

FAREHAM

BOROUGH COUNCIL

2011 Air Quality Progress Report for *Fareham Borough Council*

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

October 2011

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Executive Summary

Assessment of the 2010 dataset showed there to be 8 diffusion tube sites with an NO₂ annual mean in excess of the objective. In light of these findings further analysis of the identified exceedances was undertaken.

Of these exceedances, two were shown to meet the NO₂ annual mean objective, once facade adjustment was calculated and four were within the boundary of the existing AQMA's. The remaining exceedance, at Site G10 on Gosport Road, was confirmed as exceeding the annual mean objective at relevant exposure (in line with the Defra guidance LAQM TG(09)). Further consideration of this result, showed that of the ten Gosport Road monitoring sites, only Site G10 was exceeding, by 0.8µg/m³ for 2010. Furthermore, assessment of the Fareham dataset as a whole, suggests a regional increase in ambient concentrations for 2010. The Council therefore proposes to carry out an additional year's monitoring and review the situation through the 2012 Updating and Screening Assessment. At that time a decision will be made on the need to undertake a Detailed Assessment for investigating any exceedance further.

In terms of new local developments, no significant changes were identified since the 2010 Progress Report likely to lead to significant increases in any pollutant prescribed in the Air Quality Strategy. Therefore, a Detailed Assessment is not required.

In light of Defra's comments on the 2010 Air Quality Progress Report, the targets and indicators for the existing Air Quality Action Plan measures have been fully reviewed. This has resulted in significant revisions to the way that many of the actions will be assessed through targets and indicators in subsequent progress reporting years. In some cases actions have been discontinued due to their completion or because the review has shown them to be ineffective. Other significant changes include actions that have been combined to reflect changes in regional and local transport planning plans and policies. For example those now linked through the Strategic Access to Gosport study (StAG) study.

It is considered overall that these changes and revisions successfully answer the Defra consultation comments 21st June 2010.

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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 Borough's 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, being only 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 are road traffic emissions, notably along the M27, the A27 Eastern Way/Western Way and the A32 Gosport Road going 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 Local Air Quality Management the Council has now 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 exceedances of the annual mean Air Quality Strategy (AQS) objective for nitrogen dioxide (NO₂), with traffic congestion being the main identified source of emissions.

1.2 Purpose of Progress Report

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

They are not intended to be as detailed as USA Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedance 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.

Although local authorities with AQMAs can submit separate Progress Reports on Action Plans, they are strongly advised to combine the two reports into one report. The Progress Report will therefore set out details of action planning work being undertaken locally by the Council.

As part of the combined report the following updated information and data are required to be set out:

- New monitoring results,
 - Including the most recent results from both long-term and newly implemented monitoring surveys.
- New local developments,
 - Including any new installations covered by the Environmental Permitting Regulations or any landfill sites, quarries, major projects or road developments.
- New policy developments,
 - Relating to local and regional strategic planning and transport planning policies.
- Action Planning Elements

1.3 Air Quality Objectives

The air quality objectives applicable to Local Air Quality Management (LAQM) **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), and the Air Quality (England) (Amendment) Regulations 2002 (SI 3043). They are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (for carbon monoxide the units used are milligrammes per cubic metre, mg/m^3). Table 1.1. includes the number of permitted exceedances in any given year (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Maximum daily running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particles (PM₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, 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 (PM₁₀). 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 NO₂ AQS annual 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 comparing results with 2004 monitoring data.

The report was completed in June 2005 and concluded that the NO₂ annual mean AQS objective for 2005 would be met at Osborne Road. The modelling predicted no exceedance of the NO₂ AQS objectives in Hartlands Road, although diffusion tube results at that location were showing concentrations above the annual mean AQS objective. Monitoring and dispersion modelling results showed that the NO₂ annual mean objective would 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 NO₂ 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, and NO_x/NO₂ concentrations were monitored between December 2005 and July 2006.

Figure 1 depicts the 2006 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 in 2006, based on updated monitoring data for 2005. The report was completed in June 2006 and showed that several diffusion tubes results were above the NO₂ annual mean AQS Objective of 40µg/m³ 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 this location.

Further study of the area suggested that as local roads were used significantly by buses servicing 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 Portland Street.

Gosport Road Further Assessment 2007

The report concluded that the AQMA was still required in Gosport Road, although there was no need to extend the AQMA 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 concentrations 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 put 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 is made up of cars, versus 15% of LGVs, 4% of HGVs and 2% to 3% of motorcycles. Buses only accounted for 1% to 2% of the total traffic flow.

The report also concluded that a new AQMA was required for NO₂ in Portland Street, following exceedances of the annual mean objective. A new AQMA was therefore declared in December 2007. As the report concluded that the AQS objectives were unlikely to be breached along Hartlands Road, this road was not included in the new AQMA.

Figure 2: Fareham 2007 Portland Street Air Quality Management Area

Figure 1 map reproduced with permission of Fareham Borough Council. Licensed original presented on <http://www.fareham.gov.uk/pdf/healthregs/portlandmap.pdf>

Figure 2 depicts the 2007 AQMA, an area encompassing residential properties and the Sacred Heart Catholic Church on Portland Street.

Based on updated monitoring data, the Progress Report completed in March 2008, confirmed that the NO₂ annual mean 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 NO₂ annual mean AQS objective was still likely to be exceeded in this area. The results also confirmed that the extents of the AQMA were appropriate. Source apportionment showed that local traffic accounted for 55% to 60% of the overall NO₂ 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 70µg/m³ in NO_x concentration (equivalent to a 16µg/m³ reduction in NO₂) was required to meet the NO₂ annual mean AQS 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 NO₂ 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 NO₂ monitoring showed the annual mean AQS objective was still exceeded at a number of sites in the Borough, these exceedances were monitored either at sites within the AQMAs declared in Fareham for NO₂, or at sites not representative of public exposure. An exceedance of the NO₂ annual mean AQS objective was however 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 objective.

Additionally, dispersion modelling indicated that the area of exceedance was limited to the Gosport Road and did not include any facade of properties outside the AQMAs. Monitoring and modelling concentrations did show however that there remained exceedances of the NO₂ annual mean at locations relevant of public exposure within the Portland Street and Gosport Road AQMAs. From these results it was concluded that amendments of the existing AQMAs were not required.

As presented in the 2010 Air Quality Progress Report, updated monitoring results for 2009 suggested exceedances of the NO₂ annual mean objective remained in the two AQMAs. A further site outside the AQMAs also showed an exceedance of the annual mean objective; however was not representative of relevant exposure.

In line with the Defra LAQM guidance the 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.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

The Council operates 43 NO₂ diffusion tube sites and 1 continuous automatic site for monitoring ambient air quality within the Borough.

2.1.1 Automatic Monitoring Sites

The continuous automatic site (Table 2.1) which monitors for NO₂ (chemiluminescence) is located in Elms Road at the junction with the A32 Gosport Road, within the Gosport Road AQMA. The site has been running since 24th June 2008.

In order to provide confidence in the datasets, the continuous monitoring is subject to the same quality assurance/quality control objectives set out in the Netcen site operator's manual. These procedures are:

- Overnight 24 hour IZS calibration checks (NO_x analyser);
- Manual zero/span calibration using certified cylinders (carried out remotely every three days);
- Full data analyses and ratification through Bureau Veritas; and
- Six monthly services visits and site audits.

A map showing the location of the continuous site is presented in the 2010 Progress Report, so given there have been no recent changes, has not been recreated here.

Table 2.1 Details of Automatic Monitoring Site

Site	Site Type	OS Grid Ref	Pollutant	Monitor type	In AQMA ?	Relevant Exposure ?	Distance to kerb of nearest road	Worst-case exposure ?
Elms Road	Road side	457594 105280	NO _x /NO ₂	Chemilumin-escence	Y	N (3.5m away)	1.5 m	Y

2.1.2 Non-Automatic Monitoring Sites

Using diffusion tubes the Council monitors NO₂ at 43 sites within its administrative area, the majority of which are in Fareham. This includes triplicate co-location at the continuous monitoring site in Elms Road. Six sites are located in the Gosport Road AQMA, with three in the Portland Street AQMA (including a set of triplicate tubes). There have been no additional sites set up since the 2010 Air Quality Progress Report. Site details are given in Table 2.2.

A map showing the location of the diffusion tube sites is presented in the 2010 Progress Report, so given there have been no recent changes, has not been recreated here.

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Ref.	Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure ?	Distance to kerb of nearest road	Worst-case Location ?
10N	Farrier Way	B	457792, 104831	NO ₂	N	Y - 8m	0.4m	Y
10N A	3 Farrier Way	R	457775, 104853	NO ₂	N	Y - 0m	9.5m	Y
1N	145 Osborne Road South	R	457650, 106257	NO ₂	N	Y - 1.5m	2.4m	Y
2N	2 Osborne Road South	R	457646, 106258	NO ₂	N	Y - 0m	3m	Y
3N	14 Osborne Road	R	457643, 106328	NO ₂	N	Y - 0m	6m	Y
5N	Grove Road	R	457235, 106327	NO ₂	N	Y - 4.5m	0.5m	Y
7N	Norton Road	B	457400, 107100	NO ₂	N	Y - 6m	0.5m	Y
Av/Bf	Avenue/Bishopfields Road	R	456402, 106127	NO ₂	N	N	2.2m	Y
G10	107 Gosport Road	R	457674, 105617	NO ₂	N	Y - 0m	14m	Y
G11	2 Earls Road	R	457670, 105458	NO ₂	N	Y - 0m	5m	Y
G1A	30 Old Gosport Road	R	457733, 105625	NO ₂	N	Y - 0m	10m	Y
G2/N 11	130 Gosport Road	K	457608, 105165	NO ₂	Y - Gosport	Y - 8.5m	1.75m	Y
G3	202 Gosport Road	R	457727, 104865	NO ₂	N	Y - 0m	9m	Y
G4	122 Gosport Road	R	457596, 105216	NO ₂	Y - Gosport	Y - 0m	6m	Y
G5	275 Gosport Road	R	457680, 104909	NO ₂	N	Y - 0m	13m	Y
G6	171 Gosport Road	R	457598, 105408	NO ₂	Y - Gosport	Y - 0m	6m	Y
G7	193 Gosport Road	R	457582, 105352	NO ₂	Y - Gosport	Y - 0m	6.5m	Y
G8	152 Gosport Road	R	457649, 105066	NO ₂	N	Y - 0m	8m	Y
G9	11 Eden Rise	R	457756, 105733	NO ₂	N	Y - 0m	13m	Y
HR1	1 Hartlands Road	K	457878, 106056	NO ₂	N	Y - 6m	2.5m	Y
HR2	17 Hartlands Road	R	457823, 106106	NO ₂	N	Y - 0m	11m	Y
HR3	9 Hartlands Road	R	457794, 106133	NO ₂	N	Y - 0m	7m	Y
HR4	25 Hartlands Road	R	457858, 106077	NO ₂	N	Y - 0m	6.5m	Y
LH1	41 Bridge Road	R	451586, 108272	NO ₂	N	Y - 5m	2m	Y

