Jersey Air Quality Strategy

States of Jersey

FOREWORD

Air quality in Jersey is generally very good. This is due to a combination of factors. As an Island with a significant agricultural heritage and strong service sector, we have a limited amount of polluting industrial activity. However, our high levels of car ownership are reflected in the fact that the greatest contributor to air pollution comes from road transport. Even so, our economic base, combined with the physical location of the Island and the prevailing weather conditions that are in existence, ensure that air pollution levels are below thresholds of concern to human health and the environment. The Jersey Air Quality Strategy has been designed to maintain this positive situation into the future in light of changing working and living practises and technological developments.

Air quality is an important factor in protecting both human health, ecosystems and the environment and so we have a responsibility to make sure that the current good quality air quality is maintained and that any future impacts on air quality in Jersey, both to those that live, work and visit the Island, and to our neighbours are minimised. The air pollutants that are managed through the JAQS are also important in terms of reducing greenhouse gas emissions in Jersey and so can help us in taking forward our policies on mitigating and adapting to the impacts of climate change.

Air quality is not an issue that can be managed in isolation. This strategy recognises these inter linkages and connections. The way we move to and from the Island, the way that we travel around during the day, the way we heat and cool our work and living spaces and the choices we make in procurement of goods and services all have an impact on ambient (outdoor) air quality. This strategy and its supporting detailed project plan will minimise emissions to air from both general day to day activities and specific point sources. The JAQS connects to the policy areas addressing these issues and supports the good work that they are trying to achieve, e.g. through the transport and energy policies.

Jersey has responsibilities to the global community in terms of the international environmental agreements to which it is a signatory. We have made a commitment to work within the spirit of these agreements; this strategy will ensure that we continue to behave as a responsible jurisdiction.

The air quality strategy is pragmatic and provides a proportionate approach to managing air quality issues. The JAQS has been developed in partnership between the Department of the Environment and the Health and Social Services Department. This inter-departmental cooperation and support sets the tone for the future implementation of the strategy.

I welcome this approach which recognises that air quality is not an issue that can be dealt with in isolation, and I look forward to working in close partnership with the Minister for Health and Social Services on its implementation.

Deputy Rob Duhamel

Minister for Planning and the Environment

I am delighted that the Jersey Air Quality Strategy has come to fruition. Good air quality is a fundamental requirement for life and is vital if we are to improve the health and wellbeing of our community.

The JAQS is supported by a comprehensive air quality project plan which sets out the tasks, actions and timetable for each of the policy areas. It includes actions that are the responsibility of both Departments and other key stakeholders in the Island. The implementation of the project plan will be coordinated the Health Protection Service within my Department working in partnership with the Department of the Environment and other Departments and stakeholders.

An important part of this work will include a detailed assessment of air pollution sources and the creation of an emissions inventory to allow us to fully understand local impacts on air quality.

The JAQS focuses on ambient (outdoor) air quality. The monitoring programmes that my Department has undertaken over many years have identified areas where we can be confident that air quality is good. However we cannot be complacent; we must maintain this good status in those areas and we must direct our efforts to bring about improvements in areas where there are known pollution 'hotspots' e.g. in the narrow streets of St Helier where pollution is caused by congested traffic.

In the future, our policy will move forward to include indoor air quality. People spend up to 80% of their time indoors and we already know that indoor micro environments and multiple exposures can contribute to ill health and this can include a range of pollutants associated with outdoor sources as well as issues like Radon gas, indoor combustion appliances and poor building design.

I, too, welcome the inter agency and inter Departmental approach being taken which recognises the synergy between Health and Environment and provides a robust mechanism to prioritise resources to ensure implementation of the JAQS.

Deputy Anne Pryke

Minister for Health and Social Services

February 2013

Supporting document: Air Quality Project Plan

EXECUTIVE SUMMARY

1. The Jersey Air Quality Strategy (JAQS) provides a high level strategy with a set of objectives which provide a framework for ensuring that the high standard of air quality is maintained in Jersey. The strategy is supported by a detailed project plan which sets out the tasks, actions and timetable to implement the strategy.

2. Air quality in Jersey is generally good. This is due to the location of the Island and the prevailing weather conditions that are in existence along with the limited amount of industrial and manufacturing processes. The air quality monitoring programme demonstrates that pollution levels are below thresholds of concern to human health and the environment. The JAQS has been designed to maintain this positive situation.

3. Air pollution is caused by the emission to the atmosphere of certain substances which, alone or through chemical reaction, can damage human health, ecosystems and/or the environment. Air quality is both a local and a trans boundary issue as emissions from outside Jersey can travel large distances in the atmosphere and cause adverse effects locally

4. Air quality is also a global issue. It is recognised that taking action to reduce the effects of climate change provides an excellent opportunity to deliver further benefits to both air pollution and greenhouse gas emissions. Both arise from broadly the same sources and will therefore benefit from many of the same measures[1]. The air quality strategy is designed to complement and develop synergies with the current policy framework in addressing climate change and air quality emissions, e.g. the draft Jersey Energy Plan, the adopted Sustainable Transport Policy and Rural Economy Strategy, and the relevant Health policies. Ultimately poor air quality and the environmental effects caused by it adversely impact upon human health.

5. The requirement for an Air Quality Strategy has been identified within the 2009-2014 Strategic Plan, as an action under commitment 13. Protect and enhance our natural and built environment. The JAQS continues to be supported through the revised strategic plan to ensure that:

> *...everyone in Jersey should have access to outdoor air without significant risk to their health and that there should be minimal impacts from air pollutants on the environment of Jersey or our neighbours... as evidenced by reporting according to international reporting standards*

6. The Health Protection Service commissioned UK consultants, AEA Technology, to provided technical support and calibration services for the air quality monitoring programmes.
7. Jersey has obligations under a number of international conventions, to control and report on a range of potential pollutants. The monitoring of particulates, nitrogen dioxide and hydrocarbons has taken place in Jersey since 1997. The results from the monitoring all demonstrate that the air quality in Jersey is within the limits and

[1] DEFRA; Air pollution in a changing climate March 2010

reporting thresholds set by the protocols to which the Island is a signatory. Ambient air quality can be categorised as good according to UK standards.

8. The greatest proportion of air pollution in Jersey is from road traffic emissions. The 2010 Sustainable Transport Policy (STP) recognises that emissions from transport are significant in the Jersey context of air quality, and presents a series of recommendations which have the potential to reduce emissions from vehicles. Transport emissions of nitrogen oxides ($NO_{x)}$ and particulates (PM_{10}) present the greatest challenges to improving air quality in Jersey[2]. At the current time monitoring stations provide information on these transport pollutants at key congestion points. There may be the need to undertake some additional monitoring to gain a clearer understanding of pollutant levels within vehicles as well as the relationship of transport pollution to ambient air quality. The STP is supported by the draft Energy Plan which encourages the take up of ultra low emissions vehicles and encourages a modal shift to more sustainable transport options than the use of single occupancy cars.
9. There are also a small number of industrial sources which have been identified as potential point sources (linked to a specific location) of emissions. These include the JE plc power station and the Island's crematorium. Emissions from the energy from waste plant at La Collette are strictly controlled by the emission limits set out within its waste management licence and reporting requirements which reflect the requirements of the European Waste Incineration Directive (WID). In addition, there are emissions from a variety of domestic sources, commercial activities, light industry and manufacturing that can only be estimated.
10. The industrial point source operators are aware of their emissions and the need to ensure their businesses are working in a responsible manner. The strategy proposes establishing an inventory of point source emissions and continuing to work in partnership to ensure that these point sources do not exceed emissions limits as specified through EU and UK best practice. Jersey has very limited regulatory controls over emissions and any improvements required would need to be generated by mutual agreements with businesses.
11. Emissions of mercury from the crematorium are currently unknown and require further investigation. However, based on the frequency of use, it is likely that the crematorium will not generate enough mercury emissions to be of concern to health, although the wider environmental issues may be an area that requires further investigation.
12. The JAQS and project plan will be reviewed and revised annually by the inter-departmental air quality project team by monitoring and updating the detailed project plan. Where any significant changes or changes are identified, these will be assessed and may be used to inform future decision making.

