
Victory Rd
William Close
Woodcote Ln
S1
Albert Rd
B3385
Newgate Ln
11NL
Broom Way


St Catherines Way
Alum Way
Downend Rd
The Thicket
The Ridgeway
The Spinney
The Pines
Tamar Close
P1B
Cams Hill
A27
Oysell Gardens
Magpie Close
Wagtail Way
P7A
Beaulieu Ave
Condor Ave
Grebe Close
The Peregrines
Shearwater Ave
Peacock Close
Birdwood Grove
Hatherley Crescent
Quintrel Ave
Rockingham Way
Dore Ave
The Crossway
The Queensway
West St
The Close
The Kingsway
The Fairway
P2
P6
P5
Jute Close
Red Barn Ave
Hawthorn Close
Linden Lea
Redwood Dr
Hatherley Dr
Nelson Ave
Central Rd
Brenchley Close


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


M27
RM1
Red Barn Ln
Holly Grove
Winnington
Thorn Ave
Henry Cort Dr
Wynton Way
Park Farm Ave
Fareham Park Rd
Iron Mill Close
Kennedy Ave
Segensworth Rd
Nashe Way
Nashe Close
Inverness Ave
Gifford Close
Frosthole Crescent
Argyle Crescent
Bentley Crescent
Stow Crescent
Oak Rd
Greyfriars Rd
Abbey Rd
Priory Rd
Newlands
Bradly Rd
Meadowbank Rd
Margarita Rd
Beech Rd
Nicholas Crescent
Gudge Heath Ln
Mill Ln
Catisfield Ln
Highlands Rd
Cherrygarth Rd
Appleton Rd
Heathfield Ave
Catisfield Rd
Southmead Rd
Park Ave
AV/BF
T2
Mill St
East St
B3334
A27
Hunters Lodge
High St
T1
Peak Ln
Cleveland Dr
Oldbury Way
Wild Ridings
Cee Ave
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7N
Morshead Crescent
Mallory Crescent
Bruce Close
Norton Dr
© 2013 Google
© 2013 Infoterra Ltd & Bluesky

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
2N	2 Osborne Road South	R	457651, 106244	NO_2	N	N	Y - 0m	3m	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	Y - 0m	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, 104907	NO_2	N	N	Y - 0m	13m	Y
G6	171 Gosport Road	R	457599,	NO_2	Y – Gosport	N	Y - 0m	6m	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?
			105410		Road				
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	Y - 0m	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	Y - 0m	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	Y - 0m	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	Y - 24m	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	Y - 20m	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
S1	Albert Road / Newgate Lane	R	457069, 102952	NO_2	N	N	Y - 12m	2m	Y
S2	Stubbington Lane (Erice Road)	R	455398, 102811	NO_2	N	N	Y - 14m	2m	Y
T1	South St Dental Health, Titchfield	R	453996, 105758	NO_2	N	N	Y - 0m	1.5m	Y
T2	19 Mill Street, Titchfield	R	454158, 106060	NO_2	N	N	Y - 2.2 m	1.6 m	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	Y - 40 m	0.5m	Y
RM1	Runnymede	R	455745, 107825	NO_2	N	N	Y - 6m	49m	N
PS4	Portland Street Continuous Monitor	R	457954, 106027	NO_2	Y	Y	Y – 18m	1.8m	Y
PS5									
PS6									
GR/RL	Corner of Gosport Road & Redlands lane	R	457564, 105300	NO_2	Y	N			Y
11NL	11 Newgate Lane	R	457114, 102689	NO_2	N	N	Y – 0m	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.

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

The purpose of reviewing the monitoring data is to identify any possible exceedences 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 $\mu g/m^3$; and
- The number of exceedences of the 1 hour mean of 200 $\mu g/m^3$ (18 allowable exceedences in total).

It should be noted that it is only possible to directly assess against the 1 hour objective if hourly monitoring data are 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 $\mu g/m^3$, exceedences 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.

Good data capture was achieved at Elms Road in 2012 (91.3%). The annual mean NO_2 concentration for 2012 was 35.5 µg/m^3, which is similar to the annual mean concentrations recorded in 2008, 2009 and 2011 (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 (94.6%) but as the site was only running from April 2012 the data had to be annualised (details found in appendix A). The annualised annual mean concentration is below the objective at 34.9 µg/m^3. Figure 2.3 provides an indication of the trend in annual mean NO_2 concentration since monitoring began in 2008.

There have been no monitored exceedences 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 2 exceedences of the standard during April to December 2012. 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 exceedences of the hourly NO_2 objective since monitoring began at Elms Road or Portland Street (Table 2.4).

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 2012 % [b]	Annual Mean Concentration (µg/m^3)				
					2008* [c]	2009* [c]	2010* [c]	2011* [c]	2012 [c]
Elms Road, Fareham	R	Y	91.3%	91.3%	33.7	35.9	41.8	33.2	35.5
Portland Street	R	Y	94.6%	71.0%	N/A	N/A	N/A	N/A	34.9 (Annualised *0.82)

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

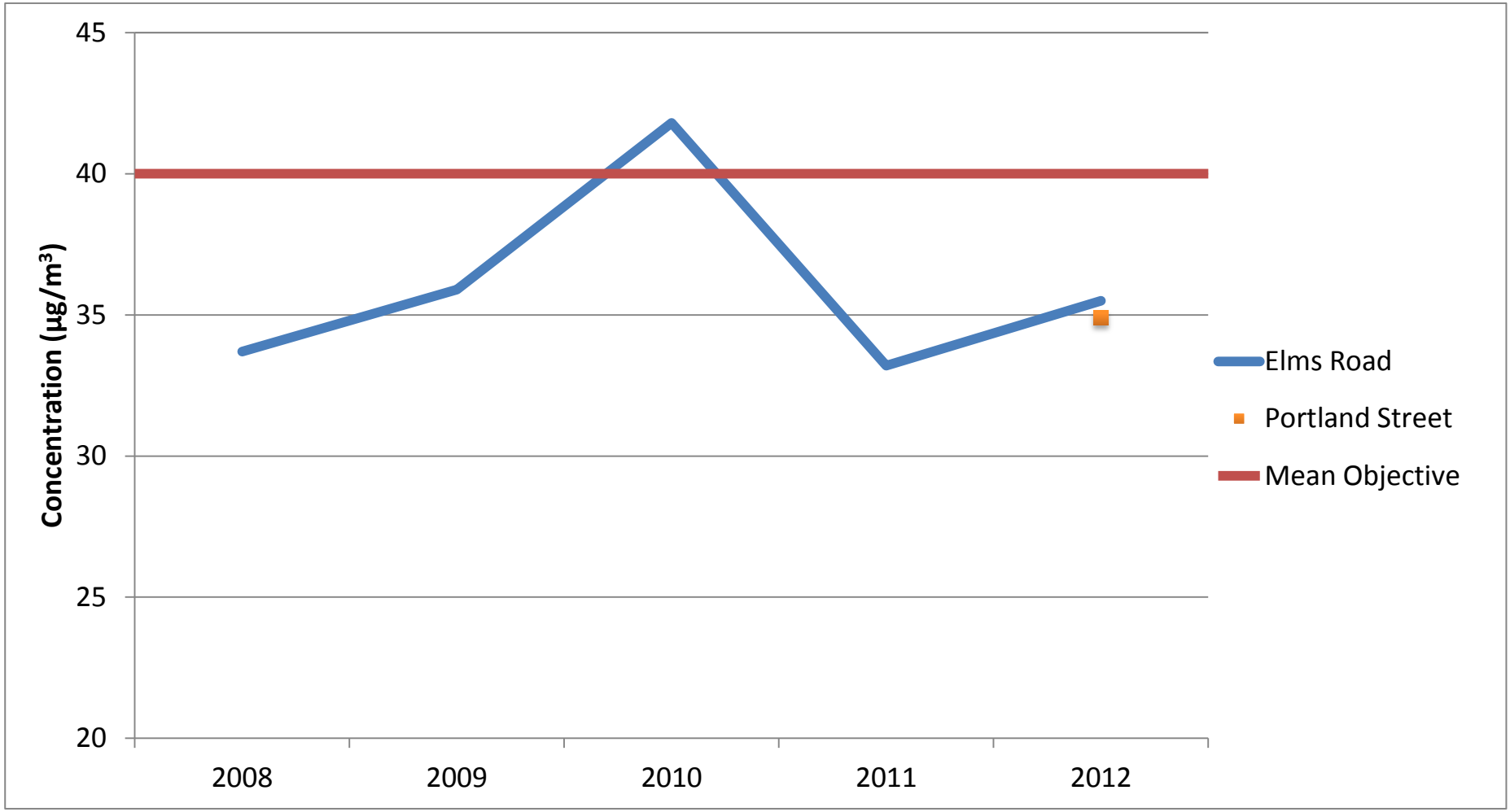


Table 2.4 Results of Automatic Monitoring for NO_2: Comparison with 1-hour Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for Monitoring Period % [a]	Valid Data Capture 2012 % [b]	Number of Hourly Means > 200µg/m^3				
					2008* [c]	2009* [c]	2010* [c]	2011* [c]	2012 [c]
Elms Road, Fareham	R	Y	91.3%	91.3%	0	0	0	0	0
Portland Street	R	Y	94.6%	71.0%	N/A	N/A	N/A	N/A	2

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. Diffusion tube sites that did not meet the 75% (9 months) data capture criterion in 2012 sites have been annualised to estimate the annual mean for 2012. The details of annualisation are given in Appendix A. Results at these sites are subject to greater uncertainty. The 2012 results for all sites including data capture percentages are given in Table 2.5. The full dataset (raw monthly values) are included in Appendix B.

The results in Table 2.5 show that there were only two marginal exceedances of the annual mean NO_2 objective in 2012 at G7 (193 Gosport Road) and PS3 (38 Portland Street). Site G7 and PS3 both are within the AQMA and have a history of exceedences of the annual mean objective.