Site Ref.	Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure?	Distance to kerb of nearest road	Worst-case Location?
LH2	36 Botley Road	R	451719, 108355	NO ₂	N	Y - 3m	1.5m	Y
LH3	36 Botley Road	R	451718, 108361	NO ₂	N	Y - 0m	5m	Y
P1	Portchester Road/Downend Road	R	459422, 106086	NO ₂	N	Y - 20m	3m	Y
P1B (was P1A)	3 The Ridgeway	R	459445, 106109	NO ₂	N	Y - 0m	20m	Y
P2	141 The Crossways	R	461141, 105805	NO ₂	N	Y - 10m	1m	Y
P4	22 Cams Hill	R	459059, 106161	NO ₂	N	Y - 24m	2m	Y
P5	Silvermist Porchester	R	461070, 105552	NO ₂	N	Y - 20m	1.5m	Y
P6	169 West Street	R	461047, 105593	NO ₂	N	Y - 3.5m	1.5m	Y
P7	77 West St Portchester	R	461438, 105548	NO ₂	N	Y - 5m	1.5m	Y
PS1 PS1A PS1B	1 Sentinel Cottages	R	457939, 106014	NO ₂	Y - Portland Street	Y - 0m	6.5m	Y
PS2	2 Sentinel Cottages	R	457938, 106018	NO ₂	Y - Portland Street	Y - 0m	6.5m	Y
PS3	38 Portland Street	R	457936, 106033	NO ₂	Y - Portland Street	Y - 0m	3.5m	Y
S1	Albert Road/Newgate Lane	R	457057, 102975	NO ₂	N	Y - 12m	2m	Y
S2	Stubbington Lane (Eric Road)	R	455398, 102809	NO ₂	N	Y - 14m	2m	Y
T1	South St Dental Health-Titchfield	R	453998, 105762	NO ₂	N	Y - 0m	1.5m	Y
E1 E2 E3	Co-located with Elms Road Monitor	R	457594, 105280	NO ₂	Y - Gosport	N - 3.5m	1.5m	Y
G12	Two Saints, 101 Gosport Road	R	457684, 105630	NO ₂	Y - Gosport	Y - 1 m	1.1m	Y
T2	19 Mill Street, Titchfield	R	454158, 106060	NO ₂	N	Y - 2.2 m	1.6 m	Y
DC1	Maytree Drive (lamppost) opposite Delme Court	R	457182, 106203	NO ₂	N	Y - 40 m	Y-0.5	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

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 is to identify any possible exceedances of the air quality objectives that are required to be considered as part of a Detailed Assessment. 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 NO₂ need to be assessed against are as follows:

- An annual mean of 40 µg/m³; and
- The number of exceedances of the 1 hour mean of 200 µg/m³ (18 allowable exceedances in total).

It should be noted that it is only possible to directly assess against the 1 hour objective if hourly monitoring data are available. As most local NO₂ 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, suggest that where the annual mean is less than 60 µg/m³, exceedances of the short term objective are unlikely.

2.2.1 Automatic Monitoring Data

The Council has undertaken continuous monitoring at the Elms Road site since the 2008 for NO₂. 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, this gives confidence that the results are worst case.

The station was only installed in June 2008, so the data for the 2008 6-month period were period adjusted (LAQM Technical Guidance) using local AURN background sites at Bournemouth and Portsmouth.

Table 2.3a Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective

Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period ^a %	Data Capture for full calendar year 2010 ^b %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
					2008 ^{c, d}	2009 ^{c, d}	2010 ^c
Elms Road Fareham	Y	N - 3.5m	89	89	33.7	35.9	41.8

^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), if monitoring was not carried out for the full year.

^d Annual mean concentrations for previous years are optional.

As the 2010 Elms Road data set for NO₂ is approximately 90%, it is not deemed necessary to undertake period mean adjusted in line with LAQM.TG(09). The annual mean for 2010 is 41.8 $\mu\text{g}/\text{m}^3$, which is higher than that observed in the last two years. The site is located within the Gosport Road AQMA.

Table 2.3b Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective

Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period ^a %	Data Capture for full calendar year 2010 ^b %	Number of Exceedances of hourly mean (200 $\mu\text{g}/\text{m}^3$) If the period of valid data is less than 90% of a full year, include the 99.8 th percentile of hourly means in brackets.		
					2008 ^c	2009 ^c	2010
Elms Road Fareham	Y	N-3.5m	89	89	0	0	0

^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 Numbers of exceedances for previous years are optional.

The result given in Table 2.3b relating to the 1 hour objective, shows there to have been no exceedances of the hourly mean objective during 2010 or for the two years previous.

2.2.2 Diffusion Tube Monitoring Data

The Council has been monitoring NO₂ using passive diffusion tubes for a number of years. The 2007-2009 results for all sites including data capture percentages (2010) are given in Table 2.4.

Table 2.4 Results of Nitrogen Dioxide Diffusion Tubes

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period ^a %	Data Capture for full calendar year 2010 ^b %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
						2008 ^{c, d}	2009 ^{c, d}	2010 ^c
10N	Farrier Way	N	Y - 8m	92	100	25.8	22.2	24.3
10NA	3 Farrier Way	N	Y - 0m	92	100	25.9	21.5	24.5
1N	145 Osborne Road South	N	Y - 1.5m	33	100	45.2	29.5	31.2
2N	2 Osborne Road South	N	Y - 0m	92	100	32.2	26.6	38.9

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period ^a %	Data Capture for full calendar year 2010 ^b %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
						2008 ^{c, d}	2009 ^{c, d}	2010 ^c
3N	14 Osborne Road	N	Y - 0m	92	100	28.6	23.5	26.6
5N	Grove Road	N	Y - 4.5m	92	100	32.0	25	27.6
7N	Norton Road	N	Y - 6m	92	100	21.6	17.7	20.8
Av/Bf	Avenue/ Bishopfields Road	N	N	83	91	29.2	21.8	29.9
G10	107 Gosport Road	N	Y - 0m	92	100	47.6	35.5	40.8
G11	2 Earls Road	N	Y - 0m	83	91	34.0	25.9	28.7
G1A	30 Old Gosport Road	N	Y - 0m	92	100	39.2	30.7	34.7
G2/N 11	130 Gosport Road	Y – (Gos)	Y - 8.5m	58	100	49.4	40.6	41.5
G3	202 Gosport Road	N	Y - 0m	83	91	33.9	26.4	30.7
G4	122 Gosport Road	Y – (Gos)	Y - 0m	92	100	34.8	26.4	30.5
G5	275 Gosport Road	N	Y - 0m	33	100	31.7	25.4	33.5
G6	171 Gosport Road	Y – (Gos)	Y - 0m	92	100	36.3	28.3	32.9
G7	193 Gosport Road	Y – (Gos)	Y - 0m	92	100	39.8	33.2	39.6
G8	152 Gosport Road	N	Y - 0m	83	100	37	25.7	31.0
G9	11 Eden Rise	N	Y - 0m	83	91	33.3	25.1	28.5
HR1	1 HartLands Road	N	Y - 6m	75	82	48.7	38.2	41.8
HR2	17 Hartlands Road	N	Y - 0m	92	100	37.2	28.2	32.5
HR3	9 HartLands Road	N	Y - 0m	33	100	32.5	25.2	34.8
HR4	25 Hartlands Road	N	Y - 0m	75	82	38.6	26.4	30.7
LH1	41 Bridge Road	N	Y - 5m	92	100	29.5	23.8	27.3
LH2	36 Botley Road	N	Y - 3m	N/A	N/A	44.2	31.4*	N/A
LH3	36 Botley Road	N	Y - 0m	92	100	39	31.3	31.4
P1	Portchester Road/Downend Road	N	Y - 20m	33	100	52	41.6	46.0
P1B (was P1A)	3 The Ridgeway	N	Y - 0m	92	100	25.6	20.8	24.0
P2	141 The Crossways	N	Y - 10m	92	100	24.3	21.2	23.7
P4	22 Cams Hill	N	Y - 24m	92	100	31.8	26	28.9

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period ^a %	Data Capture for full calendar year 2010 ^b %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
						2008 ^{c, d}	2009 ^{c, d}	2010 ^c
P5	Silvermist Porchester	N	Y - 20m	83	91	31.1	24.5	29.5
P6	169 West Street	N	Y - 3.5m	92	100	30.2	22.5	28.6
P7	77 West St Portchester	N	Y - 5m			35.1	27.7	22.5
PS1	1 Sentinel Cottages	Y – (Port)	Y - 0m	92	100	46.8	36.0	42.0
PS1A				92	100			
PS1B				92	100			
PS2	2 Sentinel Cottages	Y – (Port)	Y - 0m	92	100	48.3	38.7	43.3
PS3	38 Portland Street	Y – (Port)	Y - 0m	92	100	55.9	42.0	47.9
S1	Albert Road/Newgate Lane	N	Y - 12m	67	80	31.9	25.4	32.5
S2	Stubbington Lane (Eric Road)	N	Y - 14m	92	100	28.9	22.3	27.3
T1	South St Dental Health-Titchfield	N	Y - 0m	92	100	29.8	20.6	28.1
E1	Co-located with Elms Road Monitor	Y – (Gos)	N - 3.5m	75	82	44.4	36.5	41.8
E2				83	91			
E3				75	88			
G12	Two Saints, 101 Gosport Road	Y – (Gos)	Y - 1 m	92	100	-	44.3†	37.0
T2	19 Mill Street, Titchfield	N	Y - 2.2 m	92	100	-	23.5*	30.9
DC1	Maytree Drive (lamppost) opposite Delme Court	N	Y - 40 m	92	100	-	25.3*	29.1

^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), if monitoring was not carried out for the full year.

^d Annual mean concentrations for previous years are optional.

The results in Table 2.4 show that eight monitoring sites (Sites G10, G2/N11, HR1, P1, PS1 - PS1B, PS2, PS3 and E1-3) measured an annual mean NO₂ concentration above the objective in 2010. These sites are considered further below.

2.2.3 2010 NO₂ Annual Means

The 2010 dataset shows an increase in ambient air quality concentrations at all sites throughout the District, including both roadside and background sites. This appears to be consistent with other South East regional NO₂ continuous sites including Brighton Preston Park, Harwell, Oxford Centre Roadside, Southampton Centre and Stanford le-Hope Roadside. This suggests a regional increase in NO₂ concentrations, probably due to the meteorology in 2010, rather than as a result of localised changes.

2.2.4 Site G10

The G10 site, which shows a 2010 annual mean of $40.8 \mu\text{g}/\text{m}^3$, is 14 metres from the A32 Gosport Road, at the same distance at the adjacent residential exposure. The result suggests the site is exceeding the annual mean NO_2 air quality objective.

The guidance therefore requires that a Detailed Assessment be undertaken to establish the need for an AQMA (should an exceedance be confirmed). After careful consideration the Council proposes to delay any such work until next year, at which point a decision will be made on the necessity to proceed with additional LAQM analysis. The reasons for this are set out below:

- The discussion points raised above suggest there has been a regional increase in ambient NO_2 concentration during 2010. This may be due to meteorological conditions prevalent in that year, rather than an increase in local or regional emissions.
- Of the ten Gosport Road monitoring sites, Site G10 is the only site showing an exceedance.
- The increase is considered to be relatively minor (less than $0.8 \mu\text{g}/\text{m}^3$).
- The Detailed Assessment work required in the fourth round of Review and Assessment for Site G10 concluded from further monitoring that the site of concern on Gosport Road would meet the annual mean objective.