[2] Draft Sustainable Transport Strategy 2010 and draft Energy Plan 2012

1. AIMS AND OBJECTIVES AND RESOURCES

1.1. Aims and objectives

Air quality in Jersey is generally good. This is due to the location of the Island and the prevailing weather conditions that are in existence. Along with the limited amount of industrial and manufacturing processes, Jersey is a fortunate position in terms of its air quality monitoring which demonstrates that pollution levels are below thresholds of concern to human health and the environment. The Jersey Air Quality Strategy (JAQS) has been designed to maintain this positive situation.

The aim of the Jersey Air Quality Strategy (JAQS) is that:

...everyone in Jersey should have access to outdoor air without significant risk to their health and that there should be minimal impacts from air pollutants on the environment of Jersey or our neighbours... as evidenced by reporting according to international reporting standards

The objectives of the strategy have been taken from the scrutiny review report on air quality. These are listed below.

Objectives of JAQS
Identify pollutants with known potential for health and environment impacts and their potential sources[3];
Set appropriate standards[4] and objectives such that all critical loads and exceedences are mitigated to an achievable and cost effective extent';
Set out long term air quality objectives and policy options to further improve air quality in Jersey into the long term;
Establish an air quality monitoring regime;
Set out proposals for publishing levels of local air pollution;
Be used as a basis to inform new legislation if appropriate;
Clarify roles and responsibilities in monitoring and enforcing air quality levels and for the long term delivery of the actions agreed within the Strategy.

The scope of the JAQS is ambient (outdoor) air quality. Whilst recognising the links to indoor air quality and the associated health issues, the strategy does not directly address issues in relation to indoor air quality. This has been identified as a work stream for HSS Department in the future.

The JAQS focuses on the impacts on human health and the environment from emissions that have an effect on ambient air quality and recognises the links with climate change.

[3] Objective has been changed to 'Identify pollutants with known potential for health and environment impacts and their potential sources' on advice of AEA review Nov 2010

4 Objective changed on advice of AEA Nov 2010. 'Set appropriate standards and objectives such that all critical loads and exceedances are mitigated to an achievable and cost effective extent'

There are a wide number of linked policy areas where implementation of the JAQS will require cooperation and a partnership approach to meet the objectives of the strategy, e.g. health, planning permits, EIA and SEA consultation, transport policy and implementation, input to contract specifications.

A project team delivery approach between stakeholder Departments and organisations will be adopted to ensure that all relevant policy synergies are maximised.

This strategy supports the maintenance of the air quality monitoring programme which is currently in place as this enables Jersey to meet its obligations under the international environmental agreements to which it is a signatory and to maintain a high quality ambient air quality environment for all.

1.2. Air Quality Limit Values and Objectives

The current air quality limit values in place in Jersey are based on WHO, EU and UK limit values. These limit values should be incorporated into all aspects of development and management of air quality including assessment of EIA and SEA reports as part of the planning process.

Pollutant	Limit Value	Source
NO_2	Annual mean should not exceed 40 μgm^{-3}	WHO non-mandatory guideline
	200 μgm^{-3} as an hourly mean, not to be exceeded more than 18 times per calendar year. To have been achieved by 1st January 2010. 40 μgm^{-3} as an annual mean, for protection of human health. To have been achieved by 1st January 2010. There is also a limit for annual mean total oxides of nitrogen (NO_X), of 30 μgm^{-3}, for protection of vegetation (relevant in rural areas only).	Ambient Air Quality Directive
Toluene	value of 0.26 mg m^{-3} (260 μgm^{-3}) for the weekly mean.	WHO non-mandatory guideline
Benzene	5 μgm^{-3} for annual mean, to have been achieved by 2010.	EU limit value UK Air Quality Strategy
Particulates	PM_{10} Annual mean should not exceed 40 μgm^{-3} 24 hour running mean, 50 μgm^{-3} not to be exceeded more than 35 times in a year.	EU limit value UK Air Quality Strategy
	$PM_{2.5}$ Annual mean should not exceed 25 μgm^{-3} Objective for 2015,	EU limit value UK Air Quality Strategy

1.3. Resources

The Health Protection Service will prioritise workloads and budgets to provide resources to coordinate the implementation of the JAQS, the actions outlined in the supporting detailed project plan and to continue to implement the existing air quality monitoring programme

The air quality strategy links with a number of other corporate policy areas. The objectives in the JAQS support these corporate areas of activity. The individual work streams identified in the supporting project plan will be delivered by a wide range of stakeholders.

The Health Protection Service will coordinate, monitor and review the implementation of the project plan. The inter Departmental Air Quality project team will report to the Minister for Planning and the Environment and the Minister for Health and Social Services.

POLICY 1: Air quality project team

P1: The Minister for Planning and the Environment, working with the Minister for Health and Social Services will establish a inter Departmental air quality project team which will be coordinated by the Health Protection Service that will;

a) Oversee the implementation of the JAQS detailed project plan;

b) Undertake an annual review and report on the progress with implementation of the project plan.

2. AIR QUALITY – HEALTH AND CLIMATE CHANGE POLICY LINKS

Air pollution is caused by the emission to the atmosphere of certain substances which, alone or through chemical reaction, can damage human health, ecosystems and/or the environment. Air quality is both a local and a transboundary issue as emissions from Jersey can travel large distances in the atmosphere and cause adverse effects elsewhere and vice versa.

2.1. Air quality impacts on health and environment

The single pollutants causing the most damage to human health, ecosystems, and materials are nitrogen oxides (NO_x), sulphur dioxide (SO_2), ammonia (NH_3), ground level ozone and airborne fine dust known as particulate matter (PM). Ground-level ozone and particulates (PM-PM_{10}, $PM_{2.5}$) are the pollutants that cause the most damage to human health. Ozone is not emitted directly but is formed through the reaction of volatile organic compounds (VOCs) and nitrogen oxides in the presence of sunshine. Fine dust can be emitted directly to the air (primary particles) or can be formed in the atmosphere by certain gases (secondary particles) such as sulphur dioxide, nitrogen oxides and ammonia.

Air pollution can have various harmful effects. For example:

- **Human health**: Air pollution can have an impact on people's health in the long and short term, ranging from minor effects on the respiratory system to reduced lung function, asthma, chronic bronchitis, cancer and reduced life expectancy. The Annual Report of the Medical Officer of Health[5] identifies the health impacts associated with transport emissions. NO_2 is particularly harmful to those with pre-existing respiratory disorders and is known to exacerbate conditions like asthma, even at low levels.

- **Acidification**: Acid deposits (caused by SO_2, NO_x) and ammonia damage forests, rivers, lakes and other ecosystems as well as materials such as buildings and historical sites.

- **Eutrophication**: Eutrophication is an excess input of nitrogen nutrients (nitrogen oxides and ammonia) which disturbs the structure and function of land-based and aquatic ecosystems. Excess nitrogen in terrestrial ecosystems can lead to a loss of biodiversity and nitrogen leaching into water courses.

- **Material damage**: Buildings, including historical sites, can be damaged by acidification and particulates.

