

**THE STATES OF DELIBERATION**  
**of the**  
**ISLAND OF GUERNSEY**

**THE COMMITTEE FOR THE ENVIRONMENT & INFRASTRUCTURE**

ENVIRONMENTAL POLLUTION (GUERNSEY) LAW, 2004  
PART VII – AIR POLLUTION

The States are asked to decide: -

Whether, after consideration of the Policy Letter dated 30<sup>th</sup> November, 2016 entitled “Environmental Pollution (Guernsey) Law, 2004 Part Vii – Air Pollution”, they are of the opinion:-

1. To approve the proposals set out in this policy letter (including appendices) to;
  - a) commence part VII of the 2004 Law,
  - b) set standards for local air quality consistent with those in the UK as proposed by paragraphs 10-13 to the Director’s report,
  - c) prescribe the operations listed in paragraph 14 of the Director’s report as operations requiring a licence under Part III of the 2004 Law, subject to provisions for exemptions as set out in paragraph 16 of the Director’s report,
  - d) prohibit emissions of dark smoke subject to the exemptions listed in paragraph 21 of the Director’s report,
  - e) require the prior approval of the installation of new commercial boilers and furnaces and to impose controls on emissions from existing commercial boilers and furnaces, subject to exemptions, as proposed in paragraphs 23-26 of the Director’s report,
  - f) prohibit the uncontrolled burning of non-garden waste in the open air subject to exemptions as proposed in paragraphs 27-32 of the Director’s report,
  - g) prohibit the use of gas oils and fuels oils with a sulphur content above the levels set out in paragraphs 35 of the Director’s report subject to the exemptions as proposed in paragraphs 36-37 of the Director’s report,
  - h) provide for powers for the Director to require information concerning air pollution by notice as proposed in paragraphs 41-44 of the Director’s report;
  - i) provide for the standard necessary appeal, procedural, enforcement fee and transitional provisions relating to the above proposals as set out in paragraphs 62-65 of the Director’s report; and

- j) to direct the preparation of the necessary legislation to give effect to the above proposals.

The above Propositions have been submitted to Her Majesty's Procurer for advice on any legal or constitutional implications in accordance with Rule 4(1) of the Rules of Procedure of the States of Deliberation and their Committees.

**THE STATES OF DELIBERATION**  
**of the**  
**ISLAND OF GUERNSEY**

**COMMITTEE FOR THE ENVIRONMENT & INFRASTRUCTURE**

ENVIRONMENTAL POLLUTION (GUERNSEY) LAW, 2004  
PART VII – AIR POLLUTION

The Presiding Officer  
States of Guernsey  
Royal Court House  
St Peter Port

30<sup>th</sup> November, 2016

Dear Sir

**1. Executive Summary**

- 1.1 The Committee *for the* Environment & Infrastructure having received and considered a report (Appendix 1) from the Director of Environmental Health and Pollution Regulation (the Director) and having consulted with key States Committees and the Douzaines recommends the States to approve the proposals set out in the Director's report and direct the preparation of subordinate legislation under Part VII - Air Pollution - of the Environmental Pollution (Guernsey) Law, 2004 (the 2004 Law) to give effect to the same so as to enable the effective regulation of air pollution.
- 1.2 The recommendations implement parts of the Environmental Policy Plan and are consistent with the health protection and health improvement measures outlined in the Committee *for* Health & Social Care's '2020 Vision' strategy and frameworks.
- 1.3 Provision for regulation of air pollution will assist in maintaining and improving the quality of the air in Guernsey and will allow for the application of controls over installations, equipment and practices which could damage air quality and potentially lead to adverse health effects.
- 1.4 The 2004 Law (Order in Council XIII 2004) is set out in several parts including Part V dealing with waste, Part VI dealing with water pollution, Part VII dealing with Air Pollution and Part VIII dealing with Pollution by Sound, Light etc. The Law also includes general provisions such as for the licensing of operations involving risk of environmental pollution, powers establishing standards and objectives, and provides for enforcement which applies to all types of pollution.
- 1.5 The general, administrative and enforcement provisions of the 2004 Law (Parts I-IV and Parts IX and X) were commenced in 2006. The parts of the Law relating to waste, water and air pollution set out powers to provide for further detailed regulation in

these areas by Ordinance and statutory instrument. A Waste Ordinance and Regulations came into force in 2010.