The Council therefore proposes to carry out an additional year's monitoring and review the position through the 2012 Updating and Screening Assessment. At that time a decision will be made on the need to undertake a Detailed Assessment for investigating any exceedance further.

2.2.5 Site G2/N11

In terms of relevant exposure, Site G2/N11, which shows a 2010 annual mean of $41.5 \mu\text{g}/\text{m}^3$, is 1.75 metres from the nearest road, whilst the nearest relevant exposure is set back 8.5 metres from the roadside. The façade distance calculator (as given on the Defra website) predicts the annual mean objective to be $35.3 \mu\text{g}/\text{m}^3$ at the facade. For the purpose of the facade distance calculator, the 2010 annual mean of $24.3 \mu\text{g}/\text{m}^3$ for the background diffusion tube site (10N-Farrier Way) was considered representative.

2.2.6 Site HR1

In terms of relevant exposure, Site HR1, which shows a 2010 annual mean of $41.8 \mu\text{g}/\text{m}^3$, is 2.5 metres from the A27, whilst the nearest relevant exposure is approximately 6 metres from Hartlands Road. The façade distance calculator (as given on the Defra website) predicts the annual mean objective to be $34.1 \mu\text{g}/\text{m}^3$ at the facade. For the purpose of the facade distance calculator, the 2010 annual mean of $24.3 \mu\text{g}/\text{m}^3$ for the background diffusion tube site (10N-Farrier Way) was considered representative.

2.2.7 Site P1

In terms of relevant exposure, Site P1, which shows a 2010 annual mean of $46.0 \mu\text{g}/\text{m}^3$, is 20m metres from the A27, whilst the nearest relevant exposure is approximately 6 metres from Portchester Road/Downend Road. The façade distance calculator (as given on the Defra website) predicts the annual mean objective to be $35.3 \mu\text{g}/\text{m}^3$ at the facade. For the purpose of the facade distance calculator, the 2010 annual mean of $24.3 \mu\text{g}/\text{m}^3$ for the background diffusion tube site (10N-Farrier Way) was again considered representative.

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2.2.8 Site PS2 and PS3

Both sites are within the existing Portland Street AQMA.

2.2.9 Site PS1, PS1A, PS1B

This triplicate co location site is within the existing Portland Street AQMA.

2.2.10 Site E1-3

This triplicate co location site is within the existing Gosport Road AQMA.

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

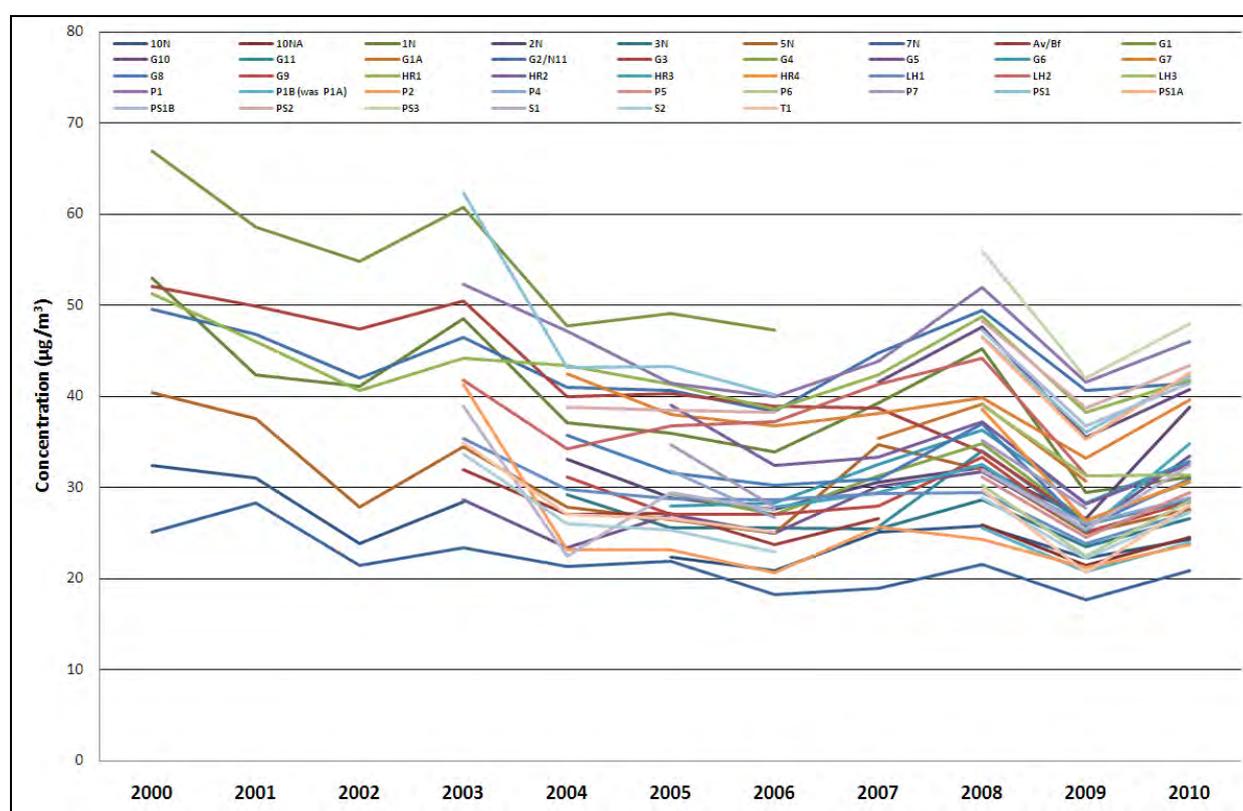


Figure 2.4 shows the annual results since 2001 for all the long term monitoring sites. The results suggest a slight downtrend in NO₂ concentrations since monitoring began, however the pattern is somewhat erratic with notable increases in 2003, 2008 and 2010. The fact that most sites show a similar pattern, suggest these increases may be as a result of meteorological effects over a wider regional area.

2.2.11 Other pollutants monitored

Fareham Borough Council does not currently monitor for any other pollutant other than NO₂.

2.2.12 Summary of Compliance with AQS Objectives

Fareham Borough Council monitors for the pollutant NO₂, by way of a continuous analyser and 43 NO₂ diffusion tubes.

Assessment of the 2010 dataset showed there to be eight monitoring sites (Sites G10, G2/N11, HR1, P1, PS1-PS1B, PS2, PS3 and E1-3) measuring annual mean NO₂ concentrations above the objective in 2010. Further analysis of these sites, in the context of the existing AQMAs and through applying appropriate facade calculations (where necessary), concluded that only Site G10 was above the objective at an area of relevance exposure.

Fareham Borough Council has examined the results from monitoring within the Borough. The identified exceedances of the annual mean NO₂ air quality objective are either within the vicinity of the existing AQMAs, or at the one Gosport Road location (Site G10), which shows a relatively minor exceedance. Given the discussion points in Section 2, a Detailed Assessment is not proposed for this location at this time.

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 be significant have been detailed. The assessment of any significantly changed sources have been considered in terms of whether the Council needs to move to a Detailed Assessment.

3.1 Road Traffic Sources

The report has assessed any changes to the following since the last Updating and Screening Assessment:

- Narrow congested streets with residential properties close to the kerb;
- Busy streets where people may spend one hour or more close to traffic;
- Roads with a high flow of buses and/or HGVs;
- Junctions;
- New roads constructed or proposed since the last Updating and Screening Assessment;
- Roads with significantly changed traffic flows; and
- 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. These are:

- Conversion of the Quay Street roundabout to a "throughabout" with planned food retail development which should result in lower nitrogen dioxide levels in the nearby Portland Street AQMA.
- South Hampshire Bus Rapid Transit (BRT) Phase 1, a 4km long dedicated busway on the 8km route between Gosport and Fareham, using a former railway corridor, which is under construction by the County Council and will be completed by late 2011. The County Council received £20m of funding towards the project, from the Community Infrastructure Fund. In addition, funding from Planning for Urban South Hampshire (PUSH) and Hampshire County Council has been used to progress the design and advanced works for the scheme.

The only roads that have been built are "residential" or "industrial" roads. Both of which are not considered to be significant in terms of their impacts on local air quality.

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:

- 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 since the 2010 Progress Report are:

- Mothballing of a coating operation at Searle Newgate Lane in Sep 2010.
- Surrendering of a surface cleaning permit at Eaton Aerospace. (This is due to the use of different cleaning methods leading to a reduction in quantity of solvent used).
- Surrender of a permit for air curtain burner July 2010. Wickham Road Fareham.
- Printed flexible packaging permit surrendered Mar 2010. Talbot Road, Segensworth, Fareham.
- Concrete crusher permit July 2010. West End, Eastleigh.

Changes to industrial processes governed under the Environment Agency Environmental Permitting Regime since the 2010 Progress Report are:

- New waste operation - Tyre Recycling Services Ltd Pinks Sawmill - permit issued by EA 11Jun 2010 - tyre baling/shredding/granulating.

3.4 Commercial and Domestic Sources

Significant commercial and domestic sources within the Borough have either not been identified or have been assessed in previous LAQM assessments.

3.5 New Developments with Fugitive or Uncontrolled Sources

Fareham Borough Council has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area.

- Development at the Daedalus Airfield;
- Expansion of Waste Transfer Station at Warren Farm; and
- Change of use of existing green waste composter site on Veolia Down End Quarry.

These will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

4 Local / Regional Air Quality Strategy

There are currently no local or regional air quality strategies relating to the Borough of Fareham or the County of Hampshire. However since the publishing of the Fareham Borough Council Air Quality Action Plan a local Implementation Group has been set up.

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 A Mandry, 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 now met eight times 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 Andy Maclean, Hampshire County Council, Senior Transport Planner, Transport Team South.
- **Sustainability** - led by Mark Chevis, Fareham Borough Council, newly appointed FBC Sustainability Officer (20 hours a month).
- **Promotion/Publicity** - led by Heather Cusack, Fareham Borough Council, Environmental Health Officer (EHO).
- **Monitoring** - led by Heather Cusack, Fareham Borough Council, 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 £300 of a further grant of £12600 received in 2010, was recently used for the administration of the Big Green Commuter Challenge (BGCC). The grant will also be used to produce leaflets compiled by NHS Hampshire and for the provision of green travel awareness banners on the A32 once the lamp columns have been replaced by the PFI contractor in 2012.

5 Planning Applications

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

5.1 Tesco development at Quay Street Roundabout

Work has now commenced on the construction of a new 70,000 sq ft Tesco in Quay Street Fareham which is expected to be completed by 2012. Adjacent to the A27 Eastern Way, significant construction works are required to the local highway, including changes to the roundabout and approaches. The development includes creating an underground car park for 350 cars.

The major highway works include realigning Quay Street, creating separate accesses to the retail store for customers & deliveries, the installation of signalised controls to the roundabout, introducing additional slip/filter lanes, changes to the A32 directional flow north towards the M27 and providing controlled pedestrian crossings.