Actual and potential local impacts

The monitoring reports completed by AEA provide information to show that [6] emissions from road transport are the primary source of pollution at the centres of highest

[5] Our Island, Our Health, Report of Medical officer of Health 2010
[6] Air Quality Report 2009

population in Jersey. As a result, there are periodic surveys of the substances of most concern (oxides of nitrogen, particulate matter, and benzene, toluene and xylene (BTX)). Road transport emissions - particularly of NO_2 and PM_{10} are higher in certain vulnerable locations – such as the Weighbridge and Beaumont.

Industrial emissions also have the potential to impact on Jersey's air quality and on known sensitive sites. A number of other potential sources of pollution have also been identified; these include domestic heating, agriculture, and small commercial/industrial combustion sources.

2.2. Climate change and air quality

It is recognised that taking action to reduce the effects of climate change provides an opportunity to deliver further benefits in terms of both air pollution and greenhouse gas emissions. Both arise from broadly the same sources and will therefore benefit from many of the same measures[7].

Whereas greenhouse gases persist in the atmosphere for a long period, some air pollutants have a relatively short life and so their impact is lower and therefore proportional to their ground level concentration. This picture is further complicated by the fact that some 'traditional' air pollutants act as greenhouse gases too, (ozone, for example) or are involved in their formation (NO_x, for example).

The potential impacts of climate change in Jersey have been outlined in detail in 'Turning Point'. Changes in the climate will impact on, amongst other things, air quality, health and the environment. Delivery of air quality and climate change goals require changes in the way we all live, work and relax. A key part of making these changes will be public engagement to encourage more sustainable behaviours in relation to, e.g. transport choices.

At a national and international level, power generation and road transport are two of the most significant sources of both air pollutants and greenhouse gases. Of these, road transport is the most significant issue in relation to air quality issues in Jersey. In terms of power generation, Jersey imports nearly all of its energy requirements from France in the form of low carbon electricity from the French grid. On Island power generation is largely for back-up purposes, so local emissions from power generation are actually very low.

The Jersey Pathway 2050 Energy Plan will provide policy mechanisms to mitigate the effects of climate change by reducing emissions at source, ensuring security of supply and setting challenging targets to achieve an 80% reduction in carbon emissions by 2050 on 1990 levels. The Energy Plan provides a policy framework for the reduction in emissions from on-Island activities, across all emissions sectors, it also identifies the need for the development of a climate change adaptation strategy for Jersey which will incorporate air quality and climate change policy objectives.

Air quality and climate change co-benefits can be realised through a range of actions as outlined in the Sustainable Transport Policy, Rural Economy Strategy and the draft

[7] DEFRA; Air pollution in a changing climate March 2010

Energy Plan. The actions include promoting ultra low-emission vehicles, use of renewable sources of electricity which do not involve combustion, implementing energy efficiency measures, and reducing agricultural waste and decreasing demand for nitrogen. Other policy areas also contain recommendations to address the health and social issues of climate change and air quality.

POLICY 2: Air quality and climate change adaptation policy

P2: The Minister for Planning and the Environment, working with the Minister for Health and Social Services, will ensure an integrated approach is taken in the development of a Climate Change Adaptation Strategy as identified in the draft Energy Plan.

2.3. Indoor air quality

Whilst the scope of the JAQS does not include air quality of indoor environments or exposure in the workplace, which is managed through Health and Safety requirements, it is recognised that indoor air quality can have a major influence on the health, comfort and well-being of building occupants. Poor indoor air quality may contribute to a number of respiratory illnesses, reduced productivity in offices and impaired learning in schools and in the case of Radon gas, lung cancer.

Poor building design contributes to lack of ventilation and poor air circulation which can increase concentrations of air pollutants in micro environments e.g. in stairwells, hall ways and corners. In some cases these concentrations can be higher than those found out of doors (ambient concentrations).

Pollutants' impacts on health depend on their toxicity, concentration and exposure period, and range from odour to irritation to serious toxic effects. The control of pollutants depends on both tackling their sources and having adequate ventilation with 'fresh' outdoor air. The Jersey Building Bye-Laws already set requirements for solid fuel cookers and stoves in order to reduce nuisance from smoke and fumes, and to ensure adequate ventilation of a property.[8] The draft Energy Plan sets out policies and actions to introduce more challenging building bye-laws by 2014 and 2018 for both domestic and commercial developments and refurbishments.

The scope of indoor air quality work in Jersey at the current time is in relation to the health impacts of smoking in the home; this will be widened over time to include all indoor health impacts. This programme of activity is led by the Minister for Health and Social Services and implemented by the Health Promotion Unit.

The European Commission is working to harmonise existing voluntary schemes for labelling of low-emitting products and there is clearly scope for such a scheme to be adopted in the UK[9]. The European Commission also recognises that there is a case for development of an EU indoor air quality directive. High level strategy discussions have taken place with key stakeholders. As yet, no timetable has been published for the development of this directive, but when further information is obtained States of Jersey will need to consider the implications of compliance with any directive that emerges.

[8] http://www.bre.co.uk/page.jsp?id=720
[9] http://www.building4change.com/page.jsp?id=444

The States Housing portfolio is subject to a detailed maintenance programme. The Housing white paper (April 2012) outlines a changed future operational structure of the Housing service. The Housing White Paper proposes the introduction of a regulator with a requirement to ensure all social housing is brought up to the UK Decent Homes Standard[10]. This includes both the energy efficiency and liveability of properties.

Consideration will need to be given in relation to information for the private rented sector to ensure that the materials specified and used in housing repairs and maintenance meet the standards as specified in the Construction products directive 89/106/EE[11].The issues of indoor air quality in relation to domestic properties could be addressed through the implementation of the Public Health (Dwellings) Legislation which is being brought forward by the Minister for Health and Social Services in 2013/14.

POLICY 3: Indoor air quality

P3: The Minister for Planning and the Environment, working with the Minister for Health and Social Services will raise awareness of indoor air quality issues by;

a) Working with the Development Control and Building Control team to ensure planning permits and revised Building Bye Laws take into account indoor air quality.

b) Ensuring that awareness of air quality issues is raised with the Eco-Active Business community and Eco-Active States departments.

c) Supporting the Minister for Health and Social Services in bringing forward the Public Health (Dwellings) Legislation in 2013/14.

d) Maintaining a watching brief to monitor the developments of the EU indoor air quality products labelling initiative and indoor air quality directive and to consider the implications when they becomes available.

e) Continuing to highlight the need for householders and businesses to control Radon levels in buildings.

[10] http://www.communities.gov.uk/publications/housing/decenthome
[11] http://ec.europa.eu/enterprise/sectors/construction/documents/legislation/cpd/index_en.htm

3. AIR QUALITY MONITORING PROGRAMME

1. There is a targeted local air quality impact monitoring programme in place, with diffusion tubes and automatic analysers which monitor particulates, hydrocarbons and nitrogen dioxide.

2. Based on the monitoring of particulates, nitrogen dioxide and hydrocarbons that has taken place in Jersey since 1997, the ambient air quality situation in Jersey can be classed as good, based on WHO, UK and EU limit values. These limit values relate to the pollutants that are required to be monitored in terms of the EU ambient air quality directive and UK Air quality strategy and indicate the thresholds above which pollutants cause harm to human health and the environment. The limit values can therefore provide an indication of the ambient or outdoor air quality in Jersey.

3. Although there is no requirement for Jersey to report to the UK or EU on air quality issues, Jersey does have obligations under a number of international conventions, to control and report on a range of potential pollutants if threshold values are breached. At the current time all pollutants are within threshold values.

The current monitoring regime shows that the pollutants identified in the UK air quality strategy, the EU air quality directive (2008/50/EC) and the protocols to which Jersey is a signatory are not above the lower reporting thresholds.