Table 2.6 below shows annual results for existing tubes since 2008 and Figure 2.4 below shows annual results since 2007 for all the long term sites. They show a downward trend in NO_2 concentrations over the years, with 2011 showing no exceedences 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 2012

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2012 [a]	2012 Annual Mean Concentration ($\mu g/m^3$) – Local Bias Adjustment factor = 0.98 [b]
10N	Farrier Way	B	N	N	N	N	83.3%	24.20
10NA	3 Farrier Way	R	N	N	N	N	91.7%	21.36
2N	2 Osborne Road South	R	N	N	Y	N	41.7%	33.28
3N	14 Osborne Road	R	N	N	N	N	91.7%	24.68
5N	Grove Road	R	N	N	N	N	83.3%	26.76
7N	Norton Road	B	N	N	N	N	91.7%	18.45
Av/Bf	Avenue / Bishopfields Road	R	N	N	N	N	91.7%	26.49
BL1	11 Bath Lane	NR	N	N	N	N	91.7%	35.88
G10	107 Gosport Road	R	N	N	N	N	91.7%	37.48
G11	2 Earls Road	R	N	N	N	N	91.7%	29.23
G1A	30 Old Gosport Road	R	N	N	N	N	91.7%	32.14
G2A	138 Gosport Road	NR	Y – Gosport Road	N	N	N	91.7%	29.90
G3	202 Gosport Road	R	N	N	N	N	83.3%	30.20
G4	122 Gosport Road	R	Y – Gosport Road	N	N	N	83.3%	28.81
G5A	275 Gosport Road	R	N	N	N	N	91.7%	26.17

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2012 [a]	2012 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 0.98 [b]
G6	171 Gosport Road	R	Y – Gosport Road	N	N	N	83.3%	34.18
G7	193 Gosport Road	R	Y – Gosport Road	N	N	N	91.7%	**40.57**
G8Z	156 Gosport Road	R	N	N	N	N	91.7%	32.24
G9	11 Eden Rise	R	N	N	N	N	91.7%	26.28
HR1	Lamppost, 8 Hartlands Road	K	N	N	N	Y	75.0%	38.50
HR2	17 Hartlands Road	R	N	N	N	N	91.7%	32.06
HR3A	7 Hartlands Road	R	N	N	N	N	91.7%	27.28
HR4	25 Hartlands Road	R	N	N	N	N	91.7%	28.52
LH1	41 Bridge Road	R	N	N	N	N	91.7%	27.10
LH3	36 Botley Road	R	N	N	N	N	91.7%	30.11
P1B (was P1A)	3 The Ridgeway	R	N	N	N	N	91.7%	23.07
P2	141 The Crossways	R	N	N	N	N	91.7%	21.72
P4	22 Cams Hill	R	N	N	N	N	91.7%	29.14

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2012 [a]	2012 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 0.98 [b]
P5	Silvermist, Portchester	R	N	N	N	N	91.7%	29.26
P6	169 West Street	R	N	N	N	N	91.7%	25.70
P7A (was P7)	77 West Street, Portchester	R	N	N	N	N	91.7%	20.11
PS1	1 Sentinel Cottages	R	Y - Portland Street	N	N	N	91.7%	35.58
PS1A					N	N	91.7%	34.49
PS1B					N	N	91.7%	35.08
PS2	2 Sentinel Cottages	R	Y - Portland Street	N	N	N	91.7%	35.84
PS3	38 Portland Street	R	Y - Portland Street	N	N	N	91.7%	**40.43**
S2	Stubbington Lane (Erice Road)	R	N	N	N	N	91.7%	23.24
T1	South St Dental Health, Titchfield	R	N	N	N	N	91.7%	23.97
E1	Co-located with Elms Road Monitor	R	Y – Gosport Road	Y	N	N	83.3%	37.07
E2					N	N	75.0%	35.37
E3					N	N	83.3%	37.65
G12	Two Saints, 101 Gosport Road	R	Y – Gosport Road	N	N	N	91.7%	37.00
G14	Bottom of Beaconsfield Road	NR	N	N	N	N	91.7%	33.29

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Annualised Y/N	Distance Corrected	Full Calendar Year Data Capture 2012 [a]	2012 Annual Mean Concentration (µg/m^3) – Local Bias Adjustment factor = 0.98 [b]
DC1	Maytree Drive (lamppost) opposite Delme Court	R	N	N	N	N	91.7%	28.25
RM1	Runnymede	R	N	N	N	N	91.7%	28.97
PS4	Portland Street Continuous Monitor	R	Y	Y	Y	N	58.3%	32.40
PS5					Y	N	58.3%	32.70
PS6					Y	N	58.3%	32.70
GR/RL	Corner of Gosport Road & Redlands lane	R	Y	N	Y	N	33.3%	26.55
11NL	11 Newgate Lane	R	N	N	Y	N	91.7%	22.94

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 (2008 to 2012)

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2008 (Bias Adjustment Factor = 1.05)	2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)
10N	Farrier Way	N	25.8	22.2	24.3	21.2	24.20
10NA	3 Farrier Way	N	25.9	21.5	24.5	18.7	21.36
2N	2 Osborne Road South	N	32.2	26.6	38.9	29.9	33.28
3N	14 Osborne Road	N	28.6	23.5	26.6	21.1	24.68
5N	Grove Road	N	32	25	27.6	22.8	26.76
7N	Norton Road	N	21.6	17.7	20.8	16.5	18.45
Av/Bf	Avenue / Bishopfields Road	N	21.8	21.8	29.9	21.8	26.49
BL1	11 Bath Lane	N	N/A	N/A	N/A	30.7	35.88
G10	107 Gosport Road	N	**47.6**	35.5	**40.8**	32.0	37.48
G11	2 Earls Road	N	34	25.9	28.7	24.3	29.23
G1A	30 Old Gosport Road	N	39.2	30.7	34.7	28.5	32.14
G2A	138 Gosport Road	Y – Gosport Road	**49.4**	**40.6**	**41.5**	27.3	29.90
G3	202 Gosport Road	N	33.9	26.4	30.7	25.4	30.20
G4	122 Gosport Road	Y – Gosport Road	34.8	26.4	30.5	24.8	28.81
G5A	275 Gosport Road	N	31.7 [e]	25.4 [e]	33.5 [e]	23.5	26.17
G6	171 Gosport Road	Y – Gosport Road	36.3	28.3	32.9	29.1	34.18
G7	193 Gosport Road	Y – Gosport Road	39.8	33.2	39.6	33.6	**40.57**
G8Z	156 Gosport Road	N	37	25.7	31.0	26.9	32.24
G9	11 Eden Rise	N	33.3	25.1	28.5	24.7	26.28
HR1	Lamppost, 8 Hartlands Road	N	**48.7**	38.2	**41.8**	35.9	38.50

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2008 (Bias Adjustment Factor = 1.05)	2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)
HR2	17 Hartlands Road	N	37.2	28.2	32.5	27.6	32.06
HR3A	7 Hartlands Road	N	32.5	25.2	34.8	23.2	27.28
HR4	25 Hartlands Road	N	38.6	26.4	30.7	26.0	28.52
LH1	41 Bridge Road	N	29.5	23.8	27.3	22.8	27.10
LH3	36 Botley Road	N	39	31.3	31.4	25.9	30.11
P1B (was P1A)	3 The Ridgeway	N	25.6	20.8	24.0	20.2	23.07
P2	141 The Crossways	N	24.3	21.2	23.7	20.3	21.72
P4	22 Cams Hill	N	31.8	26	28.9	25.5	29.14
P5	Silvermist, Portchester	N	31.1	21.2	23.7	24.6	29.26
P6	169 West Street	N	30.2	26	28.9	21.0	25.70
P7A (was P7)	77 West Street, Portchester	N	35.1	27.7	22.5	17.0	20.11
PS1	1 Sentinel Cottages	Y - Portland Street	**46.8**	36.0	**42.0**	34.8	35.05
PS1A							
PS1B							
PS2	2 Sentinel Cottages	Y - Portland Street	**48.3**	38.7	**43.3**	35.8	35.84
PS3	38 Portland Street	Y - Portland Street	**55.9**	**42.0**	**47.9**	35.0	**40.43**
S2	Stubbington Lane (Erice Road)	N	28.9	22.3	27.3	19.8	23.24
T1	South St Dental Health, Titchfield	N	29.8	20.6	28.1	21.8	23.97
E1	Co-located with Elms Road Monitor	Y – Gosport Road	**44.4**	36.5	**41.8**	33.0	36.70
E2							
E3							

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2008 (Bias Adjustment Factor = 1.05)	2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)
G12	Two Saints, 101 Gosport Road	Y – Gosport Road	N/A	N/A	N/A	31.2	37.00
G14	Bottom of Beaconsfield Road	N	N/A	N/A	N/A	29.2	33.29
DC1	Maytree Drive (lamppost) opposite Delme Court	N	N/A	25.3	29.1	24.2	28.25
RM1	Runnymede	N	N/A	N/A	N/A	21.7	28.97
PS4	Portland Street Continuous Monitor	Y	N/A	N/A	N/A	N/A	32.60
PS5							
PS6							
GR/RL	Corner of Gosport Road & Redlands lane	Y	N/A	N/A	N/A	N/A	26.55
11NL	11 Newgate Lane	N	N/A	N/A	N/A	N/A	22.94
E1	Co-located with Elms Road Monitor	Y – Gosport Road	**44.4**	36.5	**41.8**	33.0	36.70
E2							
E3							
G12	Two Saints, 101 Gosport Road	Y – Gosport Road	N/A	N/A	N/A	31.2	37.00
G14	Bottom of Beaconsfield Road	N	N/A	N/A	N/A	29.2	33.29
DC1	Maytree Drive (lamppost) opposite Delme Court	N	N/A	25.3	29.1	24.2	28.25
RM1	Runnymede	N	N/A	N/A	N/A	21.7	28.97
PS4	Portland Street Continuous Monitor	Y	N/A	N/A	N/A	N/A	32.60
PS5							
PS6							

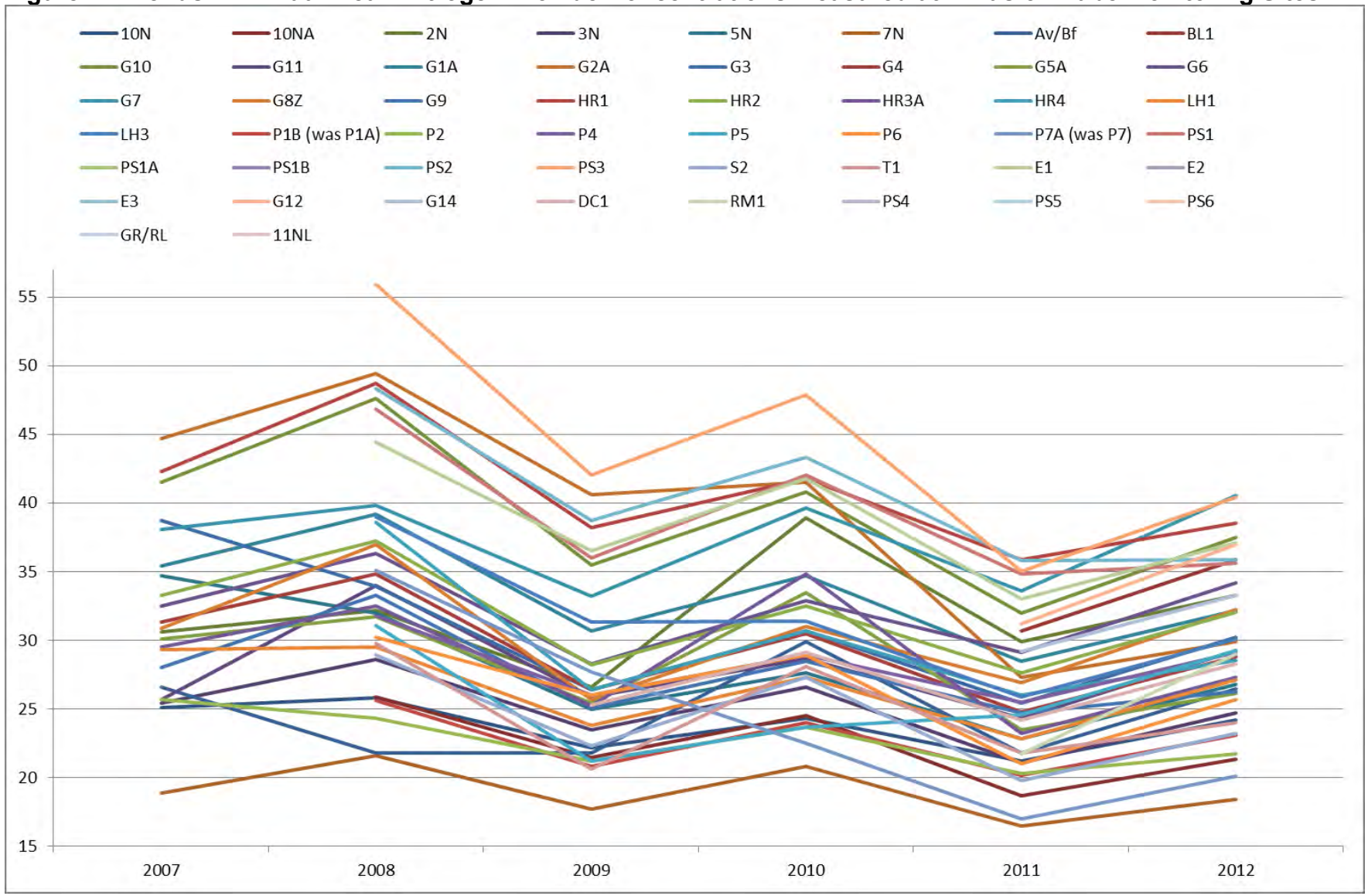
Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m^3) - Adjusted for Bias [a]				
			2008 (Bias Adjustment Factor = 1.05)	2009 (Bias Adjustment Factor = 0.84)	2010 (Bias Adjustment Factor = 1.01)	2011 (Bias Adjustment Factor = 0.85)	2012 (Bias Adjustment Factor = 0.98)
GR/RL	Corner of Gosport Road & Redlands lane	Y	N/A	N/A	N/A	N/A	26.55
11NL	11 Newgate Lane	N	N/A	N/A	N/A	N/A	22.94