The proposed development is predicted to only have a minor impact on the Gosport Road AQMA and is unlikely to lead to an extension of the AQMA either in extent or duration. It is predicted however, to have a beneficial impact on receptors along Portland Street reducing the likelihood of an AQMA being necessary in the vicinity of the Quay Street roundabout.

5.2 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 m² 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 m² of B1 floor space at Hangars East;
- Clubhouse of 1,710 m² 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 considers that a development of this size has the potential to significantly impact on local air quality, especially through increased local/regional road traffic. Therefore the council has requested that an air quality assessment be undertaken to quantify any such impacts. The outcome of the EIA assessment and overall planning application in line with the expectation of the council and the Local Development Framework will be reported in the 2012 Updating and Screening Assessment.

5.3 Other Developments

In the 2010 Progress Report, Fareham Borough Council identified the following new or previously unidentified local developments with the potential to impact on air quality:

- Harfields Trucks Ltd mobile concrete crusher, Fareham
- Veolia Environmental Services (UK) Ltd waste transfer station, Fareham
- Rentokil Initial Services Ltd facility, Fareham

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Since then two additional developments have been identified, these are:

- Expansion of Waste Transfer Station at Warren Farm (compost and household waste)
- Change of use of existing green waste composting site on Veolia Down End Quarry Down

All development progress will be detailed in the 2012 Updating and Screening Assessment.

The application referred to in the 2010 Air Quality Progress Report for the development of residential units on the Junction of Highlands Road and Fareham Park Road, has since been refused, not on air quality grounds.

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

This planning system replaces the old Unitary Development Plan with a portfolio of documents, the Local Development Framework (LDF), which must be taken into account when forming local policy. These documents include a Core Strategy, a Statement of Community Involvement (public and stakeholder consultation), Site Allocation Plans, generic development control policies, any Area Action Plans and Supplementary Planning Documents.

As these new plans near completion and adoption they will carry more weight as a „material consideration“ in making planning decisions. The Local Development framework must reflect the requirements of the Regional Spatial Strategy

6.3 Core Strategy

The Core Strategy & Development Management Policies Development Plan Document (DPD) is a key document forming part of the Local Development Framework (LDF). The Core Strategy will set out the key elements of the planning framework for the Borough. It will include 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 Strategic Development Area to the north of Fareham, Fareham Town Centre and the Coldeast and Daedalus sites.

The Core Strategy was approved by the Planning Inspector in July 2011. Construction on the Strategic Development Area 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.

6.4 South East Plan

Policy H1: Regional Housing Provision 2006 - 2026

The policy requires local planning authorities in the south east to prepare plans, strategies and programmes to ensure the delivery of the annual average net additional dwelling requirement. For Fareham this is set as 186 (per annum) and 3,720 (by 2026) and including that proposed for the SDA as described in CS13, 500 (per annum) and 10,000 (by 2026).

7 Local Transport Plans and Strategies

7.1 Hampshire Local Transport Plan (LTP3) 2011-2031

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

The new Local Transport Plan (LTP3) consists 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 Plan builds on the work of previous local transport plans with the aim to further improve the regional transport system. The Plan has been produced following an extensive consultation with both the public and the County Councils strategic partners.

7.1.1 Statutory Duties

In terms of air quality the Plan firstly sets out its statutory responsibilities as:

Support district councils with respect to carrying out air quality reviews, the assessment of air quality management areas and the preparation of air quality action plans.

7.1.2 Policy Objectives

Policy Objective 10: *Contribute to achieving local targets for improving air quality and national carbon targets through transport measures, where possible and affordable.*

Policy Objective 12: *Invest in sustainable transport measures, including walking and cycling infrastructure, principally in urban areas, to provide a healthy alternative to the car for local short journeys to work, local services or schools; and work with health authorities to ensure that transport policy supports local ambitions for health and well-being.*

7.1.3 Transport Outcomes

In order to deliver the transport vision, the Transport for South Hampshire (TfSH) authorities have identified seven key outcomes, which are complementary to the corporate priorities of Hampshire, Portsmouth and Southampton.

In addition to the key air quality Policy E, improvements to air quality are also expected to be achieved through the implementation of Policies, F, H and K.

Policy E: To deliver improvements in air quality

The TfSH authorities will work with key partners, environmental health professionals and transport operators to mitigate the impacts of traffic on air quality. The principal causes of poor air quality will be addressed by implementing a strategic area-wide approach within each urban centre to minimise the cumulative effect of road transport emissions. This can be achieved through measures promoting modal shift towards public transport modes, walking

and cycling, reducing single occupancy car journeys. Tackling congestion at hotspots can also improve air quality.

Policy F: To develop strategic sub-regional approaches to management of parking to support sustainable travel and promote economic development

The TfSH authorities will encourage better co-ordination between local authorities with responsibilities for car parking to improve the way existing parking is used and priced. Discounts can be offered to encourage car sharing, low-emission vehicles, mopeds and motorcycles. Park and ride sites offering lower cost parking than in urban centres can help reduce congestion and address poor air quality in the centres. It is important that parking management measures are implemented alongside improvements to sustainable travel modes to help increase the attractiveness and viability of these alternatives over private car trips, to support widening travel choice.

Policy H: To promote active travel modes and develop supporting infrastructure

The TfSH authorities will work with health and activity partners, including public health teams, to develop a network of high-quality, direct, safe routes targeted at pedestrians and cyclists. Well-designed routes and secure cycle parking can be partly delivered through the planning system. Pro-active marketing and participative events will radically increase the profile and understanding of the benefits of active travel.

Policy K: To work with rail operators to deliver improvements to station facilities and, where practical, better infrastructure and services for people and freight.

The TfSH authorities will work with the rail industry to encourage investment in improved station facilities, enhanced interchange facilities at main rail stations, and rail infrastructure such as track capacity, to make rail a more attractive option. Further investment in train services is also needed. The TfSH Rail Communications Protocol will be used to take forward improvements to the South Hampshire rail network, ensuring that more passengers and freight are carried by rail, and to improve rail service frequencies.

8 Climate Change Strategies

In partnership with the Hampshire County Council and the county's Borough and District Councils, Fareham Borough Council is actively implementing the following key policies and strategies.

8.1 Hampshire County Council

The County Council sets out the following position with respect to climate change:

Underlying temperatures are due to increase year on year. It is generally accepted that the UK will have hotter, drier summers and warmer wetter winters. Changes in rainfall patterns, sea level rise, and more extreme weather, are expected.

Hampshire is a large coastal (traversing approximately 230 miles) and predominantly rural county with many towns and villages; climate change is already having an impact on all of these environments and these changes are expected to increase.

The UK Climate Impacts Programme has developed climate change scenarios in the UK which tell us more about the likely impacts of climate change in Hampshire.

Expected changes in the climate may have major impacts on the built infrastructure of Hampshire, such as roads, sewers, railways and buildings, and could cause damage to trees, plants and crops. Shorter, more intense rainfall could also have an impact on flooding and recharging aquifers in the county. People's health could be affected by high temperatures, higher pollen levels and more or different pests.

In the longer term it is likely that there will also be changes to where and how people live and work, and changes to the way we care for the elderly and children. The opportunities for tourism and for growing different crops (eg wine grapes, olives) in the county are likely to increase.

8.1.1 Climate Change Adaption

The County Council has taken a lead role in working with its partners to undertake comprehensive risk assessments of services and responsibilities, and to establish how vulnerable and susceptible these are to climate change in the short, medium and long term.

The risk assessments, as well as a number of other sources of information, have been used to develop an Adaptation Action Plan, which includes around 25 strategic actions. At the time of writing this 2011 Air Quality Progress Report, the Adaptation Action Plan is in draft form.

8.1.2 Climate Change Mitigation

The County Council states that climate change mitigation principally takes the form of reducing carbon emissions.

To achieve this, the County Council has adopted a Carbon Strategy (July 2010) aimed at reducing its carbon emissions from 131,800 tonnes CO₂ per year, and has set a reduction target of 20% by 2015. The proposal is to achieve this by improving the energy efficiency of Council activities, improvements to the Councils building stock, investment in energy efficient technologies and implementing behavioural change programmes

Moving forward from 2015, the County Council's strategic commitments are:

- a 35% - 40% reduction target by 2025; and
- becoming carbon neutral by 2050.

8.2 Fareham Borough Council

8.2.1 Environmental Sustainability Strategy (2010)

In 2010 the Council produced an Environmental Sustainability Strategy, targeted at a number of key areas aimed at reducing carbon emissions through 2010 to 2020 and beyond. As details of this strategy are provided in the 2010 Air Quality Action Plan Progress Report, they have not been repeated here. The document should be read in conjunction with the 2010 Progress Report.

8.2.2 Southern Home Energy and Carbon Action Network (SHECANe)

SHECANe is an energy efficiency organisation which consists of twelve local authorities across Hampshire and the Isle of Wight, including Fareham. The project was originally set up in response to the introduction of the Home Energy Conservation Act 1995 for local authority Energy Efficiency Officers across Hampshire and the Isle of Wight. The organisation provides the platform to work together on projects dedicated to reducing carbon emissions and alleviating fuel poverty in the domestic sector

8.2.3 Sustainable Community Strategy for Fareham 2010 – 2020

Fareham's Sustainable Community Strategy 2010-2010 sets out the Council's vision to improve the quality of life for all the Borough's current and future residents.

With respect to Environmental and Transportation issues the Strategy states the following:

To maintain and enhance the quality of the natural and built environments and biodiversity of the borough, understand the 'carbon footprint' of the borough and plan for the potential local impacts of climate change and to work towards the delivery of a more sustainable transport infrastructure.

The top priorities for environment and transport are given as:

- Reducing traffic congestion;
- Maintaining and enhancing our natural environment;
- Adapting to the impact of climate change;
- Improving the overall sustainability of the borough; and
- Reducing carbon emissions.

9 Implementation of Action Plans

9.1 An 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 NO₂ 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.

9.2 Air Quality Progress Report 2010

In response to the statutory consultation on the 2010 air quality progress report, Defra, in accepting the overall findings of the report, responded with the following comments:

- 1) *The indicators selected for each measure are mostly reasonable and we can see that progress has been made, although in some cases the indicators are written in such a way that they appear to be policy aspirations rather than measurable benchmarks. Also, in many cases where the indicators are quantitative, the report does not describe progress in the same quantitative terms. The Council are encouraged to report progress in the same terms as the selected indicators (indeed there may be a case for revising some of the indicators which do not have a numerical basis).*
- 2) *We note that many of the plan measures have target end dates in the next year or so. The Council should advise in next year's progress report whether the measures with end dates in the near future have been completed or not. There may be a need to revise the Air Quality Action Plan if predicted end dates have not been achieved.*
- 3) *The Bus Rapid Transport scheme between Gosport and Fareham underpins many measures in the plan though it appears to be subject to delay. If the scheme is going to be delayed significantly then there could be a case for revision of the plan in general.*

In accepting these points, the Council, for the purpose of the 2011 Progress Report, has undertaken a full review of the following:

- The relevance, potential effectiveness and achievability of the listed targets;
- The relevance and transparency of the indicators in their linkage to the listed targets;
- Ensure quantitative targets can be assessed through direct and quantitative indicators;

- Provide a clear update of future timescales for all actions, especially those with due or imminent end dates
- Set out the current position of the BRT system and how its implementation in line with the recently published LTP3 will deliver the key measures in the action plan.