4. Most air quality issues are associated with vehicle activity and, possibly, domestic heating. At present the indications are that the current NO_x and $PM_{10/2.5}$ monitoring will continue to meet known requirements as there has been a trend downwards or stability in levels of these pollutants. At the current levels that are being recorded, the existing monitoring is expected to remain compliant with UK and EU requirements, unless the limit values are revised. It is recommended that this position is reviewed annually and any upgrading of monitoring equipment is deferred until either pollution levels approach limits or existing equipment becomes obsolete.
5. Benzene monitoring is carried out to provide an indication of hydrocarbon levels associated with vehicle emissions and the effectiveness of, vapour recovery from fuel delivery operations. As fuel filling stations upgrade their forecourts, vapour recovery devices are being fitted as mandatory in line with EU standards. The remaining issue is with regards to the fuel delivery depot at La Collette. Further work will be required to ascertain whether there is a human health risk that requires retrospective action to retrofit fuel recovery devices. Current benzene levels indicate that it is unlikely to be a problem.
6. As air quality in Jersey is generally very good, there is no evidence to support extending or upgrading the existing monitoring programme and equipment, although it is recognised that there is a need to review this to maintain and improve on current standards..
7. Ambient air monitoring is undertaken in order to maintain an overview of the impacts of both emissions from transport and diffuse emissions from industrial and other non-industrial sources. Annual monitoring reports are produced and are available to the public on www.gov.je . Near real-time information is provided on the Meteorological office website www.jerseymet.gov.je .

8. However, on the basis of the monitoring completed, it is evident that road transport emissions of NO_2 and PM_{10} are the greatest contributor to air pollution in Jersey. The pollutants from vehicles may pose a health and environmental risk in certain vulnerable locations. With a number of large developments underway in the Waterfront area of St. Helier the number of areas at risk could increase. Consequently it is prudent to maintain a watching brief on the situation to decide whether further monitoring is required, and to undertake periodic surveys to monitor changes. These surveys amount to undertaking some small-scale surveys, either by tube or portable analyser deployment to assess the local situation. These assessments might then be used as a precursor to any larger programme, if necessary. As a condition of planning approval, the developers may be are required to undertake air quality monitoring before, during and after the construction phases to assess impact.

9. There is already an active programme of continuous monitoring for NOx, and it would be prudent to continue with the existing diffusion tube surveys to monitor trends or identify emergent 'hot spots'[12]. It is recommended that the current diffusion tube monitoring of BTX continues as a minimum commitment to monitoring this group of known carcinogens[13].

10. In order to assess the potential impact on local health and sensitive ecological sites, of emissions from non-transport sources, additional information is needed. The Health Protection Service has commenced a scoping activity and will extend this to determine local impacts of the main industrial installations and an emissions inventory will be produced. Where a risk is identified, specialist monitoring will be undertaken to quantify the risk.

11. A review has been completed to identify the requirements for monitoring air quality in Jersey in relation to international environmental agreements to which it is a signatory.

12. The monitoring requirements are mainly limited to the need to prepare inventories of specific pollutants. Accommodation is already made for Jersey, either directly or indirectly, in the UK National Atmospheric Emission Inventory and Greenhouse Gas Inventory. For those few that specify measurements, the spatial resolution of the data required is relatively large and Jersey is likely to be able to access either UK or French monitoring sites to assess compliance without necessarily having to set up monitoring stations.

13. An outline of the current ambient air monitoring programme and current pollutant levels reported are summarised in the table below. Full details are provided in the annual monitoring reports available on www.gov.je

[12] This will require a re-assessment of the situation from time to time (~yearly) and relocation of tubes if necessary.
[13] Air Quality Report, 2009.

Pollutant	Monitoring Programme	Overview of current levels
NOx	Nitrogen Dioxide (NO_2) Chemiluminescence Analyser (Automatic Monitoring) at Halkett Place Nitrogen Dioxide (NO_2) Diffusion Tubes, 12 sites across the Island.[14] No requirement for further automatic NOx monitoring at levels currently being recorded.	The 1-hour mean at the Halkett Place automatic monitoring site remained below 200 µg m-3 throughout 2011. Therefore this site met the EC Directive limit value and AQS objective for this parameter. Annual mean NO2 concentrations did not exceed 40 µg m-3 at any sites in 2011. Therefore, all diffusion tube sites met the limit value for annual mean NO2 concentration. The 30 µg m-3 limit for protection of vegetation is only applicable at rural sites, and is therefore only relevant to Rue des Raisies. The annual mean NO2 concentration of 5.8µg m-3 at this rural site was well within the limit value.
PM_{10} & $PM_{2.5}$ NOTE: Metals and non-volatile POPs can be measured on the filter substrates used to determine the PM emissions	Health Protection Services monitor for particulates (PM_{10}) at two locations on the Island; Central Market, Halkett Place, St. Helier since 2004 and Havre Des Pas since 2006 (now Howard Davis Park) using 2 Turnkey Osiris Particle Monitors They are designed to continuously monitor particle levels, in particular Total Suspended Particles (TSPs), PM_{10} (Particles with an aerodynamic diameter of 10 microns) $PM_{2.5}$ and PM $_{1.0}$.	The Market site from 1st January to 31st December 2011 (85% data capture) inclusive showed the EC and UK Air Quality objectives was exceeded 31 times during this period. The Havre Des Pas site results for the period 1st January to 31st December 2011 (88% data capture)showed the EC and UK Air Quality objectives was exceeded 10 times
Hydrocarbons (Benzene, Toluene and Xylene -BTX)	BTX diffusion tube survey in place 6 sites across the Island	Of the hydrocarbon species currently monitored on Jersey, only benzene is the subject of any applicable air quality standard. The EC Directive on Ambient Air Quality and Cleaner Air for Europe sets a limit of 5 µg m-3 as an annual mean to be achieved by 2010. All monitoring sites on Jersey met this limit during 2011.

[14] See annual air quality monitoring reports for details of locations and readings on www.gov.je

POLICY 4: Air quality monitoring and reporting

P4: The Minister for Planning and Environment will work with the Minister for Health and Social Services to ensure that the ambient air quality monitoring systems, strategies employed and measured concentrations meet the reporting requirements of protocols to which Jersey is a signatory (see policy 11)

a) The upgrading of monitoring equipment will be reviewed if either pollution levels approach limits or existing equipment becomes obsolete;

b) Assess the monitoring requirements with regard to industrial emissions and ensure that where risk is identified adequate mitigation strategies are put in place to minimise harm to human health and the environment;

c) Review the current monitoring programme to ensure it is adequate and fit for purpose in order to identify any potential health or environmental risks and to take action accordingly;

d) Continue to provide annual reports on ambient air quality monitoring results and to make these available to the public through an improved website (see JAQS policy 10)

4. SOURCES OF EMISSIONS IN JERSEY

As already stated, there are a variety of sources of emissions in Jersey (industrial, transport and domestic) that may impact on air quality.

Air quality monitoring undertaken since 1997 has indicated that the main pollutants of concern in Jersey are benzene (90% from car refuelling and fuel storage); nitrogen dioxide (NO_2 – road transport, electricity generation, shipping and domestic sources); particulates (PM_{10} – road transport)

The AEA 2009 and 2010 air quality reports provide details of these key sources of emissions, which potentially have an impact on air quality. The summary findings and recommendations have been used to develop the JAQS policies and associated detailed project plan.

The following four sections provide details and policies in respect of the major emissions sources in Jersey:

- Transport
- Industrial sources
- Light Industry, agriculture and manufacturing
- Other sources

A. **TRANSPORTATION EMISSIONS**

Road transport accounts for over one third of final energy consumption in Jersey and is the key contributor to air pollution. NO_2 and PM_{10} from road transport emissions present the greatest challenge to Jersey in terms of improving air quality.