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 2.4Trends 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 2012 dataset showed there to be two monitoring sites (sites G7 and PS3) measuring annual means NO_2 concentrations above the objective for 2012. Both these sites are within the existing AQAMs declared by the Council so a further detailed assessment is not required in either case.

Fareham Borough Council has examined the results for monitoring within the Borough and the identified exceedences of the NO_2 air quality objective are within existing AQMA so detailed assessments are not required.

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 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 which are anticipated to have beneficial impacts on local congestion and emissions over the next 2-3 years. These are:-

- The Quay Street roundabout was redeveloped to a "throughabout" 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 a revocation of the latter. The "throughabout " may also be helping to reduce congestion on the A32 too.

- 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 14 Euro V buses using the route; by the end of 2013, the number of Euro V buses is expected to rise to 19. 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 10% since the opening of the busway. The busway has also become very popular with cyclists. A survey on a Friday in September 2012 recorded 790 cyclists between 0700 - 1900 hours including 150 children.

- Two new dedicated bus lanes opened in Fareham in April 2012 as part of Hampshire County Council's Fareham Town Access Plan. 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 on an 18 month trial basis. A report on their impact is due shortly.

- A planning application for the opening of the Yew Tree Drive bus gate at Whiteley to cars may be submitted by Hampshire County Council this year. The provision of the bus gate to increase the use of buses between Fareham and Whiteley was an original AQAP target. Advice has been given to Hampshire County Council in respect of possible air quality and noise impact assessments.

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 any changes to the following since the last Updating and Screening Assessment in 2012:-

- 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:-

- BP Rolls (vehicle refinishers) permit revoked January 2013;
- New concrete crusher permit for Mayfair Developments granted December 2012 and
- New abatement equipment installed at Portchester Crematorium in September 2012 has significantly reduced emission of pollutants.

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3.4 Commercial and Domestic Sources

The expansion of the Warren Farm waste transfer station in 2012 to take bulky and fly tipped waste in addition to compost storage has not resulted in any significant emissions. The opening of the Fareham Tesco store in December 2011 on Quay Street roundabout is associated with the comments above in 3.1 in respect of the "throughabout".

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;
- Change of use of previous green waste composter site at Down End quarry which was closed in December 2012 and
- The residential, commercial and industrial development north of Fareham in 2016 to be known as Welborne.

These will be taken into consideration in the next progress report scheduled for 2014.

Fareham Borough Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

Fareham Borough Council confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

4 Local/Regional Air Quality Strategy

4.1 Air Quality Action Plan - Implementation Group

The AQAP was approved by the Farnham 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 Implementation Group and NHS Hampshire. 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 will take place once the lamp columns have been replaced by the PFI contractor in 2013.

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

- A planning application has been submitted to Fareham Borough Council for a development at the Daedalus airfield which comprises of:
- An employment led scheme to provide up to 21,912sqm of employment floor space in new buildings and re-use of existing buildings in Hangars West (use classes B2 and B8);
- Up to 25,990 m^2 of employment floor space to be provided in new buildings and re-use of existing buildings at Hangars East (use classes B2 and B8);
- Up to 2,300 m^2 of B1 floor space at Hangars East;
- Clubhouse of 1,710 m^2 in the Martsu building (class D2);
- New and upgraded vehicular access and pedestrian access arrangements;
- Hard standing for open storage and parking areas;
- Allotments and open space provision at Hangars West;
- Landscaping and associated works.

The Council considered that a development of this size had the potential to significantly impact on local air quality, especially through increased local/regional road traffic. Therefore the Council requested that an air quality assessment be undertaken to quantify any such impacts. The resulting Environmental Statement indicated that the residual impacts of the development on air quality are predicted to be adverse but of neutral -minor significance in the long term. The increase in traffic levels and congestion are to be minimised through sustainable transport arrangements. A site travel plan is to be implemented for the site. Planning permission has yet to be granted.

5.2 Yew Tree Drive bus gate

Earlier this year, Hampshire County Council undertook public consultation on whether opening Yew Tree Drive in Whiteley to all traffic would be the best approach to managing traffic growth in Whiteley and the surrounding area.

Fareham Borough Council as the planning authority and Hampshire County Council as the highway authority will use the results of the public consultation to help decide whether to go ahead with any changes to Yew Tree Drive in the near future.

Residents in the immediate area were sent a consultation questionnaire; over 2000 responses were received.

For a number of years consideration has been given to the opening of the bus gate at Yew Tree Drive to all traffic. The County Council and Borough Council are now considering a formal six month trial opening to all traffic and to gauge the current views of residents on this.

Hampshire County Council previously sought your opinion on the opening of Yew Tree Drive in April 2010.Since then the County Council has considered the effects of

opening Yew Tree Drive for a three week period in July 2012 to allow for service works. Automatic traffic counters were located on neighbouring roads and they collected traffic flow data before the opening of the bus gate (in May) and during the opening (in July).

The average daily number of vehicles using the Yew Tree Drive link by the end of the trial period was approximately 3300. The impact of the bus gate being opened was shown to have varying impacts on the level of traffic on the surrounding road network.

The main changes to daily 12 hour two way flows between May and July 2012 were:

- Yew Tree Drive Bus Gate had an increase of 3300 vehicles
- Botley Road north had an increase of 1600 vehicles +18%
- Botley Road south: had an increase of 1700 vehicles, +20%
- Swanwick Lane had an increase of 300 vehicles +7%
- Yew Tree Drive east: had an increase of 400 vehicles +5%
- Leafy Lane had no change in traffic flow
- Whiteley Way had a reduction of 2500 vehicles -11%

It is important to note that the opening of the bus gate in July 2012 was not a formal trial and therefore it was not publicised. Also, July is not an ideal month to survey because the roads tend to be quieter and this is reflected in the data collected, which show lower levels of traffic making it harder to detect changes in flows. The survey information therefore gives an indication of what the effects of opening Yew Tree Drive to all traffic could be, but should not be seen as a comprehensive assessment of impacts.

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. No further applications have been made in respect of the site to date.

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 Local Development Framework

The Local Development Framework (LDF) is a suite of documents which must be taken into account when forming local policy. These documents include an adopted Core Strategy, the draft Development Sites & Policies Plan and the draft Welborne Plan. The Local Development framework must reflect the requirements of the Regional Spatial Strategy for the South East, known as the South East Plan, including a South Hampshire Sub-Regional Strategy.

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 approved by the Planning Inspector in July 2011 and 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 ongoing 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 masterplan 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 floorspace 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.

6.3.3 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 9june 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. Further consultation will take place this summer. The Plan will then be submitted and will be considered at an "examination in public" by an independent Inspector in late 2013. Finally, after the Council has taken account of any changes recommended by the Inspector, the Plan is scheduled to be adopted by the Council in February 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.

6.3.4 Draft Welborne 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 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 masterplan setting out the broad type, location, amount and character of the development including housing (6500 houses), 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. Following consultation on the Plan this Spring and again in the Winter 2013, it should be examined by an Inspector in 2014 with planned adoption by the Council in Autumn 2014.

The Transport strategy of the draft Plan seeks to provide local access to facilities, enhance alternative modes of travel and implement a wide ranging package of traffic management measures to prioritise bus services including an extension of Bus Rapid Transit system and the upgrading of junction 10 of the M27 to accommodate "all-moves".

The Welborne Sustainability Appraisal 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 M27 motorway runs along much of the southern boundary of the area known as Welborne which means that traffic-derived air quality issues pose a development constraint to the adjoining land. The concept masterplan 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.

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 masterplan 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 Bus Rapid Transit busway between Fareham and Gosport, completed within budget by April 2012At the other end of the scale, as part of its 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. In recognition of this strong track record of delivery, in November 20112, it won the "Transport County of the Year" award in the National Transport Awards.

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 eh 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. 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 Air Quality Action Plan (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 and promotion, and monitoring, with each action area having the technical lead officer (from either the Borough or County Council) 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 and 2012.

8.2 Air Quality Action Plan Progress Report 2012

In response to the statutory consultation on the 2012 AQAP update report, 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.

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.

Following the completion of this report, Fareham Borough Council should submit a Progress Report (including Action Plan progress) by April 2013.

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:

- We note that the Progress report 2011 included a review of the air quality action plan that review resulted in suggested changes to certain AQAP actions, targets and indicators. These changes have now been implemented and this has resulted in a set of clear and useable targets and indicators.

- The report states that it is hoped that the construction of the new "throughabout" at Quay Street Fareham will assist in reducing nitrogen dioxide levels. Early indications are of a reduction in monitored concentrations and further monitoring will be undertaken over the next couple of years using diffusion tubes and a new continuous monitor to assess the impact. This is welcomed, as it will help the Council to directly assess the impact of this measure, and to provide data to inform and decision on revocation in future.

- Overall, this is a comprehensive and useful progress report showing progress with the implementation of actions and commitment to take the Plan forwards, and the Council should be commended on their efforts. In particular, the inclusion of new and potential new, actions is welcomed.

8.3 Detailed updates of AQAP actions

Table 8.1 provides an update of all the 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.

Further monitoring over the next couple of years using the diffusion tubes and the new continuous monitor, will be of viewed and analysed with great interest, possibly resulting in the revocation of the AQMA.

8.3.2 Eclipse busway (Action 2, 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.

The spring edition of Fareham Today 2012 provided a map of the Eclipse bus route and the summer edition shows how other bus routes in the Borough connect to the busway.

Fourteen Euro V buses have been specially built for the Eclipse route. Five more are expected this summer. They are low emission, easily accessible buses with both audio and on-screen next stop announcements and free onboard 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 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.

First year passenger target for the Eclipse busway has been achieved. Passenger numbers on the E1 & E2 Eclipse busway routes are up 64% and all Fareham & Gosport corridor services are up by 10%.