Actions that are either complete or discontinued are shaded grey in Table 9.1. These will not be detailed in future progress reports.

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Table 9.1 Action Plan Progress

Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
1	To improve the emission standards of Council fleet vehicles by the use of cleaner and alternative fuelled vehicles	To replace two refuse vehicles each year with new Euro compliant vehicles	Two new Euro V refuse vehicles purchased in 2010/11	Remains the same.	Two new Euro V refuse vehicles purchased in 2011/12
2011 Update	By May 2011, Fareham Borough Council will have 8 Euro IV refuse vehicles, 2 due in February 2011 and 2 more in May 2011. The housing maintenance team has also ordered 2 more Euro IV vans which will make 4 in total. Street cleansing now have 2 Euro IV vehicles. Purchase of an electric truck in Spring 2011. Two fuel saving devices purchased. FBC registered with the low Carbon Vehicle Procurement programme. All FBC professional drivers who require a Certificate of Professional Competence (some 40 drivers) received Eco Driver Training in July 2010. Hybrid van to be purchased for car park patrols. GPS has been procured for 10 vehicles which will be reviewed after a year. Green Fleet Review is now complete and the report is awaited. The purchase of a vehicle with battery operated hydraulics is also still on hold due to costs.				
2	To seek a reduction in emissions from the local bus fleet (also see action 14)	To increase the number of Euro III, IV & V vehicles in the local bus fleet	To increase the % of Euro III/IV buses from a baseline in 2008/9 of 17% to 25% in 2009/10	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.
2011 Update	There has been no change to the local bus fleet in 2010/11 but <i>First</i> have 14 Euro V's on order which will come into service when the BRT opens. The Full Business Case for the BRT states that "Carbon-dioxide emissions are anticipated to reduce by 1,045 tonnes in the first year of operation (2011), and by a total of 68,535 tonnes over the subsequent 60 year period."				
3	To review the regulation of private hire and hackney carriage emissions and where appropriate, integrate improvements into the taxi licensing regime	To raise awareness of air quality amongst professional drivers in the Borough	(a)Provision of "Switch off your engine" signage in taxi ranks and bus station (b)Articles in the taxi and private hire newsletters on air quality issues	Remains the same.	Reported progress against any newly identified action developed through the AQAP Implementation Group. (See update below).
2011 Update	Completed and still active. There is no age for private hire vehicles as they have to include novelty type cars like old cars for weddings etc but out of 280 taxis, only 30 are private hire. And in respect of hackney carriages, the oldest vehicle is 5 years old. POSSIBLE NEW ACTION The licensing team is again going to be approached regarding reduced license fees for low emission vehicles. :				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
4	To continue to implement the FBC sustainable travel plan	To deliver those measures identified in the Council's Sustainable Travel Plan (STP) Action Plan	<p>(a) Annual progress reports</p> <p>(b) Payment of employee cycle mileage allowance in 2011/12</p> <p>(c) Increase membership of FBCs car share scheme from a 2008/9 baseline of 3% to 6% by 2012</p> <p>(d) Number of bike loans given to employees 2011/12</p> <p>(e) Number of employees purchasing discounted First travel card in 2011/12</p>	Remains the same.	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 in future progress reporting years, citing any changes.
2011 Update	<p>A salary sacrifice cycle purchase scheme was introduced late in 2010 as part of the Total Employment Reward Package. Reminder regarding all travel benefits including the travel season ticket loan and cycle loans was issued in the December 2010 staff newsletter, in the January 2011 payslips and on the FBC internal intranet, SID. There are 16 active participants of the FBC car share scheme, 3.6% of the total workforce. The Council is also setting up a pilot group to test the new home working policy early in 2011. Since 1 April 2010, employee cycle mileage allowances have been paid to people using their bike for work; 8 bike loans have been given and 4 employees have purchased season ticket travel loans. The internal intranet is also to be used to inform staff that it is Liftshare week from 3 - 7 October 2011 and again reminded staff of the existence of the internal car share scheme.</p>				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
5	To pursue voluntary or VOSA vehicle emission testing in or near the AQMAs	To undertake an air quality promotional type activity in conjunction with the police, EA and/or VOSA in 2009/10	To confirm date of event	Completed. Further action not possible at the present time as VOSA does not have mobile resources.	
2011 Update	Completed. Further action not possible at the present time as VOSA does not have mobile resources.				
6	To seek to reduce emissions from badly maintained vehicles by continuing to promote the smoky diesel hotline	To maintain the link to the Smoky Diesel hotline on the FBC website	To check website link on an annual basis	Remain the same.	Remain the same.
2011 Update	Completed and still active with articles in Fareham Today (Summer 2011) and taxi newsletters.				
7	Signing of waiting areas/bus station/bus stops/taxi ranks etc instructing drivers to "Turn off engines" when stationary	To raise awareness of air quality amongst professional drivers in the Borough	Provision of "Switch off your engines" signage at Fareham Bus Station and at the taxi ranks in 2009/10	Completed	
2011 Update	N/A				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
8	To examine the feasibility of erecting signs to identify the AQMA's	To raise awareness of air quality amongst drivers and other users of the A32 Gosport Road Fareham	To erect air quality awareness signs along the A32 Gosport Road Fareham when new lamp column provision by the PFI contractor allows	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.
2011 Update	Gosport BC working on the planning application for their banners. Where PFI contractor renewing lamp columns, they will not require extra strengthening and therefore no further cost to either Council. Lamp columns in GBC likely to be renewed early in 2011. FBC unlikely to receive new columns much before 2012.				
9	<p>Old Description:</p> <p>To assess the outcomes of the Gosport commuter study and the Gosport Transport and Sustainability Partnership and their impact on the AQMA's</p> <p>New Description:</p> <p>To work in partnership with The Gosport Partnership's sub group Gosport Transport and Sustainability Partnership to identify and assist in the delivery of schemes to reduce road congestion on the A32.</p>	Gosport Partnership Sustainable Community Strategy priority of reducing traffic congestion in Gosport by December 2012	<p>(a)Priority progress reports from the Gosport Partnership</p> <p>(b)Provision of air quality signage on the A32</p>	Completion of the key schemes set out in the Gosport Transport and Sustainability Partnership. Air quality and AQMA impacts to be assessed quantitatively where possible.	Annual progress against the key measures and timeframes set out in the GTSP (AQAP, 2008).
2011 Update	Compiling supporting information required for planning application to be submitted to GBC seeking permission to use lamp columns on section of A32 for advertising purposes (Smarter choices/road safety/air pollution). Anticipated planning application submission in 2011.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
10	<p>Old Description:</p> <p>To implement road network measures detailed in HCC's LTP3 to assist in reducing congestion/ improving air quality in the AQMAs</p> <p>New Description:</p> <p>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.</p>	<p>To not exceed 1% annual growth rate of all motor traffic</p> <p>(HCC LTP2 target) in the AQMAs</p>	<p>(a) Outcome of CIF bid in respect of the BRT scheme. (b) Planning permission for the Quay Street development. (c) Section 106 agreement or similar with the developer of the Quay Street retail development in respect of air quality monitoring in the Portland Street AQMA. (d) Progress of other road improvement schemes relevant to the AQMAs. (e) Local targets for reducing congestion in strategic and local congestion hot spots by HCC/FBC</p>	<p>Completion of key schemes set out in the STAG Implementation Plan. Air quality and AQMA impacts to be assessed qualitatively where possible.</p>	<p>Annual progress towards the programmed 19 schemes listed in the study. (The 19 key STAG schemes are detailed in Section 9.3).</p>
2011 Update BRT	<p>Key Project Delivery Areas</p> <ul style="list-style-type: none"> • New bridge at Newgate Lane now completed. • The busway is on target for opening in April 2012. • Village Green at Tichborne Way rejected by the Commons Registration Authority in mid-April 2011, opening up the way for HCC to complete link road. Contingency plans in place in case a challenge is brought through judicial review. • Improvement scheme at the A27 (The Avenue Junction with Redlands Lane) is completed with a switch over from the original signal control equipment to the new equipment. The new equipment will be responsive to buses once the BRT scheme is operational. 				
2011 Update LTP3	<p>Policies and Objectives:</p> <p>Section 7 sets out the key policies and objectives of the LTP3 and the air quality linkages.</p> <p>LTP3 Technical Project Works:</p> <p>Given that well documented funding uncertainty is likely to affect delivery, the Implementation Plan will need to be refreshed annually to reflect the</p>				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
	<p>levels of funding available. In 2013/14, £3m has been allocated to improve the southern section of Newgate Lane. Improvements are required to increase capacity for the growth agenda proposed on the Gosport peninsula and the regeneration aspirations for Daedalus.</p> <p>Undertaking of an options study of possible measures to improve the southern section of Newgate Lane. The options to be evaluated are:</p> <ul style="list-style-type: none"> -Do nothing; -The "historical" Peel Common bypass; -Widen the existing carriageway to 7.3 m and provide on road cycle lanes; or -Widen the carriageway to 7.3m and providing a 2.5m shared cycle tracks either side. <p>The preferred option will be subject to member consultation before feasibility and detailed design with a view to implementation in 2013/14.</p>				
11	To implement those ITS improvements within FBC as detailed in the LTP2 to reduce congestion and improve air quality in the AQMAs	As for action 10	As for action 10	Discontinued. ITS improvements are STAG scheme 5, so will be combined with Action 10 – see Section 9.3.	
2011 Update	N/A				
12	To undertake appropriate improvements to the Quay Street roundabout in conjunction with the nearby retail development and negotiate with the developer a financial contribution for future air quality monitoring in the area	As for action 10	As for action 10	Discontinued. Action 12 is STAG scheme 12, so will be combined with Action 10 – see Section 9.3.	
2011 Update	Tesco's off site highway works on A27 Quay Street roundabout commenced 9 May 2011. Works programmed to be substantially completed by the beginning of December 2011 when road works will be removed for the Christmas period. Store provisionally expected to be open Jan/Feb 2012.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
13	To develop the climbing lanes between junctions 11 and 12 of the M27	Reported as completed in the 2010 Air Quality Report			
2011 Update	N/A				
14	Develop a Quality Bus Partnership for the A32 and other bus routes including a reduction in emissions from local buses	To increase journeys by passenger transport by 2% by 2010/11 above a 2003/4 baseline in Hampshire (HCC LTP2 target)	Local Authorities and local bus companies will sign a legally binding Voluntary Partnership Agreement for the BRT corridor detailing targets for the age & quality of buses, emissions, journey times and ITS by 2011/12	Target met and action completed. (see new action 49)	
2011 Update	<p>Completed. Target achieved as bus patronage rose by 11% between 2003/4 and 2009/10.</p> <p>The BRT scheme will deliver a Voluntary Partnership Agreement with quality thresholds for vehicles, which will commence when the BRT is operational. These buses serve other parts of the Borough. The majority of bus services will move away from the A32 to use the BRT track with a consequent reduction in emissions along the A32.</p>				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
15	Provide a bus/rail interchange facility at Fareham rail station	As for action 14	HCC to develop a transport interchange at Fareham rail station	HCC to develop a transport interchange at Fareham rail station. Timescale - 2014-2020 subject to funding being available.	Provision of a transport interchange at Fareham rail station. Progress reported against the 2014 – 2020 timescale.
2011 Update	<p>Hampshire County Council is to commissioning a traffic management study to investigate public transport priority measures for Fareham West Street and adjoining roads. It is anticipated that the study will be completed by October 2011. Works to Fareham station will be considered as part of the work on the wider BRT.</p> <p><i>-Long term plan</i> - link along the disused railway north from Phase 1, either over or under the A27 and directly into the station where a new interchange would be provided. (subject to future funding reviews).</p> <p><i>-Short term plan</i> - continuation of the route along the A27 past the station and into West Street as linked to BRT Phase 1.</p>				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
16	<p>Old Description</p> <p>To provide a suitable alternative to the light rapid transit system linking Fareham, Gosport and Portsmouth</p> <p>New Description</p> <p>To provide a suitable alternative to the light rapid transit system linking Fareham and Gosport</p>	As for action 14	Subject to the award of a CIF bid, HCC to develop the BRT phase 1 route between Gosport and Fareham by March 2011	Build and open phase 1 of the BRT route between Gosport and Fareham by April 2012.	Progress against the key measures and timeframes set out for the BRT phases. (http://www3.hants.gov.uk/tfsh/bus-rapid-transit.htm). See Section 9.3.
2011 Update	<p>Construction of BRT Phase 1 is progressing well with the new bridge at Newgate Lane now completed. Wych Lane is currently closed whilst two major services are diverted and the new signalised junction is constructed.</p> <p>The Village Green at Tichborne Way was rejected by the Commons Registration Authority in mid-April 2011, opening up the way for HCC to complete link road. No legal challenge was received during the judicial review period.</p> <p>At present the busway is on target for opening in April 2012 but an exact date isn't clear given the scale of the works that remain outstanding.</p> <p>The improvement scheme at the A27 The Avenue junction with Redlands Lane is complete. The new equipment will only be responsive to buses once the BRT scheme is operational. On Redlands Lane there are some bus detector loops to complete and some parking controls to implement and these are programmed to be completed in good time for the main BRT scheme.</p> <p>The AQAP steering group will create a new action once Phase 1 of the BRT route is complete to monitor the further development of the route beyond Fareham.</p>				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
17	To monitor the progress of providing real time bus information at bus stops in Fareham and Gosport	As for action 14	All stops along Phase I of BRT to be fitted with RTI.	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. See Section 9.3.
2011 Update	RTI will be fitted to all bus stops as part of BRT Phase I. A wider system is to be progressed by HCC as part of the long term development of such a system across South Hampshire. ACIS have just won the tender for HCC countywide ITS. The aim is for them to implement a revised system along the A3 corridor and to provide the BRT system in time for the opening.				
18	To provide bus priority measures as part of the Vision for West Street	As for action 14	To be progressed by HCC	Undertake traffic modelling to establish feasibility of scheme, quantifying 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.
2011 Update	See 15.				
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	As for action 14	Number of bus journeys per day in and out of Whiteley.	Completed. Further work is not expected to increase public transport over existing usage. (see new action 49).	
2011 Update	It is proposed by HCC that this action is now completed. HCC do not envisage any increase in public transport in and around Whiteley. HCC's bus subsidy is being cut by 30% from October 2011 so there will no possible financial input from HCC.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
20	To continue to subsidise bus travel beyond the statutory minimum to further encourage bus usage	Reported as completed in the 2010 Air Quality Report			
2011 Update	N/A				
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	To increase the levels of cycling by 2010 to those experienced in 2004 (HCC LTP2 target)	(a)To assess progress of the Fareham Cycle Strategy Action Plan (b)To provide specific information on the Council's website of cycle routes in and around the AQMAs	The Cycling Action Plan 2005-2011, being in its final year of implementation, is to be reviewed. New targets and indicators will be developed as part of the review and reported on in subsequent Action Plan Progress Reports. Additionally 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.	
2011 Update	New cycle map on FBC website. GBC is looking to increase cycle storage at Gosport ferry terminal by some 40 - 50 bikes Spring 2011. Work to complete the Stokes Bay cycle route started February 2011 for 16 weeks which will provide a cycle route from the Gosport Ferry to Marine Parade East, Lee On Solent.				
22	To continue to promote public transport and alternative travel arrangements such as the Gosport Ferry and local bus services on the FBC website	As for action 14	To ensure the details of the Gosport Ferry are maintained on the FBC website	Target met and action completed. (see new action 49)	
2011 Update	Completed but still active. TravelGosport website still active with lots of travel information provided for Gosport residents. However, car share scheme is to close; residents will be encouraged to use the HCC scheme.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
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	15% of people working in Hampshire to be covered by a travel plan by 2011 (HCC LTP2 target)	(a) To set a similar travel plan target for Fareham (b) To ensure that the work travel plan agreed for the Quay Street retail development is implemented	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