- 1.6 The States has also approved the policy in respect of regulation of water pollution and work is now proceeding on drafting of the necessary legislation. This report, therefore, seeks to set out the policy for legislation under the general, licensing provisions and Part VII of the 2004 Law to regulate air pollution.

## **2. Background**

- 2.1 Part I, section 1 of the 2004 Law states that “the purposes of this Law are to empower the States to enact, monitor and effectively enforce all such measures as may be conducive to the preservation and enhancement of the environment through the limitation of pollutants therein”.
- 2.2 Part I, section 2 states that “the environment” means the media of air, water or land and “pollution” means the presence in the environment, whether permanently or temporarily, of any pollutant. "A pollutant" is any substance or energy capable of causing harm to health and wellbeing of man, including damage to or deleterious interference with man’s senses, harm to health of other living organisms supported by the environment or other interference with the ecological systems of which man or other living organisms form part”.
- 2.3 Part VII of the 2004 Law enables the States to control the nature, volume and intensity of pollutants other than energy released into or present in the air, to prohibit release into the air of substances capable of causing serious harm and to impose restrictions or limits to prescribe conditions on the release of substances in the air.
- 2.4 The Director’s report at Appendix 1 sets out the details of the recommended proposals to regulate air pollution. This includes the setting of Guernsey Air Quality Standards that apply to ambient (outdoor) air. The current UK air quality standards, objectives and target values are set out in Appendix 2 and it is proposed that air quality standards for Guernsey will be developed to be consistent with those of the UK.
- 2.5 Other proposals recommended include the licensing of certain operations, involving risk of air pollution, under Part III of the Law and controls on emissions of dark smoke, furnaces and boilers, composition of fuels and uncontrolled burning in the open air of waste matter other than garden waste. Most of these controls reflect similar regulation in place in the UK in particular the Clean Air Act 1993.

## **3. Compliance with States’ Strategic Policy**

- 3.1 Commencement of Part VII – Air Pollution - of the 2004 Law and making provision for detailed regulation of air pollution under the Law is consistent with the requirements of the States Strategic Plan and the Environment Policy Plan in ensuring recognition of international protocols on climate change, a reduction in air pollution and protection of the public from the risk of air pollution. It is also consistent with the

requirements for health protection and health improvement set out in the Committee *for* Health & Social Care's (CHSC) 2020 Vision Strategy and Frameworks.

#### **4. Consultation**

- 4.1 The Director has carried out public consultation as set out in the Director's report. The Committee *for the* Environment & Infrastructure has consulted key States Committees and the parish Douzaines.

#### **5. Legislation Costs and Resources**

- 5.1 The Committee understands that the Director has consulted with the Law Officers in developing proposals and approximately three months of legislative drafting time will be required.
- 5.2 It is proposed that fees will be charged in relation to applications concerning prescribed operations, as currently set for such applications in relation to waste operations. The Office of the Director operates so that licence fees for prescribed operations are set to cover the cost of inspections and monitoring. No additional staff have yet been employed to deliver the regime required by the 2004 Law and as such an additional member of staff will be required to deliver the service. Income already generated from waste licensing will be used to employ a local science graduate as an Environmental Protection Technician to administer the waste regime and this will release existing staff to deliver implementation of further parts of the Law.

#### **6. Conclusion**

- 6.1 Having considered the Director's report and consulted on the proposals, the Committee *for the* Environment & Infrastructure supports the commencement of Part VII of the law and making provision for detailed regulation of air pollution under the Law as a means of regulating air pollution and improving the air quality in Guernsey.