A cycling survey of the busway in September noted nearly 800 cyclists using the route in a 12 hour period.

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

8.3.3 Bus lanes (Action 2)

Independent of the Eclipse busway scheme, new dedicated bus lanes opened in Fareham in April 2012 as part of the Hampshire County Council's Fareham Town Access Plan. The latter is aimed at improving bus travel by providing better connections from the town centre to other destinations.

It is hoped that the new bus infrastructure and the Eclipse busway scheme 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 will be operational seven days a week 24 hours a day on a trial basis for up to 18 months. The bus lanes are the Portland Street south bound outside lane from the bus station except for 25 metres prior to the Quay Street roundabout and the west bound inside lane of the A27 Western Way and a small section of the A27 The Avenue, west bound inside lane.

A report on the impact of the bus lanes on local traffic and routes is expected this summer.

Fareham Town Access Plan developed by the County Council was adopted in September 2012.

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 in the next 12 - 24 months.

8.3.5 My Journey Commuter Challenge 2013

Following participation in the previous two Big Green Commuter Challenges, the Council registered with Sustrans to compete in the My Journey Commuter Challenge in May 2013. The aim of the Challenge was to reduce the number of journeys undertaken by a single person in a car. There were nearly 2000 participants and over 36,000 journeys covering a distance of 264,052 miles. Every week there were prizes for participants. Fareham Borough Council came third in the large organisation category with 11% of the staff saving 4,163 miles car miles.

8.3.6 Air quality leaflet (Action 43)

The air quality and health leaflet produced by the AQAP implementation group with NHS Hampshire, has been distributed to local GP surgeries, libraries, health centres etc.

Sustainability leaflets on several subjects including transport and travel developed by Hampshire Climate Change officers group and displayed on FBC website.

8.3.7 Strategic Access to Gosport

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 C 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 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);

Feasibility/Detailed design stage:-

- Newgate Lane (northern section) (1a);
- Newgate Lane (southern section) (1b);
- Peel Common roundabout (2);
- Marine Parade East cycle route (17);

Concept stage:-

- Marine Parade West cycle route (17).

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

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 Updating and Screening Assessment 2012

In response to the statutory consultation on the 2012 USA report, DEFRA, in accepting the overall findings of the report, responded with the following comments:-

The Report sets out the Updating and Screening Assessment 2012, which forms part of the Review & Assessment process required under the Environment Act 1995 and subsequent Regulations.

It covers all regulated pollutants and considers monitoring data, road traffic sources, other transport sources, industrial sources, commercial and domestic sources and fugitive or uncontrolled sources.

The report identifies compliance with the annual mean NO_2 objective at all monitoring sites in 2011, including those sites located in the existing AQMAs. The 2011 Progress Report identified a possible exceedence of the annual mean NO_2 objective outside of the existing AQMA at site G10 (Gosport Road). The concentration measured at this location in 2011 was compliant with the objective; hence the Local Authority does not propose to proceed to Detailed Assessment at this stage. This is accepted. The report does state that this location will continue to be monitored and discussed in future LAQM reports – this is supported.

On the basis of the evidence provided by the Local Authority, the conclusions reached are accepted for all sources and pollutants.

The report is well structured and provides most of the information specified in the Guidance. The following specific items are drawn to the Local Authority"s attention to help inform future work. It is strongly recommended that the Local Authority note these items for future reporting purposes:

- The report states that a new continuous monitor was installed in April 2012 at Portland Street. The Local Authority should include results collected at this site in the 2013 Progress Report. If the data capture rate for 2012 is less than 75% (considered likely given that the site was installed in April), the Local Authority should carry out short-term data adjustment to estimate the annual mean concentration (following the procedure outlined in LAQM TG 09).

- Table 2.1 (and Table 2.3a) includes a column which states Y/N for relevant exposure. Where a distance is reported, the column should state „Y" for relevant exposure. Where the site is located at the façade of a property, the distance to exposure should be reported as 0 metres (as in Table 2.2). „N" should only be stated where there is no relevant exposure near to the monitoring site.

- The report includes a list of monitoring sites which have been re-located or discontinued since the last report (2011 Progress Report). The Local Authority is advised to provide reasons for the changes made – for example, if a site is discontinued, reasons for this may include long-term compliance, continued loss of sample (due to vandalism etc) or no relevant exposure near to the site.

8.3.9 Local Sustainable Transport Fund (LSTF) and other funding streams

Better Area Bus Fund will provide funding for bus lanes on the Brockhurst roundabout together with new signalisation and a bus contraflow at the Crossways junction. Target date for implementation is this summer.

LSTF funding will be used to upgrade 16 bus stops off the Eclipse busway along the routes of the E1 & E2 with Eclipse style shelters, CCTV and Real Time Passenger information. Bus Information Departure Screens will also be updated at both Fareham and Gosport bus stations. Personal Travel Planning for households along the Eclipse busway route.

£90k has been allocated to develop Workplace Travel Plans along a corridor linking Fareham, Gosport & Portsmouth including the Daedalus development site.
Successful bid for Walk to School Outreach funding in 2012.

8.3.10 Environmental Sustainability Action Plan (ESAP)

The Fareham Borough Council ESAP continues to be developed and will be submitted to the Executive for approval soon. Current topics of interest include the purchase of six new 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. 6% of staff are registered on the Council's car share database. Currently, 25 members of staff have laptops for homeworking. The Chief Executive's Management Team is currently investigating the provision of new cycling storage, shower and locker facilities possibly using some of the

basement space. There is no further progress with obtaining discount season train tickets for staff due to South West Trains not expanding their scheme at present. However, Stagecoach has been contacted regarding discounted bus tickets.

8.3.11 A32 Lamp column banners

The old lamp columns should be replaced by the PFI contractor this year on the A32 in Fareham and efforts will then be made by the Council and the County Council to display sustainable travel type messages.

Table 8.1 Action Plan Progress

Fareham Borough Council Air Quality Action Plan Table (Appendix 6 of the original AQAP) – August 2013

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

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
REDUCE VEHICLE EMISSIONS					
1.	To improve the emission standards of Council fleet vehicles by the use of cleaner and alternative fuelled vehicles	FBC	2013/14	To replace two refuse vehicles each year with new Euro compliant vehicles	Two new Euro V refuse vehicles to be purchased in 2013/14
UPDATE	The Council has 8 Euro V refuse vehicles, 2 purchased in the 2011/2012. At the June 2012 Executive, approval was given for the purchase of 4 new refuse vehicles. Fuel saver packs purchased using air quality grant money fitted to 2 new vehicles with 15% fuel saving. Six new refuse vehicles scheduled for delivery between Nov 2012 and Dec 2013 will have "Olympus/Elite Fuel Saver pack" specified which will again save up to 15% on fuel consumption. The majority of collection vehicles now have electric hoists which reduces fuel consumption. GPS has been procured for 10 of the total refuse fleet vehicles and an evaluation report on this will go to the appropriate procurement group. Consideration is being given to trialling a refuse vehicle with a heavy (1 tonne) battery that will power the hoist and compactor mechanisms with potential to reduce fuel consumption of up to 40%.GPS being trialled in the Building Services section. The housing maintenance team has 4 Euro IV vans. Street cleansing has 2 Euro IV vehicles. An electric truck was purchased in Spring 2011 - known as a Mega truck it has a payload of 400 kg, recharges from a standard plug in 3 hours and has a range of 60 miles. It is being used around the town centre for grounds maintenance, litter collection etc. FBC registered with the low Carbon Vehicle Procurement programme. All drivers now sit a module on driving efficiently as part of their initial training. A "traffic light" system similar to Greenroad technology used by the local First Bus company is being used to monitor driver behaviour. The purchase of a hybrid van for car park patrols and a vehicle with battery operated hydraulics is still on hold due to costs. Eco drive assistant has been fitted to two vehicles which limits engine RPM; there is budget available to fit similar devices on 2 new vehicles planned for 2013. In respect of undertaking a full review of council fleet to ascertain other potential ways of saving energy, the report produced by the Energy Savings Trust has been received but only covers vehicles of less than 3.5 tonnes and is therefore of limited scope and there are no recommendations not already addressed.				
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**. At present this 33% is made up of 24 III/22 IV/14 V buses. Five more Euro V buses are due for delivery in the summer of 2013. Between the First bus stations at Hillsea Portsmouth and Hoeford Fareham, 10% of the fleet are considered new, modern buses which mean more buses will be cascading down the fleet to replace the Euro O/I/II buses eg a ZIP bus is to be transferred to the Highlands Road Fareham route. By 2016, all buses				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	will be disability access compliant.				
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	New target for original action 2.				
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 reference to these key objectives, citing any changes.
UPDATE	The FBC Environmental Sustainability Action Plan (ESAP) was submitted to the Executive in June 2012. The previous plan was rather vague and detailed and it is felt that this action plan is more practical, concise and achievable. It contains reference to the new FBC fleet and eco-friendly vehicles with emphasis on fuel saving, driver training, driver monitoring devices etc. It also contains a revived sustainable travel plan for staff with input from both the personnel and the communications teams. The ESAP continues to be developed and will be submitted to the Executive for approval soon. Current topics of interest include the purchase of four new 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. 6% of staff are registered on the Council's car share database. Currently, 25 members of staff have laptops for homeworking. The Chief Executive's Management Team is currently investigating the provision of new cycling storage, shower and locker facilities to encourage more people to cycle to/from work, possibly using some of the basement space. There is no further progress with obtaining discount season train tickets for staff due to South West Trains not expanding their scheme at present. However, Stagecoach has been contacted regarding discounted bus tickets. In 2012, FBC officially joined PCC, Havant BC, GBC and Groundwork Solent to develop the Big Green Commuter Challenge 2012. The Challenge had it's own website:- www.thebiggreencommuterchallenge.co.uk. Asda, Bhs and M&S and TICCS in Fareham registered to take part in 2012. Bhs				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	did very well in the medium sized category and came third in the group. 81% of their staff took part in the challenge and they saved nearly 900 car miles. 22 (5%) FBC staff took part and saved over 1200 car miles. GBC won the large size category. In total, the Challenge saved nearly 100,000 car miles in a week with 40 organisations and nearly 4000 people taking part. Sustrans organised the My Journey Commuter Challenge in May 2013 and FBC registered to take part. Fareham came third in the large organisation category with 11% of the staff saving over 4000 car miles in their commute to work. Message on internal FBC intranet regarding Bikes Go Free Week on the Gosport Ferry in July 2013 and Liftshare Week October 2013. Six employees took advantage of the salary sacrifice cycle purchase scheme in 2012/13. There are 28 active participants of the FBC car share scheme, 6% of the total workforce. One employee claimed 18 cycling miles. 7 employees purchased season ticket travel loans. The Council set up a pilot group to test the new home working policy in 2011/12. Currently, 25 staff have laptops for home working. Further efforts are being made to establish a discounted season ticket with a local train company and information on all discounts will be advertised this year on the intranet. An air quality and health leaflet developed by the AQAP steering group is on the FBC website and was distributed to local GP surgeries, libraries etc in the Autumn of 2012.				
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.** The summer 2012 edition of Fareham Today contained a bus route map of those routes in Fareham feeding into the Eclipse busway and an article on the new air quality and heath leaflet published by the AQAP steering group. The leaflet was circulated to local health centres, GP surgeries and libraries in Autumn 2012.				