2011 Update	<p>Voluntary travel plans have not been targeted in the AQMAs or surrounding area to date due to resourcing and funding constraints. However business travel planning is an integral part of the Transport for South Hampshire Local Sustainable Transport Fund (LSTF) Bid. Successful bid confirmation will be in June 2012.</p> <p>The only development related travel plans that HCC have in place at the moment are:</p> <ul style="list-style-type: none"> - Sainsbury's at Broadcut; and - Submitted plan for the proposed Tesco Store at Quay Street. 				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
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	100% of students in full time education (5-16 years) to be covered by a travel plan by 2008/9 from a 36.5% base in 2004/5 (HCC LTP2 target)	For schools in and around the AQMAs in Fareham to maintain their school travel plan at the current level or improve it to at least a level 3	Target to be developed once success of LSTF bid is know. LSTF is now the primary resource mechanism for travel planning projects.	Indicators to be developed once success of LSTF bid is know. LSTF is now the primary resource mechanism for travel planning projects
2011 Update	<p>As a result of a reduced Area-Based Grant, from which School Travel Planning is funded, the County Council is no longer able to provide the previous level of support. Alternative funding streams include. charging schools, using developer contributions, taking on work for outside partners and including travel planning within the Local Sustainable Transport Fund bid.</p> <p>With respect to the schools in FBC, there are 40 schools at level 3 (an approved travel plan in place); 4 schools at level 1 (working towards a STP) and 2 schools at level 0 (interest shown). Progress for those schools that are within the AQMA is detailed below:</p> <ul style="list-style-type: none"> - Redlands Primary has been written to regarding a review. Safe Routes to School (SRTS) scheme has been implemented which includes a School Crossing Patrol site opposite the school entrance, high friction surfacing and pinch points. - Neville Lovett School had a meeting with HCC in November 2009 to discuss a full review - no further progress has been made since by the school. SRTS scheme was proposed but cancelled in early 2011 due to public opposition to TROs that were required by safety audit in order to implement crossing points outside of the school. <p>The Environmental Protection team installed diffusion tubes in three local schools (Redlands Lane, Orchard Lee and Oak Meadow), but these were removed late in 2010 as the results indicated that NO₂ levels at the schools were well below the objective. This will be reviewed as it is considered there is an educational benefit from the work in addition to assessment against the objectives.</p>				
25	To implement the Town Access Plan proposals where they have an impact on air quality in the AQMAs	Accessibility target (% of people with access to town centre) (HCC LPT2 target to be developed for Fareham)	(a)FBC to adopt HCC Town Access Plan (b)Accessibility target to be developed for Fareham	The Town Access Plan (TAP) is being developed through the LDF. Relevant cycling measures from the TAP will be detailed in future Air Quality Action Plan Progress Reports. Targets and indicators will therefore be development in due course.	
2011 Update	HCC is currently drafting a Fareham Town Access Plan. It is anticipated that a draft will be published for consultation later in 2011.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
26	To continue to inspect premises and take appropriate enforcement action in respect of the Environmental Permit risk assessment regime	To ensure that permitted premises are inspected in line with Defra's regime	Defra return	Remains the same	Remains the same
2011 Update	All due inspections were undertaken for the year 2010/11 including vehicle refinishers, foundry, crematorium etc. Defra annual return submitted on time.				
27	To use Environmental Permit inspections to encourage the provision of alternative fuels at petrol stations	To provide petrol station operators during EP inspections with a leaflet regarding the benefits of providing alternative fuels at their premises.	To liaise with HCC and raise issue at local pollution officers' meeting (ECAC) eg finance	Work towards maximising local uptake of alternative fuels, having leafleted all petrol stations (in line with original target).	Number for alternative fuelling pumps and evidence of continued council engagement.
2011 Update	Completed. New options to be reviewed annually.				
28	Promote the use of planning policies, alongside other planning and transport measures, to promote sustainable transport choices and reduce reliance on the car	Examples of where FBC requires higher provision of cycle facilities or lower car parking facilities than the HCC standards for new developments	Core Strategy Examination in public due to June 2011	Implementation of the relevant policies set out in the LDF to influence local and regional air quality. (see Section 6)	Examples of where FBC requires higher provision of cycle facilities or lower car parking facilities than the HCC standards for new developments.
2011 Update	Examination in Public of Core Strategy took place in May 2011. The Inspector's report is expected in September 2011. Sustainability concepts for the new SDA north of Fareham are being drafted for public consultation during 2011.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
29	To ensure that the new LDF incorporates planning policy that will not adversely impact on air quality but furthermore enhances air quality where possible	Specific targets to be developed following the Public Examination of the Core Strategy in 2011.	Specific indicators to be developed following the Public Examination of the Core Strategy in 2011.	Remains the same	Remains the same
2011 Update	See 28 above				
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	Planning development control to continue to liaise with the pollution team	<p>(a) Number of planning applications with air quality assessments</p> <p>(b) Number of section 106 agreements specifically related to air quality</p> <p>(c) Number of conditions relating to work travel plans</p> <p>(d) Formal pre-application advice system operational</p>	Structured communication between Regulatory Services and Development Control on plans potentially affecting air quality.	Weekly bulletins, listing planning applications issued to Regulatory Services.
2011 Update	<p>(a) None except see (d) below</p> <p>(b) One - The Quay Street developer. When work commences on site the requirement to pay will come into effect.</p> <p>(c) Two - Sainsbury's at Broadcut and Tesco's at Quay Street (to be developed prior to store opening).</p> <p>(d) Operational since April 2009 - recently commented on air quality requirements of an EIA for HMS Daedalus development.</p>				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
31	To review the FBC parking strategy and implement any measures that may result in reduced congestion in AQMAs	Development of resident parking schemes possibly affecting the AQMAs	Number and location of such schemes in 2011/12	In line with 2011 update for this Action, once scheme/policy options going forward have been clarified, targets and indicators can be developed.	
2011 Update	<p>There have no changes to the parking strategy for 2011/12 that are likely to actively benefit reduction of the AQMAs, however the Fareham Town Parking Strategy is due for a complete revision over the coming year.. This Strategy will seek to provide policies relevant to various issues including (where possible) those relating to the AQMAs. Polices will depend on research into the following:</p> <ul style="list-style-type: none"> - Demand and supply of parking; -Use of other modes of transport and how this may impact on parking; -Location of current parking supply; -Price-elasticity of demand for parking and how this impacts the retail centre; and -Consultation with relevant groups including businesses, charities, lobby groups and the public. <p>The impact of the 350 parking spaces that will soon be available at the Tesco development will also be examined and if there is an adverse impact on the AQMAs.</p>				
32	To continue to review and consult on air quality in the Borough in line with statutory requirements	To ensure compliance with the Defra timetable	(a)To submit the 2011 combined progress report to Defra (b)To maintain air quality reports on the FBC website	Remains the same.	Remains the same.
2011 Update	The 2011 Air Quality Progress Report was compiled by the Councils chosen consultant. The consultant attended the March meeting of the AQAP steering group to review the current action planning measures in line with the Defra consultation comments on the 2010 Progress Report. Annual air quality report to be submitted to the PPPDRP in September 2011.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
33	To enhance the nitrogen dioxide monitoring network by providing continuous nitrogen dioxide monitors in the AQMAs	To provide continuous monitoring information for the Gosport Road AQMA and to assess whether or not the annual mean objective for NO ₂ is not being exceeded so as to allow for the revocation of the AQMA	Outcomes of the LAQM reporting process using diffusion tube and continuous monitoring data from the Gosport Road and possibly Portland Street	To provide continuous monitoring in Portland Street.	Reporting on identification of key project deliverables, such as location, financing and site commissioning.
2011 Update	Majority of diffusion tubes now on the facades of residential properties. Only have funding to operate the Gosport Road monitor for one more year - AQ grants no longer available for monitoring purposes. Section 106 agreement should allow the purchase of another monitoring unit for Portland Street and to operate it for 3 years. £12,600 still available for AQAP work although a small amount has been used for the administration of the Big Green Commuter Challenge (BGCC).				
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	The HIOW air quality officers' group to meet twice a year as a sub group of the HIOW Environmental Control Advisory Committee (ECAC)	Minutes of meetings	Remains the same.	Remains the same.
2011 Update	A representative of FBC will continue to attend the Gosport Transport and Sustainability Partnership meetings as long as they continue. AQMA regional group to continue to meet each year. The group last met in July 2011.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
35	To monitor the performance of the AQAP and review actions having regard to the air quality objectives and implement additional actions where necessary	To revoke the AQMAs for both locations	Outcomes of the LAQM reporting process using diffusion tube and continuous monitoring data	To meet the AQO annual mean for NO ₂ and ultimately revoke the AQMAs for both locations.	Outcomes of the annual LAQM reporting of annual mean air quality concentration improvements. Also set out a position statement within the annual action plan progress report on any required changes to the existing measures and the need for further actions.
2011 Update	The AQAP steering group last met on 14 June 2011. Defra grants now total £12,600 for AQAP work. Current work includes the development of the BRT route; the Quay Street roundabout; FBC staff undertook the Big Green Commuter Challenge (BGCC) 2011 on a trial basis; the production of sustainable travel type A32 banners in Gosport and Fareham on lamp columns (waiting for lamp columns to be replaced by the PFI contractor using strengthened columns - likely to be 2011 for GBC and 2012 for FBC) and possibly on buses.				
36	To continue to educate and enforce in respect of domestic, agricultural and industrial smoke nuisances and dark/black smoke	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	Remains the same.	Remains the same.
2011 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	Target to reduce emissions by 10% between Apr 2009 and March 2011 and 4% per annum thereafter	Reduction of 8% achieved in 2009/10	Whilst NIs 185 and 194 are no longer to be formally reported, the Council is still to report NI 185 in 2011.	
2011 Update	Whilst not making any formal submission, the Council will continue to assess NI 185 emissions and report on the website. NI 194 will not be report for 2011. This will be reviewed for July 2012.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
38	To continue to place air quality reports on the FBC website	To ensure that all appropriate bodies are kept aware of LAQM progress	All reports are placed on the FBC website	Remains the same.	Annually (or as required) e-mail stakeholder bodies and send a message each time there is a website report update.
2011 Update	The 2011 combined progress report will be placed on the Council's website once submitted and approved by Defra.				
39	To investigate the most effective method of disseminating air quality information to the public and assess the feasibility of employing this method for FBC	To raise awareness of local and national air quality matters	(a)Information from the continuous nitrogen dioxide monitor to continue to be displayed on the FBC website (b)To assess what other Local Authorities are providing and at what cost eg Air Alert	Remains the same.	Annual review of information dissemination options in line with UK best practice and discussions with neighbouring authorities.
2011 Update	Neither WCC nor SCC show current air quality via roadside electronic signage. Subsequent to HCC confirming that there will be no funds available as part of the BRT to provide VMS, steering group looking at using the electronic car parking signs on Gosport Road.				
40	To promote awareness via the FBC website of other air quality information web sites	To raise awareness of local and national air quality matters	Links to other air quality websites established from the FBC air quality pages as necessary	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.
2011 Update	Ongoing process of updating website including links from the air quality page to sustainable travel information.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
41	Support locally, national campaigns to raise awareness of air quality, alternative transport choices etc	To support where appropriate, a national air quality campaign at least once a year via the FBC website	Evidence of this action	Remains the same.	Remains the same.
2011 Update	PCC has been running the Big Green Commuter Challenge (BGCC) for 9 years. This year as a trial FBC staff were invited to join the Challenge by leaving their cars at home for week (16-22 May 2011) and travelling to work and undertaking work journeys by more sustainable forms of transport. There were prizes for the winning organisation, individual special effort etc. Hopefully, FBC will expand this to external partners in the area in 2012. An air quality article will appear in the Summer edition of Fareham today. Furthermore an article on the BRT should be published prior to its opening.				
42	To promote the use of alternative fuels eg LPG, hybrid	To increase awareness of alternative fuels	(a)To provide petrol station operators during EP inspections with a leaflet regarding the benefits of providing alternative fuels (b)To provide appropriate information on the FBC website	Now combined with Action 27	
2011 Update	(a) Completed (b)To be auctioned. The Council have arranged the purchase of an electric Mega truck vehicle for use around the town centre.				
43	Old Description: To produce a leaflet on the AQAP and distribute to libraries, surgeries etc New Description: Strengthening the linkage and understanding between air quality and health	To raise awareness of the link between poor air quality and ill health.	If financially feasible, to produce a leaflet for distribution at GP surgeries etc	To raise awareness and improve understand of the relationship between poor air quality and ill health.	Identifying, implementing and reporting projects to be undertaken by the council and relevant stake holders.
2011 Update	A local GP has contacted their communications team to produce a draft leaflet to highlight the damaging effects of poor air quality on people's health and to encourage a modal shift to more sustainable modes of transport. This draft leaflet was presented at the March and June 2011 AQAP steering group meetings. Members were asked to submit their comments so the leaflet could be finalised for the meeting in September 2011.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
44	To liaise closely with the PCT in respect of identifying any linkage between areas with poor air quality and ill health	To understand more fully the relationship between poor air quality and ill health locally in Fareham	To continue to liaise with the PCT	Discontinued as now covered with Action 43.	
2011 Update	Efforts have been made but at present there does not appear to a need or resources to take this any further at present.				
45	To continue to promote energy awareness and efficiency in the Borough	To develop a new Home Energy Efficiency Strategy during 2011 which will contain specific targets	New targets and indicators to be developed as part of new Home Energy Efficiency Strategy being developed in 2011.	Review of strategy actions shows no direct significant linkage with air quality. Action therefore discontinued in the context of the Air Quality Action Plan. Where relevant outputs will be report in the Climate Change section of future Air Quality Progress Reports.	
2011 Update	Building works are underway on five new Council homes being built to Sustainable Home Code Level 4. Completion due this Autumn. Various retrofit projects are being developed with housing associations which will be open for public viewing. Executive have agreed to install PV (photovoltaic) Panels to Civic Offices, the Depot and two sheltered housing schemes.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
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 LTP2 LTP3.	HCC's targets for Hampshire's Smarter Travel Choices Strategy shown in Table 8 of section 10.7.1 of the AQAP	(a) Progress in respect of these targets via LTP3 progress reports (b) To add walking to the transport section of the FBC website (c) To assess progress of the Fareham Cycle Strategy Action Plan (d) To provide specific information on the FBC website of cycle routes in and around the AQMAs	Target to be developed once success of LSTF bid is known. LSTF is now the primary resource mechanism for travel planning projects. Any future target will also be linked in with the relevant LTP3 policy objectives 7, 10, 11 & 12. See Section 9.5.	Indicators to be developed once success of LSTF bid is known. LSTF is now the primary resource mechanism for travel planning projects Any future indicator will also be linked in with the relevant LTP3 policy objectives 7, 10, 11 & 12. See Section 9.5.
2011 Update	<p>See comments for Actions 21 and 28 which are linked to this action.</p> <p>Increased information relating to sustainable modes of transport is now on the air quality page of the Council website.</p> <p>The Environmental Sustainability Strategy will include actions related to Action 46 and one of the challenges set by the Greening Campaign is to reduce car usage. FBC is also running a Pilot home working project.</p> <p>See Section 9.5 for further details on the LSTF bid and listed LTP3 Policy Objectives</p>				
47	To continue to promote cycling and walking as healthier alternatives to the car on the FBC website	As for action 46	As for action 46	Discontinued as now covered with Action 46	
2011 Update	New cycle map on website.				