#### **7. Propositions**

The States are asked to decide whether they are of the opinion:

1. To approve the proposals set out in this policy letter (including appendices) to;
  - a) commence part VII of the 2004 Law,
  - b) set standards for local air quality consistent with those in the UK as proposed by paragraphs 10-13 to the Director's report,
  - c) prescribe the operations listed in paragraph 14 of the Director's report as operations requiring a licence under Part III of the 2004 Law, subject to provisions for exemptions as set out in paragraph 16 of the Director's report,
  - d) prohibit emissions of dark smoke subject to the exemptions listed in paragraph 21 of

the Director's report,

- e) require the prior approval of the installation of new commercial boilers and furnaces and to impose controls on emissions from existing commercial boilers and furnaces, subject to exemptions, as proposed in paragraphs 23-26 of the Director's report,
- f) prohibit the uncontrolled burning of non-garden waste in the open air subject to exemptions as proposed in paragraphs 27-32 of the Director's report,
- g) prohibit the use of gas oils and fuels oils with a sulphur content above the levels set out in paragraphs 35 of the Director's report subject to the exemptions as proposed in paragraphs 36-37 of the Director's report,
- h) provide for powers for the Director to require information concerning air pollution by notice as proposed in paragraphs 41-44 of the Director's report;
- i) provide for the standard necessary appeal, procedural, enforcement fee and transitional provisions relating to the above proposals as set out in paragraphs 62-65 of the Director's report; and
- j) to direct the preparation of the necessary legislation to give effect to the above proposals.

## **8. Committee Support for Propositions**

- 8.1 In accordance with Rule 4(4) of the Rules of Procedure of the States of Deliberation and their Committees, it is confirmed that the propositions above have the unanimous support of the Committee.

Yours faithfully

B L Brehaut  
President

M H Dorey  
Vice-President

S L Langlois  
H L de Sausmarez  
S T Hansmann-Rouxel

**ENVIRONMENTAL POLLUTION (GUERNSEY) LAW 2004**

**PART VII (AIR POLLUTION)**

**DIRECTOR'S REPORT**

1. **EXECUTIVE SUMMARY**

1.1 The Director of Environmental Health and Pollution Regulation (the Director) is recommending the States to agree to the drafting of the necessary legislation to commence Part VII of the Environmental Pollution (Guernsey) Law, 2004 (the Law) on Air Pollution and to provide for detailed regulation of air pollution under generally applicable parts of the 2004 Law and Part VII.

1.2 The recommendations will implement parts of the Environmental Policy Plan and are consistent with the health protection and health improvement measures outlined in the CHSC '2020 Vision' strategy and frameworks.

1.3 Provision for detailed regulation of air pollution will assist in maintaining and improving the quality of the air in Guernsey and will allow the Director to apply controls over installations, equipment and practices which could damage air quality and potentially lead to adverse health effects.

1.4 Detailed research in Guernsey has shown that when air pollution levels rise, there are increased admissions to the Princess Elizabeth Hospital of people who suffer from respiratory conditions such as asthma etc. Poor air quality impacts on the quality of life of islanders and therefore on States' budgets for treatment services (Cameron, 2014).

1.5 In particular the legislation would;

- introduce statutory ambient air quality standards for common pollutants
- provide for some of the most polluting processes to be prescribed and licensed
- make provision for Air Quality Management through controls on future developments that may impact on air quality
- prohibit emissions of dark and black smoke
- require prior approval for specified large boiler plant
- restrict uncontrolled burning of waste material
- regulate the composition of fuels
- require information about air pollution to be provided to the Director

2. **CONTROL BY ORDINANCE OF THE NATURE, VOLUME AND INTENSITY OF AIR POLLUTION**

2.1 The Environmental Policy Plan within the States Strategic Plan states that "maintaining sustainable practices", "climate change impacts", "biodiversity and threats to the nature of the island's countryside" are challenges that the Island faces. Items 15 and 22 of the 'outcomes' section within the Policy Plan state that "our biodiversity will be healthier" and, more specifically to this report, that there should be "a reduction in air

pollution". The contents of this report will also have an impact on the delivery of outcome items 6 on education on environmental impacts and quality information, 9 on stakeholder roles and responsibilities on climate change, 10 on greenhouse gas emissions and item 13 on sustainable energy.