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	All new lamp columns in GBC and FBC should be installed by the end of 2013. Work will then be undertaken to obtain the necessary permissions to display the banners.				
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	**Completed.**				
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:-				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	Completed – Quay Street roundabout (3); Brockhurst roundabout (6); BRT Phase 1 (7) opened 28 April 2012; Stokes Bay cycle route (17); Tichborne Way to Holbrook Leisure centre cycle route (17); Marine Parade East cycle route (17) likely to proceed to construction late 2013 to avoid summer period. Marine Parade West cycle route around Daedalus being reviewed for concept. £200k of matched funding secured from Sustrans - business case being progressed and concept designs being drafted. Advanced design stage – A32 Newgate Lane (northern section) (1a); Newgate Lane (southern section) (1b) and Peel Common roundabout (2); - significant long term programme. Consultation due June 2013. A new three year LTP3 Implementation Plan has been developed by the County Council 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 successful Transport for South Hampshire's Local Sustainable Transport Fund bid for South Hampshire in 2012 (£17.8m supported by £13.3m of local contributions) entitled "A better connected South Hampshire: Supporting Growth, Reducing Carbon, Improving Health" will provide money for public transport local infrastructure improvements around Fareham Railway station including real time information, Daedalus Enterprise Zone and accessibility improvements in Gosport. £5m of Regional Growth Funding has also been secured to attract businesses to the planned Solent Enterprise Zone at Daedalus and £8m of Growing Places funding has also been secured for on and off site improvements. The off-site infrastructure improvements will include £8.5m of investment to improve the whole length of Newgate Lane, the most direct access from the Zone to the M27 junction11.This route currently experiences high levels of traffic congestion in both AM and PM peaks. The scheme will also comprise works at Peel Common roundabout, improved traffic flows; increase the capacity of the corridor and separate vehicles from pedestrians and cyclists.				
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	HCC FBC Developer	2012	Completed	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	area				
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. The local First bus company purchased 14 Euro V buses for the new Eclipse busway that came into operation in April 2012. These are low emission, low floor buses with comfortable seating, real time information systems and free on-board WiFi. There is a website www.eclipse.bus.co.uk. First have introduced a weekly Fareham/Gosport ticket - FirstWeek Eclipse £19, at a lower price that the previous option for a weekly ticket which was Hampshire wide, the FirstWeek Hampshire at £22 per week. As yet, there is still no Eclipse day ticket available as a separate brand. Passengers can choose from a local single or return or a FirstDay Hampshire ticket for £5.60. 77% increase in bus passengers on the launch of the busway and this has led to a sustained increase of 13 - 20%. Bus route map published in Fareham Today summer edition 2012. The Eclipse busway is very popular with cyclists. A survey undertaken on a Friday in September 2012 recorded 790 cyclists between 0700 - 1900 hours including 151 children. The Eclipse busway delivers a Voluntary Partnership Agreement with quality thresholds for vehicles, which commenced when the busway became operational on 22 April 2012. These buses also serve other parts of the Borough. The majority of bus services will move away from the A32 to use the Eclipse busway with a consequent reduction in emissions along the A32.				
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	Two new bus lanes were introduced on the day the busway opened - 22 April 2012 - on the southbound off-side lane of Portland Street from its roundabout junction with Hartland's Road southwards to a point 25 metres north of its entry onto Quay Street roundabout and on the westbound inside lane of the A27 Western Way from the entry onto the A27 Railway Station roundabout eastwards a distance of 470 metres. The bus lanes will				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	improve bus journey time reliability for the new BRT services as well as the existing local bus services that use these sections of roads. The bus lanes are experimental for up to an 18 month period. The recent report on the impact of the bus lanes indicates that the bus lanes will be kept in place and further bus priority measures are planned to increase patronage further in and around Fareham. There are three proposals to encourage the use of public transport, and help the services maintain journey time reliability, which will also return an amount of road space to those drivers who continue to insist on single occupancy vehicles during peak hours. The first is the alterations to the existing bus lanes, with the end of the bus lane approaching Station Roundabout being drawn back to allow two lanes back onto Station Roundabout, and the removal of The Avenue section of bus lane. This will be effective as at 2nd September 2013. The second is for a "bus Gate" – A bus only exit, controlled by traffic signals, from Western Road, West bound, onto Western Way. This will effectively remove all westbound bus services from 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. This is anticipated for delivery during the first half of 2014 The third is for an off-carriageway bus lane, which will use the verge space between the railway and road, and will return the two lanes westbound to normal traffic. This is anticipated for delivery during the second half of 2014. The bus/rail interchange facility is still under consideration but there is no indicative date for interchange work due to lack of funding. Station roundabout design and alternate proposals for the bus lanes are being investigated by HCC. These will be presented to FBC members as the solutions are taken past concept into feasibility design. HCC are to work with South West Trains and FBC to discuss a travel plan for Fareham station. Halcrow have been employed to produce the document. The draft travel plan was circulated to FBC members for a short consultation period in April 2013.				
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	**Completed.** 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				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	pedestrian and cycle links to Fareham. The Better Area Bus Fund (nearly £1.6m of government funding awarded to TfSH in 2012) will provide funding for bus lanes on the Brockhurst roundabout together with new signalisation and a bus contraflow at the Crossways junction. Target date for implementation is summer 2013. The Eclipse busway is very popular with cyclists. A survey undertaken on a Friday in September 2012 recorded 790 cyclists between 0700 - 1900 hours including 151 children.				
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.** This particular target was met with the opening of the Eclipse busway on Sunday 22 April 2012. Suggested new target 17a: - Summer 2013 - LSTF funding will be used to upgrade 16 stops off the Eclipse busway along the routes of the E1 & E2 buses with Eclipse style shelters, CCTV and Real Time Passenger information (RTPI - bus, train and ferry). Bus Information Departure Screens will be updated at both Fareham and Gosport bus station. The Avenue bus stop on Redlands Lane will also be fitted with an Eclipse style shelter for the benefit of students attending Fareham College for whom this is a new bus link. Previously students had to travel via Fareham bus station and then walk a mile to the College.				
New 17a	To monitor the progress of providing real time information (RTI) at bus stops in Fareham and Gosport	HCC	2013/14	To upgrade 11 bus stops off the Eclipse busway along the routes of the E1 & E2 buses with Eclipse style shelters, CCTV and RTPI (bus, train and ferry)	Reporting of progress at AQAP meetings in line with meeting the target.
UPDATE	New target agreed at the 16 April 2013 AQAP meeting.				
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	See action 15				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
19.	To work with local bus operators to provide improved services for people working in Whiteley via the now complete Yew Tree Drive bus link	HCC	2009/10	Complete. Further work is not expected to increase public transport over existing.	
UPDATE	**Completed.** HCC do not envisage any increase in public transport in and around Whiteley. HCC's bus subsidy was cut by 30% from October 2011 so there will no possible financial input from HCC. HCC proposed a new action 19A below. 2013 - HCC are investigating the opening up of the Yew Tree Drive bus link to cars including an assessment of the likely impact on air quality for nearby residents.				
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	First year passenger target for the Eclipse busway achieved. Figures released by First bus group in March 2013 are that passenger numbers on the new E1 & E2 Eclipse busway routes are up 64% compared to the old 82 and 86 buses that used the A32. All Fareham & Gosport corridor services up 11.86%. First state that ticket sales are still rising. The number of buses on the A32 has been reduced with the opening of the Eclipse busway and those that are on the A32 are significantly slower that the Eclipse buses. The first anniversary of the route was celebrated with buses in both Fareham and Gosport town centre. Other achievements related to the Eclipse route include HCC being named Transport County of the Year; Norman baker MP riding on the busway; to celebrate World book Day (7 March 2013) the prize for the winning Eclipse was a Kindle, which can be used eg buying books with the WiFi service, on the buses; a cycling survey on a dry Sunday in September 2012 noted 790 cyclists on the busway between 0700 - 1900, with children comprising 19% of the riders. Other achievements related to the Eclipse route include First Bus being short listed for the Transport Team Partnership category of the National Transport Awards this October. First have organised and funded a Fareham & Gosport bus panel, chaired by a non-First person. The inaugural meeting has taken place with a good turnout. Their Customer Charter allows for fare refunds where the Eclipse buses are more than 5 minutes late and other buses in Fareham that are more than 20 minutes late.				
20.	To continue to subsidise bus travel beyond the statutory minimum to further encourage	FBC	2009/10	Completed.	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	bus usage				
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	Following a meeting between Cllr T Cartwright, Chair of the AQAP group and Richard Jolley, Director of Planning and Environment, in April 2013 regarding the FBC cycling strategy, FBC will work with HCC on a scoping report for the Council. The Eclipse busway is very popular with cyclists. A survey undertaken on a Friday in September 2012 recorded 790 cyclists between 0700 - 1900 hours including 151 children.				
22.	To continue to promote public transport and alternative travel arrangements such as the Gosport Ferry and local bus services on the FBC website	FBC	2008/9	Completed.	
UPDATE	**Completed and still active.** Information regarding the My Journey Commuter Challenge 2013 circulated to FBC staff. Sustrans ran the new My Journey Commuter Challenge in May 2013 and FBC registered to take part. Fareham came third in the large organisation category with 11% of the staff saving over 4000 car miles in their commute to work. FBC and HCC both have a car share scheme.				
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 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	Consultants PB have been appointed to prepare and deliver workplace travel plans across 8-10 business area in South Hampshire. These will be a combination of large single businesses eg Exxon/Mobil Fawley Oil Refinery, area wide travel plan networks (Adanac Business park) and whole town centres. £90k has been provisionally allocated to the development of Workplace Travel Plans along a corridor linking Fareham, Gosport and Portsmouth. Potential sites include the Daedalus development and Gosport Hospital.				
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
UPDATE	HCC were successful in securing funding in 2012 for Walk to School Outreach, through the LSTF in partnership with 10 other authorities nationwide and will have a share of a £4.8m. The Bid was submitted by 11 local authorities including ourselves, in partnership with Living Streets and the project is focused on addressing congestion associated with the school run where it has a significant negative impact on congestion, journey times and economic growth. Delivery will be led by Living Streets and 2 Walk to School Coordinators will be appointed for the County, who will identify and tackle local barriers to walking with direct support for schools and implement physical improvements. Neither local school has rated highly enough to be on the list as both schools have high levels of walking and low levels of car use (Neville Lovett - 15.4% car use; Redlands - 18% car use). HCC will be launching the STARS (online travel plan software) shortly with guidance for schools. There are currently no targets in the TfSH school programme.				
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.				
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

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
UPDATE	All due inspections were undertaken for the year 2012/13. DEFRA annual return 2013 submitted on time as per usual. New permit for a concrete crusher based in the Borough and new permit based on updated guidance to be drafted for Polycast, the foundry in Warsash.				
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	**Completed.** New options to be review annually. There was a potential option for adding an action for pool bikes for staff, however there was little support for further investigation from CXMT given that staff already have option of an interest free loan for bikes, but also because we are focussing more of our efforts on revising the current storage provision in the basement, which could involve installation of new showers and lockers alongside new cycle racks all within the basement of the building. **POSSIBLE NEW ACTIONS:-Electric vehicle charging point as part of the HCC Town Access plan; Alternative fuel campaign with reference to ESS; Eco driver training for all essential car users; Low emission pool cars for staff and residents;**				
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	Hampshire Climate Change Officers Group has been working on joint wording for all Local Authorities to use for their web sites regarding sustainable matters. This involves producing leaflets that Council's can then use for all purposes. One of the leaflets will be on "transport & travel". The leaflets discussed at the April 2013 AQAP meeting. 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.				
29.	To ensure that the new LDF incorporates planning policy that will not adversely impact on air quality but furthermore enhances air quality where	FBC	2013/14	Member of the pollution team to continue to attend the LDF officers' meetings	Examples of LDF provisions related to air quality