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Action	Description	Existing Target	Existing Indicator	Changes to Target	Changes to Indicator
48	To implement Environmental Sustainability Strategy (ESS) and ensure that NO ₂ is considered in the development of the FBC Sustainability Strategy	To ensure that all specific targets in the ESS which have a bearing on air quality are met	Quarterly progress reports on the ESS made to Corporate Sustainability Group and annual progress report to P&I PDR Panel	Remains the same.	Remains the same.
2011 Update	The post of Sustainability Coordinator has now been made into a 20 hour a month addition to an existing post. The post was filled with effect from 1 June 2011. The first annual report on the ES Strategy Action plan was made to the PI and PDR Panel in March 2011. An update was provided regarding the AQAP.				
49 (New)	Increase numbers of people using local bus services.	New action, no previous target.	New action, no previous indicator.	To monitor the increase in 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.
2011 Update	Once BRT starts operating, HCC will be able to provide passenger numbers periodically.				

9.3 Bus Rapid Transport (BRT)

9.3.1 Background to BRT

As set out in a dedication section of the Hampshire County Council website, Bus Rapid Transit (BRT) is a broad term given to a variety of transportation systems that, through improvements to infrastructure, vehicles and scheduling, use buses to provide a service that is of a higher quality than an ordinary bus line.

Unlike light rail solutions, which serve concentrated corridors, buses can be introduced at relatively low cost in a shorter timeframe, and have few physical constraints, allowing them to serve all parts of an urban area.

The rapid transit bus has the advantage that it can run on dedicated routes free of other traffic, as well as on ordinary roads, bypassing congested parts of the highway network and serving housing estates, local shopping centres, hospitals and other locations. Bus rapid transit systems have high quality, purpose-built stops with comprehensive information systems and comfortable waiting facilities for passengers.