A number of potential pollutant "hotspots" have been identified including locations at Georgetown in St Saviour, Beaumont in St Peter and in St Helier: First Tower, the former Bus Station, Broad Street and La Pouquelaye. Other sites identified as being at risk of elevated levels of nitrogen dioxide[15] include Le Bas Centre, Mont Felard, Robin Place, Saville Street/Rouge Bouillon and Beresford Street.

The Sustainable Transport Policy (2010) brings forward recommendations to introduce an emissions testing regime to be included within a commercial vehicles operators licence. Rec 7.8. The draft Energy Plan supports the implementation of the STP and makes further recommendations to reduce emissions from transport.

The Sustainable Transport Policy, was adopted by the States in 2010. Implementation of the recommendations within this plan will improve air quality both by reducing the amount of road traffic and by increasing the proportion of vehicles with lower levels of emissions. The STP contains a suite of recommendations which will impact on all transport operations.

The STP includes a wide range of recommendations to meet an overall target of reducing peak hour traffic levels to and from St Helier by 15% by 2015. In 2009 TTS introduced a simplified version of this with an 'eco permit' scheme offering 50% discount on parking card charges for vehicles within the UK's emissions rating category A (under 100gms CO_2/km) and hybrid vehicles in category B (under 120gms CO_2/km).

The STP also contains recommendations to encourage low or zero emissions vehicles and also to introduce emissions testing to ensure that the existing fleet is maintained appropriately so as to reduce air pollution from vehicles as much as possible. The draft Energy Plan also provides policy direction on the introduction of low emissions vehicles and supports the emissions testing of vehicles.

Currently, only about 1,000 vehicles (1%) are subject to annual testing at Driver Vehicle Standards. These include buses, taxis and oversize trucks. This ensures that the emissions of those vehicles comply with the published levels of emissions for that vehicle at year of manufacture. 40% of vehicles on Jersey's registration system are over 10 years old and so do not meet the requirements of the Euro 3 standard. All vehicles manufactured for sale in the EU after 2000 are required to meet the requirements of the Euro 3 (2000) standard - 98/69/EC[16]. Whilst there is an issue with respect of the age profile of the vehicles in Jersey, the Euro 3 manufactured vehicles are now working their way through the 2nd hand market, this external driver provides a mechanism that over time will ensure all vehicles operating in Jersey are meeting the Euro 3 standard. The introduction of an emissions test alongside a road worthiness test will ensure the existing commercial and domestic vehicles are operating to the requirements of the standard, and will ensure that older vehicles are maintained in line with the requirements.

[15] Diffusion tube surveys in recent years have actually demonstrated compliance at all sites in 2009,
[16] Euro 3 (2000) for any vehicle - 98/69/EC

Vehicles in the States of Jersey fleet are replaced on a planned replacement basis, by 2011 all vehicles within the fleet were at least Euro 3 compliant. Lease vehicles are renewed annually and vehicles specifications for fuel efficiency and emissions levels are included in the contract. In 2013, 10 electric vehicles were included in the States of Jersey fleet.

Other methods of transport – shipping and aviation

The control of shipping emissions comes under the requirements of the Marpol Convention (pollution from ships) which has been extended to Jersey. Ratification is being implemented in a stepwise manner. The intention is to extend ratification of the air pollution sections of the Marpol convention in 2013/14.

The draft Energy Plan notes that in addition there is a considerable linkage between economic growth and on/ off island transport links. The JAQS supports the draft Energy Plan which recognises developments in the international aviation sector which is working to increase fuel efficiency and so reduce emissions. Whilst the development of international aviation standards is outside the control of the JAQS, the Island will benefit from these improved operating standards as they are implemented by aircraft operators providing services to and from the Island.

POLICY 5: Emissions from transport

P5: The Minister for Planning and Environment will work with the Minister for Transport and Technical Services to reduce emissions from transport by;

a) Supporting the recommendations in the Sustainable Transport Policy and its subsequent revisions, which contribute to improved air quality through reduced transport emissions, and ensure that the monitoring and reporting of the policy includes air quality emissions information.

b) Ensuring that all States vehicles are operating to the highest emissions standard according to operational requirements.

c) Ensuring all new developments above the required threshold submit a workplace travel plan as part of the planning process.

d) Supporting the Minister for Economic Development to implement the requirements of the Marpol convention through the Shipping (MARPOL)(Jersey) Regulations.

B. EMISSIONS FROM INDUSTRIAL SOURCES

The Health Protection Service has started work on the creation of an emissions inventory which has identified a number of industrial sources that have the potential to cause air pollution.

These are all relatively small facilities with the exception of the JE plc power station and the energy from waste plant at La Collette.

A small amount of quarrying is also undertaken on the Island and whilst this may contribute to particulates emissions, currently there is no data available on these emissions. The major quarrying operator is fully accredited to the international management standard ISO14001.[17]

A summary table of potential industrial sources of emissions is included below:

Industrial source	Air Quality management currently applied	Mechanism
Energy from Waste plant (La Collette)	EC Waste Incineration Directive	Licence through Waste Management (Jersey) Law 2005
JE plc Power Station	JE plc seeking derogation under EC Large Combustion Plant Directive	Voluntary emissions monitoring. Environmental management system in place.
Animal Cremator (HDF)	UK's Process Guidance Note 5/3 (04), Secretary of State's Guidance for Animal Carcase Incineration	As a condition of planning permit
Pet Cremator (to be relocated to HDF)	Standard rules SR2008No26 – animal carcass incinerator (pet crematorium)	As a condition of planning permit
Jersey Dairy	Voluntary environmental management system in place	Planning and waste water permits
Crematorium (Westmount)	UK's Process Guidance Note 5/2 (04) Secretary of State's Guidance for Crematoria	Ongoing monitoring to ensure compliance. Additional monitoring required to establish mercury emissions.

Energy from waste facility (EfW)

The energy from waste plant was constructed and commissioned in 2011. The EfW plant is regulated by the Department of the Environment under licence through the Waste Management (Jersey) Law 2005, and is required to achieve compliance with the stringent standards set within the EC Waste Incineration Directive. These apply to all municipal solid waste (MSW) incinerators and energy from waste facilities in Europe.

[17] NOTE: The attention given to quarrying should be tailored according to their local impact. In the UK, for instance, quarrying is regulated under the Environmental Permitting Regulations (via Process Guidance Note 3/8 (04)) and EU countries must report emissions, under the ERTR, for larger quarries.

Emissions to the atmosphere from the EfW facility are monitored for a wide variety of potential pollutants, including continuous monitoring for oxides of nitrogen, sulphur dioxide, hydrogen chloride, hydrogen fluoride, particulate matter (dust), carbon monoxide, and volatile organic compounds, and periodic monitoring for dioxins and furans, dioxin like PCB's, polycyclic aromatic hydrocarbons and specific heavy metals. TTS, as the operator of the EfW, has installed continuous emission monitoring systems (CEMS) for specified key emissions including particulates. The CEMS equipment is subject to daily internal calibration checks and a mandatory independent quality assurance check in accordance with the relevant International and British Standards. TTS are required to provide the regulator with records of for example, each measured daily and ½ hourly average for particulates. The equipment records emissions of all particles below 10 micrometres (PM_{10}), which include those below 2.5 micrometres ($PM_{2.5}$) as a sub-set. The full details are set out in Schedule 4 of the EfW waste licence. The air pollution emission data is to be uploaded to the internet in due course.