- 2.2 An air quality screening and assessment report (entitled 'Air Quality in Guernsey – Screening and Assessment Document') was completed by the Office of Environmental Health and Pollution Regulation (OEHPR) in July 2015 in order to provide an overview of the air pollution levels on-Island and the local contributors to the measured pollutants. This report was the second comprehensive air quality screening and assessment document that has been produced for Guernsey and provides a comparison of Guernsey's air quality with that of the UK. The report focused on sources and levels of local atmospheric pollution in comparison with the standards and objectives set within The Air Quality Strategy for England, Wales and Northern Ireland (July 2007) and the Air Quality Standards Regulations 2010 (applying in England).
- 2.3 The Regulations implement the requirements under relevant EU Directives in relation to air quality. Whilst these standards, objectives and target values are not currently legally applicable to Guernsey, they can be considered to be the most applicable benchmark to establish Guernsey's current position against. Air pollutants are continuing to be monitored locally and the information within the 'Screening and Assessment' document provides a baseline against which to assess "a reduction in air pollution" as required by the States Strategic Plan and Environmental Policy Plan. Legislative controls are, however, essential in order to control current and potential sources of air pollution on Guernsey and to facilitate this reduction.
- 2.4 The document – 'Air Quality in Guernsey – Screening and Assessment Document' – can be found at [www.gov.gg/nuisances](http://www.gov.gg/nuisances)
- 2.5 Part VII of the Law (Air Pollution) has "the purpose of better enabling the States to control by Ordinance the nature, volume and intensity of pollutants other than energy released into or present in the air, whatever their origin". Traffic pollution is currently the biggest local polluter and there are also numerous point sources of pollution ranging from open burning to industrial activities. These sources have a negative impact upon local air quality standards and the health of the Island's inhabitants. Part VII will allow proportionate controls to be put into place to reduce or prevent emissions into the air from current and potential polluters which will ensure the maintenance of good local air quality and positively impact on the health of Islanders.
- 2.6 Part VII allows control, via Ordinance, to "prohibit the release into the air of Guernsey, or at any specified place or description of place within Guernsey, of any substance capable of causing serious pollution of the air, whether in Guernsey or elsewhere". Guernsey is defined in the Law to include the territorial waters.
- 2.7 Section 49 of the Law also provides powers, by Ordinance, to "impose restrictions and limits on the amount of any substance which may be released into the air" and to "prescribe conditions subject to which that substance may be so released either generally, during any specified period, at specified places, or from premises, vehicles, vessels or processes of specified descriptions".

- 2.8 Air quality monitoring has been carried out in Guernsey since 1992 and, based upon data compiled by the OEHP, air quality in Guernsey is generally very good. The 'Air Quality in Guernsey – Screening and Assessment' report focused on sources and levels of local atmospheric pollution in comparison with the standards and objectives set within The Air Quality Strategy for England, Wales and Northern Ireland (July 2007 and updated in 2011) and the Air Quality Standards Regulations 2010 (Appendix 2). This document concluded that there were no overall exceedances of the English standards but that the more stringent Scottish standards for certain pollutants would be exceeded. The areas where the standards for nitrogen dioxide are exceeded include Fountain Street, Bulwer Avenue and the Bridge area.
- 2.9 It should be noted that nitrogen dioxide is an irritant gas that has adverse effects on health particularly those with ill-health conditions such as asthma and Chronic Obstructive Pulmonary Disease (COPD) etc. Nitrogen dioxide exposure may reduce the development of the lungs in children thus reducing lung function in adults, who will be four times more likely to develop COPD (European Respiratory Society, 2013). The Director is currently conducting detailed research into the emissions of nitrogen dioxide around local primary schools.
- 2.10 There are no specific legislative controls in Guernsey for current or future emissions to the air from local sources, other than where amounting to a nuisance, and no enforceable air quality standards.