9.3.2 South East Hampshire Bus Rapid Transit

The wider BRT network will connect key towns and destinations in South East Hampshire including Gosport, Fareham and Portsmouth, the Queen Alexandra Hospital, Port Solent, Tipner and ultimately Havant, Waterlooville, Segensworth and Whiteley. The network will also be designed to connect with proposed major new development sites including the future North Fareham Strategic Development Area. One recently completed phase of the network is the ZIP Bus Priority Corridor from Clanfield to Gunwharf Quays.

Ultimately, the wider BRT network will directly benefit 100,000 households (around 230,000 people who live within 1km of the proposed scheme), giving them a viable alternative to car travel.

9.3.3 BRT Phase 1 – Fareham to Gosport

The buses that travel on the BRT Phase 1 route will be subject to a special agreement between Hampshire County Council and South Hampshire Bus Operators' Association. The result will be a more efficient service using new, comfortable and low-emission buses that meet a minimum emissions standard of at least Euro V.

BRT Phase 1 is being delivered in two phases:

- Phase 1A – Redlands Lane to Tichborne Way; and
- Phase 1B – Tichborne Way to Military Road.

Phases 1A and 1B follow the disused railway line between Redlands Lane, Fareham and Military Road, Gosport. They bring back a disused public transport route into use as a new, dedicated (bus and cycle only) corridor for reliable and frequent bus travel in one of the most congested parts of Hampshire. Using the new busway, buses will be able to avoid congested parts of the busy A32 so that passengers can benefit from reliable journey times and can plan their onward travel connections.

To ensure that the BRT provides the most effective, efficient and attractive service possible and is successful in delivering benefits such as reduced congestion and emissions on the existing road network, Phase 1 also includes high quality waiting facilities with:

- real-time passenger information;
- comfortable seating;
- solar powered lighting;
- closed-circuit TV for security, and
- special features to ensure accessibility for all.

Annual progress on the development of the scheme will be delivered through future Air Quality Progress Reports. Options for quantifying the air quality impacts and benefits of the BRT scheme (and associated actions described in Table 9.1) will also be reported through Air Quality Progress Reports. It should be noted however, that such assessments are heavily reliant on robust project traffic data being made available.

9.4 Strategic Access to Gosport (2010 - 2026)

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. Through managing these issues, the study is consistent with the goals of Delivering a Sustainable Transport Strategy (DaSTS), in particular by supporting economic growth, promoting equality of opportunity, tackling climate change and improving quality of life.

9.4.1 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.*

Building on LTP2 and DaSTS goals, the study also set out the following objectives (derived through reference to national, regional, sub-regional and local transport planning policies):

- *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.*

Table 9.2 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. 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

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Table 9.2 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 TSCO 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.
Delme Roundabout	Measures to address traffic congestion, road safety and severance.	Gosport Draft Core Strategy Preferred Options.

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Measure	Description of Measure	Reference Document(s)
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.

9.5 LSTF bid LTP3 Policy Objectives (Action 46)

9.5.1 Local Sustainable Transport Fund (LSTF) Bid

HCC is intending to submit a joint bid with both Portsmouth and Southampton City Councils, to the Local Sustainable Transport Fund (LSTF). This will be a Large Project Package bid to the fund and has three strands:-

- 1) A TfSH area-wide public transport smart card;
- 2) Unlocking demand for sustainable modes; and
- 3) Targeted behavioural change.

The LSTF criterion requires applications to target evidenced problems and that targeted and modest solutions must be deliverable within the fund period (by the end of March 2015). It is likely that prioritisation will be on urban areas. Emerging potential ideas are to include modest public transport enhancements on the Gosport peninsula and Fareham area that support a wider BRT network. All enhancements that lead to a future wider BRT network are likely to improve the benefits achievable through each additional phase.

9.5.2 LTP3 Policy Objectives

Policy Objective 7: *Ensure that travel from home to school affordably serves changing curriculum needs, underpins sustainable schools and maximises individual opportunities for education and training.*

Subject to the resourcing and communication issues described for Action 23, there are no outstanding actions for HCC in respect to schools in the area. The input of Policy Objective 7 to developing future targets and indicators will therefore be reviewed once the outcome of the LSTF bid is known.

Policy Objective 10: *Contribute to achieving local targets for improving air quality and national carbon targets through transport measures, where possible and affordable.*

Policy Objective 12: *Invest in sustainable transport measures, including walking and cycling infrastructure, principally in urban areas, to provide a healthy alternative to the car for local short journeys to work, local services or schools; and work with health authorities to ensure that transport policy supports local ambitions for health and well-being.*

Linked to these policies is the Joint Large Project Package Initial Proposal. Specifically in the local context of Fareham, the corridor linking Gosport with Portsmouth (through Fareham), is one of the 15 corridors that HCC identified, 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 RTPI through a range of media, smart cards, improved legibility and connection to the walking and cycling network of adjacent areas.

If funding is secured, these corridors will be used to deliver a series of targeted incentives and improvements to developing sustainable travel. Coordinated under a single social marketing brand to help to encourage behaviour change, the range of initiatives may include: work place and school travel planning, PJP, travel awareness, branding and publicity, Greenfleet initiative to tackle freight trips, cycle training, car clubs and use of social media to encourage behaviour change.

Policy Objective 11: Reduce the need to travel through encouragement of a high-speed broadband network, supporting the local delivery of services and in urban areas the application of 'Smarter Choices' initiatives.

HCC has recently secured Government funding of £8.4m for rural broadband and is currently finalised the detail of how this will be delivered, working with BDUK, suppliers and others to further develop the delivery plans.

As with Policy Objective 7, Policy Objectives 10,11 and 12 will be factored into developing future targets and indicators for Action 46 once the outcome of the LSTF bid is known.

10 Conclusions and Proposed Actions

10.1 Conclusions from New Monitoring Data

Fareham Borough Council has historically monitored for the pollutant NO₂, by way of a continuous analysers and 43 diffusion tube sites.

Assessment of the 2010 dataset showed there to be 8 diffusion tube sites with an NO₂ annual mean in excess of the objective.

No PM₁₀ monitoring was undertaken in 2010.

In light of these findings further analysis of the identified exceedances were undertaken. The conclusions of which are set out in Table 10.1.

Table 10.1 Current Status of NO₂ Annual Mean Exceedances

Site Name	Location	Current Status of Exceedance
G10	107 Gosport Road	Elevated annual mean concentration, 0.8µg/m ³ above the objective. Further years monitoring to be assessed prior to moving to Detailed Assessment. Will be reported on in 2012 Updating and Screening Assessment.
HR1	1 Hartlands Road	34.1 µg/m ³ at the facade.
P1	Portchester Rd/Downend Rd	35.3 µg/m ³ at the facade.
PS1	1 Sentinel Cottages	Within the existing Portland Street AQMA.
PS1A		
PS1B		
PS2	2 Sentinel Cottages	Within the existing Portland Street AQMA.
PS3	38 Portland Street	Within the existing Portland Street AQMA.
E1	Co-located with Elms Rd Monitor	Within the existing Gosport Road AQMA.
E2		
E3		

The identified exceedances of the annual mean NO₂ air quality objectives are either within the existing AQMA's, or at the Gosport Road location which shows a relatively minor exceedance. Given the discussion points in Section 2, a Detailed Assessment is not proposed at this location at this time.

10.2 Conclusions relating to New Local Developments

Fareham Borough Council has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area.

- Development at the Daedalus Airfield;
- Expansion of Waste Transfer Station at Warren Farm; and
- Change of use of existing green waste composter site on Veolia Down End Quarry.

These, along with those highlighted in the 2010 Air Quality Progress Report, (Section 5.3) will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

10.3 Other Conclusions

The report details the latest position with the evolving Local Development Framework and newly published Third Local Transport Plan and the associated linkages to air quality.

In light of Defra's comments on the 2010 Air Quality Progress Report, the targets and indicators for the existing Action Plan measures have been fully reviewed. This has resulted in many examples, in significant revisions to the way that many of the actions will be assessed in subsequent progress reporting years. In some cases actions have been discontinued due to their completion or because the review has shown them to be ineffective. Other significant changes include actions that have been combined to reflect changes in regional and local transport planning plans and policies. For example those now linked through the StAG study.

It is considered overall that these changes and revisions successfully answer the Defra consultation comments, set out in Section 9.2.

10.4 Proposed Actions

The overall conclusions for the assessment are that Fareham Borough Council proposes that a Detailed Assessment is not required for any of the pollutants listed in the Air Quality Strategy 2007, at this stage. The Council will continue to undertake monitoring at the existing locations for the foreseeable future including in the Gosport Road area, which shows a marginal exceedance for 2010.

The next report to be submitted in line with the requirements of LAQM is the 2012 Updating and Screening Assessment, which will update on all the elements set out in this report.

11 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.
- **Local Air Quality Management Policy Guidance LAQM.PG(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 NO₂ 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
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Appendices

Appendix A: Monitoring Data QA/QC

Diffusion Tube Bias Adjustment Factors

Bias adjustment is effectively a calculated factor which shows whether diffusion tubes are over or under reading ambient concentrations and therefore allows for a correction to be made.

The diffusion tubes are supplied and analysed by Gradko International Limited. Before 2009 Fareham exposed diffusion tubes prepared using the 50% TEA in water method. In February 2008, practical guidance was issued by Defra and the Devolved Administrations to harmonise the different steps in UK diffusion tube methodology. As a result of the publication only two methods of tube preparation remained: 20% TEA in water and 50% TEA in acetone. Rather than switching tube preparation methodology during the year, the laboratory began supplying Fareham BC with 20% TEA in water from the January 2009 exposure period.

Factor from Local Co-location Studies (if available)

The Council operated a co-location monitoring site throughout 2009 at Elms Road Roadside site in Fareham. The Bias factor calculated for 2010 was **1.01**.

Discussion of Choice of Factor to Use

With regard to the application of a bias adjustment factor for the diffusion tubes, the technical guidance LAQM.TG (09) and Review and Assessment Helpdesk recommend use of a local bias adjustment factor where available and relevant to diffusion tube sites.

QA/QC of automatic monitoring

Details of automatic monitoring QA/QC is given in Section 2.1.

QA/QC of diffusion tube monitoring

The Workplace Analysis Scheme for Proficiency (WASP) is an independent analytical performance testing scheme, operated by the Health and Safety Laboratory (HSL). WASP formed a key part of the former UK NO₂ Network's QA/QC, and remains an important QA/QC exercise for laboratories supplying diffusion tubes to Local Authorities for use in their Local Air Quality Management work.

Defra and the Devolved Administrations advise that diffusion tubes used for LAQM should be obtained from laboratories that have demonstrated satisfactory performance in the WASP scheme.

Out of a rating of GOOD, ACCEPTABLE, WARNING AND FAILURE, the results for 2009 show that Lambeth Scientific Services were rated as GOOD. This is classified as follows:

GOOD: Results obtained by the participating laboratory are on average within 7.5% of the assigned value. This equates to an **RPI of 56.25 or less**.