Jersey Electricity Company (JEC) Power Station at La Collette

The Jersey Electricity power station, built in 1965, is located at La Collette. Its role has changed over the past 45 years from the main source of generation to the control centre for the Channel Island Electricity Grid (CIEG). The CIEG comprises two 90 MW power cables that supply power to Jersey and Guernsey. The first, commissioned in 1985 and is capable of supplying 55 MW of power, the second commissioned in 2000 is capable of supplying up to 90 MW. These two cables now supply Jersey with more than 95% of its normal power demand and normally meet the full Island load demand for nine months of the year. A third interconnector will be commissioned in 2015.

The power station has an important role as an emergency stand-by generation facility. It comprises steam, gas and diesel turbines, which are used to supplement imported electricity from the European grid in the event of unforeseen supply interruptions. There are eight flues combined within the stack, although two are redundant at present.

At times when electricity demand exceeds the capacity of the interconnector, Jersey injects power from its own indigenous plant, or accepts power from Guernsey's indigenous plant. The presence of generators in Jersey and Guernsey provides contingency cover for failure of the mainland interconnector. Occasionally power is provided back to France.

The gas turbines, while quickest to start up, are expensive to run and serve as an emergency back up to be used as a quick recovery option. They are tested once a month. In the event of a prolonged loss of grid power, the gas turbines are displaced by the more efficient base load generation plant, comprising steam and diesel turbine generators. The boilers and diesel generators are fired with heavy fuel oil, although they do start up and shut down on ultra low sulphur diesel fuel. The gas turbines run on ultra low sulphur diesel fuel. Average winter demand of electricity in Jersey is about 140 MW with a peak of around 160MW.

Emissions from the JE plc Power Station are not currently regulated and whilst there is no local mechanism to do so JE plc are undertaking voluntary emissions monitoring in line with the requirements of their environmental management system. The EU large combustion plan directive allows existing combustion plants to be exempted from compliance with emission limit values provided that the operator undertakes not to operate the plant for more than 20,000 hours starting from 1st January 2008 and ending

no later than 31st December 2015. This exemption will apply to the JE plc power station due to the limited hours of operation.

The Island Crematorium

The crematorium is over 30 years old. Pollutants produced from crematoria may include dioxins and furans, mercury, particulates, hydrogen chloride and carbon monoxide. It is probable the Jersey's crematorium is a source of mercury on the island, however, due to the frequency of use it is unlikely that these levels will be of harm to human health. Odour can also be a problem. Since the publication of the Air Quality Strategy 2003[18], new plant has been introduced that meets current UK process guidance notes emissions standards. There is currently no specific local legislation to regulate emissions from this facility, however, the crematoria are operated, as a requirement of Statutory Nuisances (Jersey) Law 1999 by the Health Protection Service, to the standards set out within the UK's Process Guidance Note 5/2 (04), Secretary of State's Guidance for Crematoria. Annual testing is required to ascertain the emissions of total particulates, Hydrogen Chloride Carbon Monoxide and organic compounds excluding particulate matter expressed as carbon.

Bellozane waste management facilities

The municipal waste incinerator at Bellozanne was decommissioned in 2012 and will be demolished during 2013. The old plant has been replaced with the Energy from Waste facility (EfW) located at La Collette[19]. The demolition of the Bellozanne site will be controlled through the planning process and appropriate permits. Other waste disposal facilities in the Bellozanne Valley include hazardous waste collection and disposal facilities, clinical waste incineration, sludge drying, oil recovery, ash separation and treatment and ferrous and non-ferrous metal extraction. Any waste activity covered by the Waste (Jersey) Law and its exemptions will be subject to regulation of emissions through a waste licence.

[18] An Air Quality Strategy for Jersey 2003: A report produced for the States of Jersey, AEA
[19] Energy from Waste and Bulky Waste Facilities – Environmental Impact Statement 2007

POLICY 6: Emissions from industrial sources

P6: The Minister for Planning and Environment will work with the Minister for Health and Social Services to ensure that negative impacts of emissions from industrial processes are minimised by;

a) Developing a register of point source emissions which will be constructed and maintained by the Health Protection Service. Where risk is identified, work will take place with the operator to put in place appropriate mitigation strategies based on EU and UK best practice guidance notes.

b) Ensuring that, where applicable, all emissions arising from waste operations are controlled through Waste Management (Jersey) Law, waste licences, in line with EU and UK best practice

c) Ensuring that adequate controls on new industrial developments are put in place through the planning permit process, including requirements for environmental impact assessments and strategic environmental assessments where relevant; using air quality limit values as set out in the JAQS.

d) Establishing the position with regard to emissions of mercury from the crematorium, and if risk is identified, work with the operator to put in place appropriate and proportionate mitigation strategies.

C. LIGHT INDUSTRY, AGRICULTURE AND MANUFACTURING

Industrial processes in Jersey are generally limited to 'light industry' including manufacturing, warehousing and distribution at a number of established industrial estates distributed across the Island, including Rue des Pres Trading Estate, St. Saviour; Jersey Steel, Beaumont, St. Lawrence; St Peter's Technical Park, St. Peter; Springside, Trinity; L.C. Pallot Properties, Trinity; Barrette Commercial Centre, Mont Mado, St. John; and Thistlegrove, St. Saviour.

There are a number of smaller industrial operations, including the port; these contribute towards an increase in the total emissions of pollutants on the Island. These activities include printers, dry cleaners, agricultural activities, and the storage and handling of organic chemicals at the port. In the food industry there are a number of operations which will give rise to emissions of pollutants to air. The three boilers at the Jersey General Hospital use ultra low sulphur fuel oil which meets the requirements of EC Directives.

The impacts of emissions from domestic heating, agriculture, and small commercial/ industrial combustion sources are not likely to be significant provided that biofuels (particularly wood) are not used extensively in urban areas or unregulated industrial use of solvents or other potentially toxic substances.

Emissions from light industrial and manufacturing activities

Emissions from industrial processes have the capability of impacting on air quality. Where this risk is significant, either by virtue of the scale or type of operation carried out, it is prudent that individual installations are subject to pollution prevention and control in line with UK and EU best practise.

As Jersey is not a member of the EU, there is no requirement to report emissions from industrial processes to the European Pollutant Release and Transfer Register. All EU Member States report the emissions (measured, estimated or calculated) from installations over a specified size on an annual basis.

Although Jersey is not required to report emissions under the A listing of the activities covered by EU legislation as given in Annex 1 of Regulation (EC) No 166/2006, the EPRTR annex 1 register can be used as a screening tool for identifying potential industrial emissions, not already identified, which might be present in Jersey. This review indicates that the scale of the majority of operations in Jersey are below the reporting thresholds that EU Member States are required to observe. There are a number of operations that may be relevant, listed below.

In terms of movement of notifiable/ hazardous waste, Jersey reports all the notifiable/ hazardous waste exports to the UK so that the UK can include them in the figures they report to the Basel Secretariat.

The sewage treatment works (STW) in Jersey are regulated through a water discharge licence under the requirements of the Water (Jersey) Law. For the purposes of the water framework directive, the STW is classified as serving over 100k population equivalents, which according to the EPRTR thresholds would require reporting to the EU if Jersey was a Member State. Regular reports are provided to the regulator as part of the discharge permit but do not include emissions monitoring. A new STW will be

required in the near future and consideration of emissions from a new plant will need to be assessed as part of the sustainability considerations of the technological options.

Other waste management operations that are operating at La Collette, including the landfill site, composting and other operations will all be regulated through appropriate waste licences as a requirement of compliance with the Waste (Jersey) Law, these licences are currently under development.