### 3. AIR QUALITY STANDARDS AND MANAGEMENT

- 3.1 The Director proposes that once Part VII has been commenced, a set of Air Quality Standards are adopted by the States, through Ordinance, which reflect the UK Air Quality Objectives and the limit values, target values and objectives set out for certain pollutants in the Air Quality Standards Regulations 2010 (Appendix 2). Air quality standards are set for all ambient (outside) air that can be breathed in by all islanders and the limits are determined to protect human health, ecosystems and the environment. The standards are used as a benchmark for ambient air quality monitoring programmes which establish the state of the air environment and inform any decision making for future developments and controls that may need to be applied. Any breaches in air quality standards are attributed to pollution from point and line sources e.g. combustion and industrial plant, traffic emissions etc. The standards will also be used to inform the management of traffic flows around the island and for the setting of conditions for "prescribed operations" to ensure that local ambient air quality is not compromised by their emissions to the air.
- 3.2 These standards would set air quality objectives for benzene, 1,3-butadiene, carbon monoxide, lead, oxides of nitrogen, particulate matter of specified size (e.g. PM<sub>10</sub> are particles with a diameter of less than 10 microns) and sulphur dioxide. Air quality targets would be set for arsenic, cadmium, nickel, benzo(a)pyrene and PM<sub>2.5</sub>. As the proposed legislation is some five years behind comparable legislation in the UK, it is proposed that air quality targets and target dates in Guernsey will be 2020 for all parameters, to allow a suitable lead in time. It is not currently envisaged that any of these targets and target dates will be a cause for concern in Guernsey due to the lack

of heavy industry, however, more detailed monitoring of PM<sub>2.5</sub> is required and the Director has already started the process to extend the existing monitoring programme to include this.

- 3.3 Whilst ozone levels would continue to be monitored on-Island to provide essential environmental health data, it is not proposed that ozone would be included as a locally enforceable standard because ozone levels are greatly affected by transboundary airflows and cannot be controlled at a local level. It is, however, proposed that the target value within the Air Quality Standards Regulations 2010 for ozone levels is used as a trigger level to issue advice to the public due to the adverse health impacts known to be associated with ozone inhalation.
- 3.4 The standards would provide a framework against which to assess trends in air pollution and to regulate line and point sources of air pollution that have an adverse impact on ambient (outdoor) air quality.
- 3.5 Through reference to the Air Quality Standards for certain pollutants, the Director would then impose proportionate controls for 'prescribed operations', which require a licence under Part III of the Law, relevant to the process, locality and measured emissions. The Director is required under the Law to take into account any relevant objectives, requirements or limits to control pollution when considering an application for a licence and may attach relevant conditions to a licence.
- 3.6 Ambient air pollution standards would also be taken into account when making amendments to planning policy. A reference to the same in development plan policies would enable standards to be taken into account and, where necessary, relevant conditions imposed, when planning applications are considered for developments which could result in increased emissions of relevant pollutants at e.g. air pollution hot spots such as Fountain Street in St Peter Port.