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	possible.				
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.
UPDATE	Work is ongoing. Current examples include the planning application for the Daedalus & Coldeast developments; opening of the Yew Tree Drive bus link. Information provided to planning on the need for possible air quality assessments in the development of the Development Sites & Policies Plan which went out to consultation late 2012.				
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	A new five year parking strategy was approved by the Executive in late 2012. It is based on economic improvement for the town centre. Positive publicity received from the local media and retailers. Fareham needs to attract visitors in the face from competition at the new development at Whiteley and improved facilities in Eastleigh. There is now no distinction between the car parks in the Borough, that is, there are no short or long term car parks; the car parks are now known as inner or outer car parks and the only time limit is a 24 hour parking limit; the tariff ranges from 70p/hour to £3.50 for the day; the £25 charge for over 4 hours has been removed from the tariffs; there are season ticket offers and changes to the disabled parking policy. All car parks have now been provided with chip and pin payment systems.				
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	The new air quality monitor for nitrogen dioxide installed at Portland Street April 2012 with funding from a section 106 agreement working well. Cost saving three year air quality monitoring partnership contract signed for three sites, two in Fareham and one in Gosport in March 2012. Air quality report to Executive on 11 June 2012. Updating and screening assessment 2012 (USA 2012) report (consultant assisted) approved by Defra. Annual means for all diffusion tubes and the continuous monitor below the AQ objective of 40 ug/m^3 and to monitor for another year at least before looking at revoking any AQMAs. AQAP progress report 2012 (compiled in-house) approved by Defra. Both reports added to FBC website. Consultation on USA 2012 and the updated AQAP table undertaken as required by statute but no responses received. Progress report 2013 being				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	compiled in-house by the Environmental Health Partnership. Draft results show that the nitrogen dioxide annual mean was not exceeded in 2012 at either monitor; however two façade located diffusion tubes, one in the Gosport Road AQMA and one in the Portland Street AQMA, just exceeded the 40ug/m^3 annual mean objective. The AQMAs will not be revoked this year. Air quality report to the FBC Public Protection Policy Development & Review Panel in September 2013.				
33.	To enhance the nitrogen dioxide monitoring network by providing continuous nitrogen dioxide monitors in the AQMAs	FBC	2011/12	Completed	
UPDATE	**Completed.** Majority of our 40+ diffusion tubes on now on the facades of residential properties where exposure is relevant. New tube located in North Fareham in 2011 close to the M27 has not shown any exceedences of the annual mean objective for nitrogen dioxide. 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 2013. Meeting of the regional air quality group in December 2012 at FBC. Sustrans organised the My Journey Commuter Challenge in May 2013 and FBC registered to take part. Fareham came third in the large organisation category with 11% of the staff saving over 4000 car miles in their commute to work.				
35.	To monitor the performance of the AQAP and review actions having regard to the air quality objectives and implement	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

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	additional actions where necessary				changes to the existing measures and the need for further actions.
UPDATE	The AQAP steering group met on16 April 2013 and 3 September 2013. £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. USA 2012 and AQAP progress report 2012 approved by Defra. Current work includes the monitoring of the effect on air quality of the now opened Quay Street throughabout and the Eclipse 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; Progress report 2013. Annual average concentration for nitrogen dioxide at the Gosport Road monitor: 33 ug/m^3 in 2008; 36 ug/m^3 in 2009; 42 ug/m^3 for 2010; 33ug/m^3 in 2011;35 ug/m^3 in 2012. The figure for Portland Street (annualised as only in place for 8 months) was 35ug/m^3. A visit was made to the Gosport Road monitor by Council members and HCC staff.				
36.	To continue to educate and enforce in respect of domestic, agricultural and industrial smoke nuisances and dark/black smoke	FBC	2013/14	To respond to complaints of smoke and odour	(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
UPDATE	**Completed but active.** Around 50 complaints a year are received on this subject.				
37.	To monitor as a Council data in respect of NI 194 and implement actions to achieve target set	FBC	2013/14	Whilst NIs 185 and 194 are no longer to be formally reported, the Council is still to report NI 185.	
UPDATE	The next Environmental Sustainability Action Plan looks to take this forward further. To reduce the Council's target by 20% by 2020 from a 2012 baseline. The baseline data will be produced shortly for March 2012. This target was agreed by the CXMT in 2013.				
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	The DEFRA approved USA 2012 and AQAP progress report 2012 are published on the FBC website.				
39.	To investigate the most effective method of disseminating air quality	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.

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	information to the public and assess the feasibility of employing this method for FBC				
UPDATE	There have been several national air quality alerts during the winter of 2012/13. No current FBC developments. An air quality and health leaflet developed by the AQAP steering group and is now on the FBC website and was physically distributed to local GP surgeries, libraries etc in the Autumn of 2012. **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 transport choices etc	FBC	2013/14	To support where appropriate, a national air quality campaign at least once a year via the FBC website	Evidence of this action
UPDATE	For one week in May 2012, FBC officially joined PCC, Havant BC, GBC and Groundwork Solent to develop the Big Green Commuter Challenge 2012. The Challenge had it's own website:- www.thebiggreencommuterchallenge.co.uk. Asda, Bhs and M&S and TICCS in Fareham registered to take part in 2012. Bhs did very well in the medium sized category and came third in the group. 81% of their staff took part in the challenge and they saved nearly 900 car miles. 22 (5%) FBC staff took part and saved over 1200 car miles. GBC won the large size category. In total, the Challenge saved nearly 100,000 car miles in a week with 40 organisations and nearly 4000 people taking part. Sustrans organised the My Journey Commuter Challenge in May 2013 and FBC registered to take part. Fareham came third in the large organisation category with 11% of the staff saving over 4000 car miles in their commute to work. An air quality and health leaflet developed by the AQAP steering group and is now on the FBC website and was physically distributed to local GP surgeries, libraries etc in the Autumn of 2012. **POSSIBLE NEW ACTIONS:-Air quality day; Bike campaign; Radio campaign; CAT presentation**				
42.	To promote the use of alternative fuels eg LPG,	FBC	2011/12	Now combined with Action 27	

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	hybrid				
UPDATE	**Deleted.** There was a potential option for adding an action for pool bikes for staff, however there was little support for further investigation from CXMT given that staff already have option of an interest free loan for bikes, but also because we are focussing more of our efforts on revising the current storage provision in the basement, which could involve installation of new showers and lockers alongside new cycle racks all within the basement of the building. The Council's Transport Manager, Trevor Beard, purchased an electric Mega truck vehicle for use around the town centre. **POSSIBLE NEW ACTIONS:- Electric vehicle charging point as part of the HCC Town Access plan; Alternative fuel campaign with reference to ESS; 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.** Leaflet distributed to local GP surgeries, libraries etc in October 2012.				
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.** Efforts have been made but at present there does not appear to a need nor resources to take this any further at present.				
45.	To continue to promote energy awareness and efficiency in the Borough	FBC	2011/12	Completed	
UPDATE	**Completed**. Hampshire Climate Change Officers Group has been working in 2013 on joint wording for all Local Authorities to use for their web sites regarding all things sustainable. This involves producing leaflets that Council's can then use for all purposes. These leaflets cover the following topics: 1. Top Money-Saving Tips 2. Energy in the Home (general) 3. Water 4. Gas Heating 5. Recycling				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	6. Climate Change – how will it affect you? 7. Insulating your home 8. Transport & Travel 9. Electric Heating and Other Fuels 10. Transport & Travel The draft leaflets were circulated and discussed at the April 2013 AQAP meeting. Newly designed FBC website launched in 2013.				
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	See comments for Actions 21, 24 and 28 which are linked to this action. The Environmental Sustainability Strategy will include actions related to this. Pilot home working project for FBC. Between July 2011 and March 2015, the DfT is making £560 million available to Local Transport Authorities (LTA) in England to deliver 96 projects from the Local Sustainable Transport Fund (LSTF). HCC has been a partner in four successful bids, which are all now in the project delivery stage. The LSTF supports packages of transport interventions that support local economic growth and reduce carbon emissions in their communities, as well as delivering cleaner environments and improved air quality, enhanced safety and reduced congestion. All 96 successful projects that were awarded LSTF funding are expected to achieve a modal shift from the private car to public transport, walking and cycling. Of the successful bids, one is a joint large LSTF project led by the three LTAs of 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 aims to provide low cost physical improvements along certain corridors such as the one linking Gosport with Portsmouth (through Fareham) including Gosport Road and the Portland Street approach to Fareham Bus Station. These have been identified as being capable of delivering large-scale modal shift to public transport, particularly for existing and new journeys to work. Physical interventions along these corridors could include Real Time Passenger Information (RTPI) through a range of media, smart cards, improved legibility and connection to the walking and cycling network of adjacent areas. These corridors will be used as a „hook" to deliver a series of targeted nudges and improvements to the sustainable journey experience. Coordinated under a single social marketing brand with specific „calls to action" to help to encourage behaviour change the range of initiatives could include: Work place travel planning, school travel planning, Personal Journey Planning, travel awareness, branding and publicity, Greenfleet initiative to tackle freight trips, cycle training, car clubs, use of social media to encourage behaviour change, etc. A key outcome of the successful large LSTF bid is to achieve a -5% modal shift from the private car across the key corridors and a 25% increase in				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	public transport usage. The 'My Journey Commuter Challenge' ran throughout May 2013. Organisations were encouraged to sign up through the 'My Journey' Website. http://www.myjourneyportsmouth.com/challenge Monitoring and Evaluation of the outcomes is being led by the University of Southampton through its Transport Research Group. FBC registered to take part. Fareham came third in the large organisation category with 11% of the staff saving over 4000 car miles in their commute to work. In excess of £1.5m has been allocated to measures along the Fareham-Gosport-Portsmouth corridor aimed at providing better information and way finding for pedestrians and public transport users as well as improving bus and cycle facilities and infrastructure, supported by travel plans at key interchanges including Fareham Station and Gosport Ferry Terminal and Personal Travel Planning for households along the BRT route. The Eclipse busway is very popular with cyclists. A survey undertaken on a Friday in September 2012 recorded 790 cyclists between 0700 - 1900 hours including 151 children. An air quality and health leaflet developed by the AQAP steering group and is now on the FBC website and distributed to local GP surgeries, libraries etc in October 2012. FBC principal transport planner Rosemary Fletcher will be reviewing the Cycle Strategy at some point in the future in light of HCC's Town Centre Access plan. **Specific achievements in 2012/13 include:-** South East Hampshire Bus Rapid Transit (BRT) - In conjunction with the BRT Eclipse Busway, LSTF funding was utilised to refurbish bus passenger infrastructure on the wider Gosport Peninsula as used by the Eclipse bus route. This includes: • The provision of two new bus shelters at Fareham Rail Station interchange and one at Creek Road ,Gosport; including Real time bus, train, ferry and way finding maps • Improvements to Fareham and Gosport Bus Stations; including Real time bus, train, ferry and way finding maps 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 2013/14. Responding to the fact that confidence and on-road safety are key barriers to cycling, adult cycle training has been made available to all residents across Hampshire. A two hour 1:1 lesson has been subsidised and only costs residents £5. The sessions are tailored whether you are a beginner or a regular cyclist and trainers join people on the journeys that they would like to make by bike but currently don't, for example home to work. Working with Sustrans the My Journey team created a Hampshire wide month long challenge to encourage employees to make more sustainable travel choices on their commute to work. The first My Journey Commuter Challenge has been a great success with over 85 businesses from across				