Sites, on Island, where large scale quarrying activities takes place that may require the operations to be reported to the EPRTR are all controlled through planning permits and environmental impact assessments of any proposed changes to their activities. Issues identified in the Environmental Impact Assessment (EIA) can be controlled through mitigation strategies required as part of the planning permit.

In terms of treatment and processing of milk products, the new dairy operates to high industry standards and the requirements of the planning and waste management requirements; all operations are controlled through the Jersey Dairy voluntary environmental management system.

The abattoir and slaughterhouse facilities in Jersey are below the thresholds that would require reporting in the EU.

Emissions from agriculture

The agricultural sector has a role to play to manage the emissions from their operations. The Rural Economy Strategy was adopted by the States in early 2011[20] and bought forward detailed policies and support mechanisms to address the impact of this sector. There is considerable current work in this area already for example:

- Green waste composting to assist the building of soil organic matter;
- Diet formulations designed to reduce methane emissions from livestock
- Implementation of Codes of Good Agricultural and Environmental Practice (CGAEP)
- Long-term slurry storage to improve utilisation of greenhouse gas producing compounds and reduce reliance on inorganic fertiliser;
- Green cover crops to minimise soil erosion, nutrient loss to the environment and increase soil organic matter;
- Fertiliser recommendations to optimise use of inorganic fertiliser and to maximise the use of organic manures.

[20] http://www.gov.je/News/2011/Pages/RuralStrategyLaunched.aspx

POLICY 7: Emissions from light industrial processes, agriculture and manufacturing

P7: The Minister for Planning and Environment will work with the Minister for Health and Social Services to ensure emissions from light industrial processes, agriculture and manufacturing are within operating limits by;

a) Reviewing whether current regulatory controls are adequate to manage risk in terms of emissions from this sector and where appropriate revise existing legislation to take into account air quality issues.

b) Undertaking a review of the EPRTR annex 1 thresholds to identify operations in Jersey that are relevant and ensure that appropriate mechanisms are in place to manage emissions from operations through existing regulatory mechanisms, that would be required to be registered in the EU, in line with UK and EU best practise. (see Policy 6)

c) Ensure that all agriculture operators are made aware of the air quality code of practice in the Rural Economy Strategy.

Emissions from the public sector - Eco-Active States

The States of Jersey is the largest organisation in the Island with a large property portfolio and nearly 500 vehicles under its direct management. In addition the States of Jersey employs a large number of contractors. The States of Jersey is a significant user of energy (government consumption in 2007 accounted for about 9% of the total) representing a considerable cost to the States of Jersey and to the environment.

This puts the States in a good position to lead by example, by improving the energy efficiency of its premises, reducing emissions from its fleet and operations and to ensure procurement takes account of environmental impacts of suppliers and contractors of goods and services.

In 2011, The States of Jersey commenced upon an environmental improvement programme, Eco-Active States. Central to the process is developing a baseline of the environmental impacts across five key areas (energy, waste, water, transport and procurement) with the aim of minimising the impacts from these areas through the development and review of an environmental action plan. The programme applies to the full States of Jersey property portfolio and all functions within the operation of the States of Jersey, e.g. airport, harbours, police, fire, hospital, school etc as well as all the office and depot functions. The programme will be extended to include all Parish Halls and associated operations which are funded through public monies.

The States Housing portfolio is subject to a detailed maintenance programme which includes upgrading all 3000 properties to comply with the higher standard Building Bye Laws by 2014. The future operational structure of the Housing service is not clear at the current time, but in parallel with the policies in the draft Energy Plan liaison will continue through Eco-Active States with relevant policy officers.

In terms of the Education portfolio, Eco-Active Schools follow the UK Eco-Schools accreditation which requires the development of an energy action plan. In 2012, 78% of

Jersey schools had started to implement the Eco-Schools programme with a target of all schools actively participating by 2015.

As part of the States of Jersey energy project, which Eco-Active States supports, all public buildings are to be provided with an energy consumption dashboard, similar to the UK building energy performance certificates.

The States vehicle fleet is subject to an ongoing maintenance and renewal programme, which means that the fleet will all be at Euro III standard by the end of 2012. The implementation of a fuel efficiency driver training programme, for all fleet users, will support the aims of both the air quality strategy and the draft Energy Plan.

The States of Jersey has over 6,500 employees. A sizeable proportion of these people commute into St Helier every day. The Sustainable Transport Policy includes recommendations targeted at reducing car use of States employees both through awareness raising through an Eco-Active Travel programme (Recommendation 6.6.1) and also practical measures such as implementing travel plans for all States departments (Recommendation 6.6.3), implementing school travel plans and safe routes to school schemes at all States schools (Recommendation 6.6.4) and encouraging the use of new car sharing software on the States intranet for States workers (Recommendation 6.6.6).

The Eco-Active States project officer will continue to roll-out the programme across all Departments working with the estate management service in Jersey Property Holdings, and to Parish Halls and associated operations.

POLICY 8: States of Jersey leading by example

P8: The Minister for Planning and Environment will ensure that air quality is managed within the States of Jersey estate and portfolio by;

a) Continuing to roll out the Eco-Active States programme as a management mechanism to implement corporate policies across all States Departments, and extending it to all Parishes, in a consistent manner, to monitor progress and report improvements.

b) Work with the Minister for Transport and Technical Services to ensure that the procurement of all States fleet vehicles includes high environmental specifications, to the most recent emissions standards, and that all fleet users undertake fuel efficiency driver training.

D. **OTHER SOURCES OF EMISSION**

A number of other sources of emission may possibly have an impact on air quality at a local level and may need to be considered when addressing measurement and monitoring.

Emissions from biomass

In common with other types of combustion appliances, biomass boilers are potentially a source of air pollution. Pollutants associated with biomass combustion include particulate matter (PM_{10}/$PM_{2.5}$), carbon dioxide (CO_2) and nitrogen oxides (NO_x) emissions. These pollution emissions can have an impact on local air quality and affect human health. It is essential that any new biomass boilers installed in Jersey meet certain emission control requirements in order to protect local air quality. Current building bye laws provide control over the installation of new biomass burners in the domestic setting in order to avoid nuisance from smoke and to ensure safety of installations.

The draft Energy Plan identifies the potential for biofuel production but concludes that there is unlikely to be a large scale shift in agricultural practices to grow significant volumes of biofuels.

Emissions from construction sites

Airborne dust from construction sites can cause environmental degradation, including air and water pollution. At least one local construction company has joined the UK Considerate Constructor Scheme. This scheme works on a voluntary basis and provides a framework for the construction company to minimise nuisance issues to neighbours whilst working on site. There is potential to make it a condition of planning approval for construction companies to undertake monitoring before, during and after to assess impact. Good practice guidance is available to the construction sector to support them in meeting these requirements.

Emissions from new developments

The planning system provides a mechanism for ensuring potential air quality impacts from proposed developments are considered and, where appropriate, requirements for monitoring and reporting can be made a condition of a planning permit.

Environmental impact assessments, which are a requirement of the planning process, ensure that all development exceeding thresholds set in the Island Plan will be subject of an independent environmental impact assessment. This assessment includes a requirement for consideration of emissions to air, and an assessment of the likely impacts on health and the environment. This process enables the Environmental Protection and Health teams and other stakeholders to comment on proposals, and for planning conditions to be put on permits. E.g. licenses etc.

Strategic Environmental Assessment guidance (SEA) for Jersey has been developed requiring SEA’s to be undertaken where policies and strategies meet the requirements as specified in the guidance.

The SEA process has already been applied to the Island Plan and North Town masterplan. The SEA process applies to strategic plans which have an impact on land

use, and provides an opportunity to assess cumulative impacts and strategic consideration of potential air quality issues arising from the implementation of the plan.