ACTION	DESCRIPTION	LEAD ROLE	TIMESCALE	TARGET	INDICATOR
	Hampshire competing against each other to climb the leader board. During the month long challenge 1,629 participants recorded 36,116 journeys. As well as the fun competition between departments and businesses comparing how many kilos of carbon and calories saved (measured in doughnuts) there have been some great stories on the challenge forum of people setting themselves personal challenges and rediscovering the joys of cycling and walking. 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.				
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 46	
UPDATE	**Deleted**. See comments for Actions 21, 28 and 46. New cycle map on website. FBC principal transport planner Rosemary Fletcher has indicated that she will be reviewing the Cycle Strategy at some point in the future. There was a potential option for adding an action for pool bikes for staff, however there was little support for further investigation from CXMT given that staff already have option of an interest free loan for bikes, but also because we are focussing more of our efforts on revising the current storage provision in the basement, which could involve installation of new showers and lockers alongside new cycle racks all within the basement of the building.				
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.** Environmental Sustainability Action plan taken to FBC Executive in summer 2012.				

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 started to produce reliable data. Both continuous sites showed no exceedences of the annual mean NO_2 objective.

The analysis of the 2012 diffusion tube data showed only 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 (193 Gosport Road) and PS3 (38 Portland Street) only marginally exceeded and may be attributed to the effect of regional meteorological conditions during 2012 as there is an increase in all sites compared with 2011 data (see figure 2.4). The exceedences are in locations already declared as AQMAs, site G7 being within the Gosport Road AQMA and site PS3 within the Portland Street AQMA. At present it is not recommended to revoke the AQMAs until further monitoring is undertaken to determine the long term trend of air quality within these areas.

No Detailed Assessment is required at this point as the sites that exceeded are already within AQMAs.

No PM_{10} monitoring was undertaken in 2011.

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 over the next 2-3 years.

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

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

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

- BP Rolls (vehicle refinishers) permit revoked January 2013
- New concrete crusher permit for Mayfair Developments granted December 2012 and
- New abatement equipment installed at Portchester Crematorium in September 2012 has significantly reduced emission of pollutants.

9.2.4 Commercial and Domestic Sources

- Expansion of the Warren Farm waste transfer station not resulted in any significant emissions.
- The opening of the Fareham Tesco store in December 2011.

9.2.5 New Developments with Fugitive or Uncontrolled Sources

No new previously un-identified sources.

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 exceedences 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;

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

- Prepare and submit, in line with the requirements of LAQM, an Air Quality Progress Report in 2013, 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.

Local Air Quality Management – Progress Report March 2008. Fareham Borough Council

Local Air Quality Management - Air Quality Action Plan 2008. Fareham Borough Council

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

Air Quality Action Plan Progress Report April 2010. Fareham Borough Council

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

Air Quality Action Plan Progress Report April 2011. Fareham Borough Council

Air Quality Updating and Screening Assessment 2012. Fareham Borough Council

Air Quality Action Plan Update – June 2013. Fareham Borough Council

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 2013. http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html

Defra. Nitrogen Dioxide Diffusion Tube Local Bias Adjustment. April 2013. http://laqm.defra.gov.uk/bias-adjustment-factors/local-bias.html

Defra. Background Maps. April 2013. 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 113 – 120. 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 113-120. March 2013.

http://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html

Appendix A: QA:QC Data

Diffusion Tube Bias Adjustment Factors

A national bias adjustment factor of 0.97 was obtained from the national spread sheet of bias adjustment factors version 03/13 using the following inputs:

- Analysed by: Gradko International
- Method: 20% TEA / Water
- Year: 2012

Output shown in figure A.1.

Figure A.1: NO_2 Diffusion Tube Bias Adjustment Calculation, Fareham 2012

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/13

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 spreadsheet 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 June 2013

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.

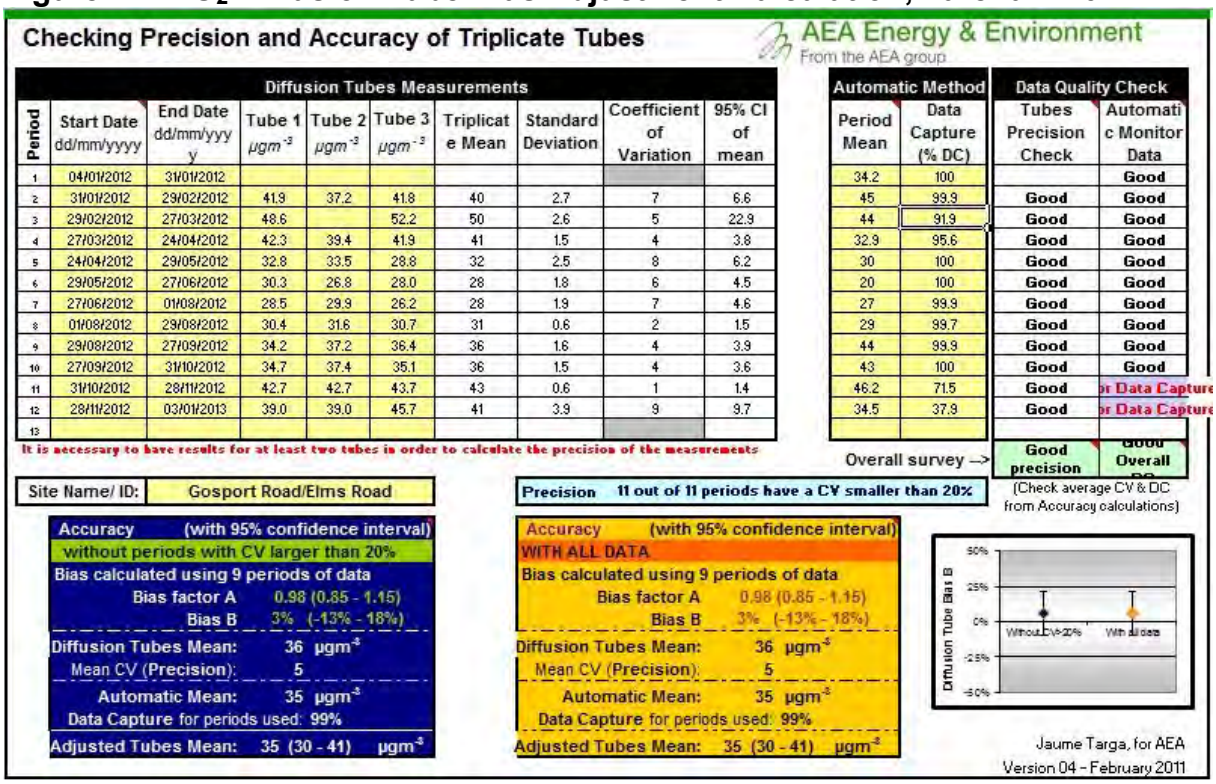
Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1:	Step 2:	Step 3:	Step 4:								
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	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[3]	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 To undo your selection, choose (All) from the pop-up list	Year[2] To undo your selection, choose (All)	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)
Gradko	20% TEA in water	2012	R	NOTTINGHAM CITY COUNCIL	10	44	44	-0.2%	G	**1.00**
Gradko	20% TEA in water	2012	R	NOTTINGHAM CITY COUNCIL	11	43	41	4.9%	G	**0.95**
Gradko	20% TEA in water	2012	R	NOTTINGHAM CITY COUNCIL	10	46	47	-0.3%	G	**1.00**
Gradko	20% TEA in water	2012	R	The Highland Council	9	24	32	-24.1%	G	**1.32**
Gradko	20% TEA in water	2012	R	Wiltshire Council	10	36	35	3.9%	G	**0.96**
Gradko	20% TEA in Water	2012	UB	LB Waltham Forest	11	33	38	-11.8%	S	**1.13**
Gradko	20% TEA in water	2012		**Overall Factor[3] (27 studies)**				Use		**0.97**

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 Elms Road Monitoring Site and the co-location used to calculate a local bias adjustment factor. It was decided not to use the new Portland Street co-location site as the continuous analyser had only been running since April 2012. Details of the local bias adjustment calculation are shown in Figure A.2. The local bias adjustment calculation resulted in a local bias adjustment factor of 0.98.

Figure A.2 NO_2 Diffusion Tube Bias Adjustment Calculation, Fareham 2012.



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	04/01/2012	31/01/2012							
2	31/01/2012	29/02/2012	41.9	37.2	41.8	40	2.7	7	6.6
3	29/02/2012	27/03/2012	48.6		52.2	50	2.6	5	22.9
4	27/03/2012	24/04/2012	42.3	39.4	41.9	41	1.5	4	3.8
5	24/04/2012	29/05/2012	32.8	33.5	28.8	32	2.5	8	6.2
6	29/05/2012	27/06/2012	30.3	26.8	28.0	28	1.8	6	4.5
7	27/06/2012	01/08/2012	28.5	29.9	26.2	28	1.9	7	4.6
8	01/08/2012	29/08/2012	30.4	31.6	30.7	31	0.6	2	1.5
9	29/08/2012	27/09/2012	34.2	37.2	36.4	36	1.6	4	3.9
10	27/09/2012	31/10/2012	34.7	37.4	35.1	36	1.5	4	3.6
11	31/10/2012	28/11/2012	42.7	42.7	43.7	43	0.6	1	1.4
12	28/11/2012	03/01/2013	39.0	39.0	45.7	41	3.9	9	9.7
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
34.2	100		Good
45	99.9	Good	Good
44	91.9	Good	Good
32.9	95.6	Good	Good
30	100	Good	Good
20	100	Good	Good
27	99.9	Good	Good
29	99.7	Good	Good
44	99.9	Good	Good
43	100	Good	Good
46.2	71.5	Good	or Data Capture
34.5	37.9	Good	or Data Capture
Overall survey -->		Good precision	Good Overall

(Check average CV & DC from Accuracy calculations)

Site Name/ ID: Gosport Road/Elms Road

Precision 11 out of 11 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 (0.85 - 1.15)
Bias B 3% (-13% - 18%)
Diffusion Tubes Mean: 36 µgm⁻³
Mean CV (Precision): 5
Automatic Mean: 35 µgm⁻³
Data Capture for periods used: 99%
Adjusted Tubes Mean: 35 (30 - 41) µgm⁻³

Accuracy (with 95% confidence interval)
WITH ALL DATA
Bias calculated using 9 periods of data
Bias factor A 0.98 (0.85 - 1.15)
Bias B 3% (-13% - 18%)
Diffusion Tubes Mean: 36 µgm⁻³
Mean CV (Precision): 5
Automatic Mean: 35 µgm⁻³
Data Capture for periods used: 99%
Adjusted Tubes Mean: 35 (30 - 41) 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:

`

- Local bias adjustment factor is considered to be the most representative of local conditions in Fareham;
- Local and national bias adjustment factors are similar (0.98 and 0.97 respectively), so adjusted concentrations did not differ much when applying the local or national bias adjustment factor and it was believed that the local factor was more representative of Fareham conditions.
- 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%).