There is a requirement for Work Place Travel Plans to be developed and submitted for large developments (over 2,500m^2). Consideration needs to be given to the standards that these are required to comply with.

Emissions from existing developments and businesses

The Eco-Active initiative includes a number of opportunities for addressing air quality issues in existing developments and business.

The Energy Efficiency Service provides advice and support to socially vulnerable people and community organisations to help reduce emissions by improving insulation levels in domestic and community buildings. The draft Energy Plan proposes the roll-out of the energy efficiency scheme to reach a wider audience which will broaden the scope of the support available and increase the impact on managing emissions levels.

The Eco-Active Business scheme provides a framework for business to manage and report on measures that they take to manage air quality, including the implementation of workplace travel plans. Toolkits are available for businesses and also for schools in Jersey to assist them in designing and implementing their travel plans. Additional support is needed to increase take up and implementation of these plans. The STP will provide this through a dedicated resource in TTS.

The Eco-Active Sustainable Schools framework provides an online set of resources to assist schools in integrating sustainability into all aspects of both the curriculum and day to day operation of the school. It also provides a mechanism for schools to achieve the international Eco Schools Standard. 78% of schools have registered with the Eco Schools programme in 2012.

POLICY 9: Raising awareness of air quality issues

P9: The Minister for Planning and Environment will work with the Minister for Health and Social Services to raise awareness of air quality issues by;

a) Supporting the implementation of best practice in relation to air quality management from new development proposals through the EIA and SEA processes, including requirements for workplace travel plans, in order to manage emissions from other sources, including construction and new development, using air quality limit values as specified in the JAQS.

b) Through the Eco-Active Business scheme raise awareness of the local business community with regard to air quality management issues, especially within the construction sector.

14. PUBLIC ACCESS TO INFORMATION

Information on air quality in Jersey is made available to the public on the Jersey Meteorological office website www.jerseymet.gov.je and through annual reports available on the main States of Jersey website, www.gov.je

The air quality information that is provided from the automatic monitoring equipment is near 'real-time', but only 'periodic' from the non automatic monitoring stations. Collating this information for timely information to the public will have resource implications.

The most efficient way to disseminate air quality information and data to the public and other end users is via a website. The Jersey Meteorological office website is subject to review in 2012, and it is proposed that the revised website incorporates an improved air quality monitoring section to provide information in an accessible format to the public. Annual reports will continue to be published on www.gov.je

POLICY 10: Public access to information

P10: The Minister for Planning and Environment will work with the Minister for Health and Social Services to ensure information on ambient air quality is accessible to the general public by;

a) Reviewing the current website provision to provide up to date information regarding the health and environmental impacts of air quality on the States of Jersey website.

b) Developing public awareness campaigns through the Eco-Active programmes, to enable the public to make stronger connections between air quality and transport and Energy Plan objectives and health issues.

5. REGULATORY FRAMEWORK

At the current time Jersey does not have any specific air quality legislation or emissions permitting regulations regime in place. However, the principles of best available techniques are adopted within current planning, water and waste legislation which do set limits and issue permissions and discharge licences to operators of industrial processes and developers of new commercial and domestic developments.

As Jersey is not an EU Member State, there is no legal requirement to develop new legislation implementing EU Directives in relation to air quality in Jersey. However it is recognised that the EU air quality directive (2008/50/EC)[21], does provide a set of limit values that is of relevance to Jersey.

The Jersey air quality monitoring reports that have been completed over the past 17 years demonstrate that Jersey air quality is within the lower limits of the EU air quality directive and that the systems and monitoring in place already mean that adopting the directive as good practice and the basis for setting emissions limit values for industrial processes and new developments would not require additional resources or legislation to be developed.

By working within the EU air quality directive limit values, Jersey will be able to demonstrate that it is a responsible environmental jurisdiction meeting internationally recognised air quality standards, in the same way that we meet the EU bathing water and water framework directives. This would then enable direct comparisons to be made with EU Member States

The UK implements the EU air quality directive through the national UK air quality strategy and through the environmental legislation and permitting regime that it operates. Implementing a similar approach in Jersey would be disproportionate to the scale of the air quality situation that is being managed.

On this basis, the JAQS will work within the limit values set in the EU air quality directive and UK ambient air quality standards. The project plan sets out the requirements to ensure compliance through our monitoring and reporting regimes.

The European Air Quality Directive (2008/50/EC)[22], sets the following requirements;

- Define and establish objectives for ambient air quality in the community in order to avoid, prevent or reduce harmful effects of air pollution on human health and the environment as a whole;
- Provide recommendations for the assessment of ambient air quality in Member States on the basis of common methods and criteria;
- Provide recommendations for obtaining adequate information on ambient air quality and public dissemination; and
- Require maintenance of adequate air quality where it is good and improvements to be made in other cases

[21] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:01:EN:HTML EU Directive on Ambient Air Quality and Cleaner Air for Europe
[22] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:01:EN:HTML EU Directive on Ambient Air Quality and Cleaner Air for Europe

Under the Directive (2008/50/EC) standards are set for sulphur dioxide (SO_2), nitrogen dioxide (NO2), particulates (PM10) and lead (Pb). Populations less than 250,000 are required to monitor, using CEN (i.e. European Standards) standards, at one location that is representative of where the highest pollutant concentrations are likely to occur.

Working within the framework of the EU air quality directive (Directive 2008/50/EC) will assist Jersey in demonstrating compliance with its international environmental agreements and obligations as required through the international environmental agreements to which Jersey is a signatory. Many of these are addressed through local legislation and regulation where appropriate. The compliance links for the international environmental agreements relevant to air quality are listed below.

International Environmental Agreements	**Jersey compliance mechanism**
United Nations Framework Convention on Climate Change	Report through UK GHG inventory Draft Energy Plan 2012
Kyoto Protocol to the United Nations Framework on Climate Change	Report through UK GHG inventory Draft Energy Plan 2012
**United Nations Vienna Convention for the Protection of the Ozone layer (1985)	Waste Management (Jersey) Law 2005 applies to disposal of some of the chemicals to which the Convention and protocol apply
**Montreal Protocol to the Vienna Convention on substances that deplete the ozone layer (1987)	None produced on Island; Waste Management (Jersey) Law 2005 applies to disposal of some of the chemicals to which the Convention and protocol apply
**United Nations Geneva Convention on Long Range Transboundary Air Pollution (LRTAP) (1979)	Infrastructure updates i.e. EfW; RES agriculture compliance; monitoring of industrial sites e.g. crematorium
**The LRTAP Protocols to the Geneva Convention	Infrastructure updates i.e. EfW; RES agriculture compliance; monitoring of industrial sites e.g. crematorium
Convention on Environmental Impact Assessment in Transboundary Convention (ESPOO)	Planning (Jersey) Law; Environmental Impact Assessment Order
Basel Convention of the Control of Transboundary Waste, Movements of Hazardous Wastes and their Disposal	Waste (Jersey) Law and waste licences

POLICY 11: Regulatory Framework

P11: The Minister for Planning and Environment will work with the Minister for Health and Social Services to ensure compliance with the standards set out in the EU air quality directive (2008/50/EC) by;

a) Ensuring that air quality monitoring systems are maintained to gather data in an appropriate format in relation to compliance with the limits for the pollutants identified in the EU air quality directive (see policy 6)

b) Utilise the existing regulation and legislation framework to recommend that industrial and commercial processes are managed in line with best practice as specified in the EU air quality directive and through UK process guidance notes, where relevant, in order to ensure any adverse impact on ambient air quality is avoided

c) If polluting businesses do not respond to recommendations consider the introduction of enabling Law.