Table A.1 Short-Term to Long-Term Monitoring Data Adjustment Portland Street Continuous Monitor

Site	Site Type	Annual Mean ($\mu g/m^3$)	Period Mean ($\mu g/m^3$)	Ratio
Tichborne Way	R	30.15	33.34	0.90
Portsmouth	R	21.12	28.75	0.73
Elms Road	R	35.50	41.07	0.86
Southampton	R	32.55	42.23	0.77
Average				0.82

Table A.2 Short-Term to Long-Term Monitoring Data Adjustment Site 2N

Site	Site Type	Annual Mean ($\mu g/m^3$)	Period Mean ($\mu g/m^3$)	Ratio
Tichborne Way	R	30.15	29.83	1.01
Portsmouth	R	21.12	20.22	1.04
Elms Road	R	35.50	36.83	0.96
Southampton	R	32.55	32.22	1.01
Average				1.01

Table A.3 Short-Term to Long-Term Monitoring Data Adjustment Site PS4, PS5, PS6 (triplicate site)

Site	Site Type	Annual Mean ($\mu g/m^3$)	Period Mean ($\mu g/m^3$)	Ratio
Tichborne Way	R	30.15	24.00	1.26
Portsmouth	R	21.12	24.00	0.88
Elms Road	R	35.50	36.58	0.97
Southampton	R	32.55	37.01	0.88
Average				1.00

Table A.4 Short-Term to Long-Term Monitoring Data Adjustment Site GR/RL

Site	Site Type	Annual Mean ($\mu g/m^3$)	Period Mean ($\mu g/m^3$)	Ratio
Tichborne Way	R	30.15	28.30	1.07
Portsmouth	R	21.12	20.29	1.04
Elms Road	R	35.50	32.78	1.08
Southampton	R	32.55	32.38	1.01
Average				1.05

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 2 shows Gradko International Ltd. summary performance for WASP NO2 PT rounds R112 – R115 which cover the 2011 monitoring period. The performance summary shows that Gradko International Ltd. achieved 100% ratings from January to December 2012.

Table A.4: Laboratory Summary Performance for WASP Rounds R116-119

WASP Round	WASP R116	WASP R117	WASP R118	WASP R119
Round conducted in the period	**Jan-March 2012**	**April-June 2012**	**July – Sept 2012**	**Oct – Dec 2012**
Gradko International	100%	100%	100%	100%

Appendix B: Nitrogen Dioxide diffusion tube results 2012

Site Ref.	NO_2 Concentration ($\mu g/m^3$)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average	Annualised? (Y-value / N)	Corrected Annual Mean 2012 (Bias Factor 0.98)
10N	34.63	28.68	31.72	24.36	15.64	13.54	-	16.95	21.21	-	28.74	31.43	24.69	n	24.20
10NA	29.9	25.17	29.43	20.52	13.38	11.94	-	15.25	18.47	22.43	26.3	26.93	21.79	n	21.36
2N	-	38.05	**49.13**	28.83	25.78	26.33	-	-	-	-	-	-	33.62	Y – 33.96	33.28
3N	31.72	27.12	33.93	23.71	17.35	15.04	-	19	21.62	25.55	31.08	30.93	25.19	n	24.68
5N	18.43 *	30.46	39.45	24.9	18.67	17.79	-	20.99	24.54	29.92	35.14	31.22	27.31	n	26.76
7N	22.04	27.08	24.27	17.75	12.86	11.11	-	12.49	15.47	19.02	20.95	24.1	18.83	n	18.45
AV/BF	37.05	33.9	35.71	27.11	18.82	12.22	-	15.15	23.25	29.84	32.06	32.27	27.03	n	26.49
BL1	**43.21**	38.94	**50.07**	32.19	24.09	27.18	-	31.59	27.88	**40.06**	**43.76**	**43.82**	36.62	n	35.88
G10	**43.06**	38.73	**46.92**	**40.21**	25.75	30.01	-	33.25	34.86	**44.19**	**45.55**	38.21	38.25	n	37.48
G11	37.54	32.16	**40.05**	30.22	22.11	20.1	-	19.27	27.89	29.23	36.81	32.71	29.83	n	29.23
G1A	**42.72**	32.82	**44.55**	32.64	29.88	24.04	-	27.99	14.66	34.05	38.75	38.65	32.80	n	32.14
G2A	**41**	34.48	36.56	30.22	20.79	18.98	-	23.55	28.48	30.93	36.01	34.61	30.51	n	29.90
G3	37.94	35.9	39.24	28.01	22.83	20.8	-	24.36	28.39	33.03	37.64	-	30.81	n	30.20
G4	32.44	29.85	38.35	27.31	20.98	-	-	21.66	27.31	26.9	34.8	34.42	29.40	n	28.81
G5	26.01	33.01	31.51	24.08	22.57	17.44	-	20.07	22.82	27.64	35.67	32.93	26.70	n	26.17
G6	39.13	39.68	**42.21**	31.04	-	25.48	-	29.57	29.32	35.41	39.75	37.18	34.88	n	34.18
G7	**49.56**	34.14	**55.38**	**45.45**	34.05	28.96	-	35.05	**41.54**	**45.4**	**41.65**	**44.15**	**41.39**	n	**40.57**
G8Z	39.79	38.92	**43.02**	29.52	22.93	24.39	-	26.97	33.3	33.4	38.53	31.11	32.90	n	32.24
G9	25.59	27.95	35.84	22.07	22.8	23.52	-	29.63	22.17	27.43	31.42	26.59	26.82	n	26.28
HR1	**51.74**	**41.4**	**48.79**	**43.53**	-	-	-	34.25	36.64	**47.52**	**46.62**	**45.36**	43.98	n	43.10
HR2	33.8	33.27	38.98	37.8	28.6	24.95	-	26.08	26.43	33.88	**40.01**	36.1	32.72	n	32.06
HR3A	32.97	30.72	34.65	25.22	20.11	19.61	-	20.97	23.86	32.35	36.47	29.24	27.83	n	27.28

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 2012 (Bias Factor 0.98)
HR4	9.11	34.22	**42.81**	32.96	24.42	20.84	-	22.38	24.62	33.6	39.19	35.98	29.10	n	28.52
LH1	32.15	31.18	36.1	35.38	17.36	17.75	-	19.35	25.97	28.76	28.17	31.96	27.65	n	27.10
LH3	32.81	30.7	**44.93**	32.88	21.11	24.69	-	26.25	28.24	29.15	33.48	33.71	30.72	n	30.11
P1B	26.37	25.56	30.7	22.19	14.5	17.59	-	20.43	20.68	23.58	28.94	28.44	23.54	n	23.07
P2	30.04	19.87	28.2	21.38	15.1	13.9	-	17.4	18.57	23.59	28.91	26.82	22.16	n	21.72
P4	37.9	28.55	**40.77**	27.07	17.87	29.53	-	23.63	25.25	25.47	35.97	35.04	29.73	n	29.14
P5	38.01	30.34	**42.98**	25.84	21.28	16.82	-	21.42	27	32.74	35.57	36.46	29.86	n	29.26
P6	36.16	30.9	38.6	24.53	15.92	14.43	-	18.65	21.06	26	30.69	31.54	26.23	n	25.70
P7A	26.99	23.58	27.39	18.51	13.07	11.15	-	13.66	19.01	21.51	23.66	27.21	20.52	n	20.11
PS1	**42.55**	38.11	**45.1**	32.15	36	20.32	-	35.03	29.21	39.18	**42.66**	39.07	36.31	n	35.58
PS1A	**41.19**	37.07	**46.37**	34.97	28.98	21.82	-	29.59	29.41	38.61	**40.67**	38.49	35.20	n	34.49
PS1B	**40.3**	31.41	**45.69**	37.76	29.16	28.74	-	31.14	29.96	**41.93**	**41.43**	36.18	35.79	n	35.08
PS2	**40.81**	35.92	**42.89**	35.38	31.12	28.35	-	32.17	35.11	**42.49**	**43.94**	34.09	36.57	n	35.84
PS3	**48.22**	39.52	**52.06**	**42.51**	25.78	33.65	-	37.73	39.52	**42.88**	**47.12**	**44.85**	**41.26**	n	**40.43**
S2	29.58	29.59	36.22	24.08	18.57	10.1	-	16.18	19.74	22.32	28.04	26.4	23.71	n	23.24
T1	29.3	27.83	35.5	24.61	15.07	15.91	-	17.12	19.73	26.35	26.65	31	24.46	n	23.97
E1	-	**41.91**	**48.58**	**42.26**	32.76	30.33	-	30.4	34.22	34.7	**42.79**	**40.32**	37.83	n	37.07
E2	-	37.24	-	39.43	33.45	26.77	-	31.57	37.24	37.4	**42.72**	38.98	36.09	n	35.37
E3	-	**41.79**	**52.19**	**41.93**	28.83	27.97	-	30.65	36.37	35.07	**43.72**	**45.71**	38.42	n	37.65
G12	**45.8**	37.92	**48.58**	36.77	25.77	27.5	-	32.21	33.82	39.12	**45.49**	**42.33**	37.76	n	37.00
G14	36.88	38.35	**45.21**	37.22	31.24	22.85	-	23.71	24.9	36.14	**42.8**	34.37	33.97	n	33.29
DC1	38.52	30.76	34.61	25.06	20.59	18.15	-	21.05	27	31.1	35.01	35.27	28.83	n	28.25
RM1	39.54	39.04	39.58	31.86	24.23	14.35	-	16.28	27.51	28.69	28.93	35.19	29.56	n	28.97
PS4	-	-	-	-	**42.7**	30.76	-	38.16	37.54	**46.75**	**56.41**	**43.76**	**42.30**	Y – 42.30	**41.45**

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 2012 (Bias Factor 0.98)
PS5	-	-	-	-	30.43	35.43	-	34.91	**43.36**	**50.03**	**53.78**	**52.11**	**42.86**	Y – 42.86	**42.01**
PS6	-	-	-	-	37.84	38.57	-	**42.08**	34.17	**48.1**	**54.61**	**45.59**	**42.99**	Y – 42.99	**42.13**
GR/RL	-	-	-	-	-	-	-	-	18.34	27.38	29.75	27.74	25.80	Y – 27.09	26.55
11NL	26.05	27.46	**49.15**	21.7	15.56	13.44	-	16.6	15.87	22.59	24.95	24.15	23.41	n	22.94

* Tube was located on the ground during the survey. These results have been discounted in the analysis

** Tube was located upside down during the survey. These results have been discounted in the analysis

Appendix C - 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 Gosport	Pedestrian and cycle provision. ITS optimisation solutions including VMS and Traffic Management. Including Wych Lane provision of a right turn lane from the A32 onto Wych Lane.	TfSH Towards Delivery/ Gosport Draft Core Strategy Preferred Options.
New Ferry Service – Portsmouth to Southampton	Serving intermediate communities including Gosport.	TfSH Towards Delivery/ LTP2.

Measure	Description of Measure	Reference Document(s)
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.