#### 4. PRESCRIBED OPERATIONS

- 4.1 Whilst Section 49(4)(a) of the Law allows controls to be placed on activities causing air pollution, "whether or not that activity is or involves a prescribed operation", this report proposes to control air pollution by prescribing processes that are known to be potentially high risk in relation to polluting emissions as prescribed operations requiring a licence under Part III of the Law. Licence conditions could then be imposed, reflecting the approved Air Quality Standards, on both existing and new-build installations to ensure that suitable controls are in place to regulate the emissions from the operation. Proportionate controls would be applied and it is an offence to breach licence conditions. Conditions applied to licences would take into consideration a range of international standards and guidance and may include the EU Industrial Emissions Directive and the EU Medium Combustion Plant Directive. Prescribed operations would mirror the high risk installations that are controlled via the Integrated Pollution Prevention and Control (IPPC) system in the UK, namely;

- Energy production
- Refineries
- Production and processing of metals

- Production of cement and lime
- Activities involving asbestos
- Glass, glass fibre and other mineral fibre manufacture
- Ceramic production
- Organic & inorganic chemical production
- Fertiliser and biocide manufacture
- Pharmaceutical manufacture
- Explosives manufacture
- Storage of bulk chemicals
- Incineration
- Paper manufacture
- Tar and bitumen processes
- Coating, printing and textile activities
- Dye, ink and coating material manufacture
- Timber activities
- Rubber activities
- Processing of food and
- Commercial boilers over 0.4MW.

4.2 It should be noted that many of these operations do not exist currently in Guernsey, but are mentioned to ensure controls can be applied should there be a future development.

4.3 It is proposed that the Director would have powers to exempt such operations, by regulations or by written notice, which do not actually involve a significant risk of pollution, from the licensing requirement. This would mirror the exemption powers for prescribed operations under section 3 of the Environmental Pollution (Waste Control and Disposal) Ordinance, 2010.

4.4 An ‘emissions inventory’, which lists the current premises in Guernsey where there are considered to be ‘prescribed operations’, is found at Appendix 3. Most of these, such as the hotels listed, are premises with commercial boilers over 0.4MW thermal capacity. It is anticipated that most of these operations will be made exempt from licensing and this will be dependent on the type of fuel being used and potential for polluting emissions. Any operator that is likely to be deemed to be a prescribed operation has been consulted on the proposals within this report and their comments have been addressed.

## 5. DARK SMOKE

5.1 Section 50 of the Law provides for the prohibition of the emission of “dark smoke” from;

- the chimney of any building other than a dwelling house
- a chimney (not being a chimney of a building) which serves the furnace of any fixed boiler or industrial plant
- the burning of any commercial waste and
- any vehicle or vessel.

- 5.2 The CHSC already has powers to abate smoke nuisances providing that they are “a nuisance or prejudicial to health”, under the Public Health Ordinance 1936. These controls are limited and were not specifically designed to prevent burning that causes dark smoke or to ensure more wider-reaching controls over the Island’s air quality standards.
- 5.3 It is proposed that dark smoke emissions should be prohibited, so that it would be an offence under the Law to breach this prohibition. Dark smoke would be defined by reference to the Ringelmann chart in British Standard BS2742C where smoke is considered ‘dark’ if it has a shade of 2 or darker. It is proposed that the Ordinance would specify that the emissions of dark smoke would not need to be witnessed in order to take enforcement action and that evidence of burnt materials that could cause dark smoke, such as steel reinforcement from tyres, or plastic residues, would be sufficient. It would also preclude the defence of lack of visual evidence, for example when materials are burnt at night.
- 5.4 Section 50(2) of the Law allows exemptions to be made regarding the times, places, durations or other circumstances leading to dark smoke. It is proposed that limited exemptions would be made, by Regulations of the Director, relating to dark smoke emitted in relation to;
- waste explosives
  - materials burned as part of fire fighting research or training activities
  - road and other paving surfacing materials
  - diseased animal carcasses
  - initial start up and shut down of combustion processes
  - emissions associated with maintenance of plant.
- 5.5 Any exemption would take into consideration the following;
- there is no other reasonable, safe and practicable method of disposing of the matter
  - burning must be under the direct and continuous supervision of the occupier of the premises or someone authorised to act on their behalf
  - care must be taken to minimise dark smoke.
  - the emission was the result of a cold start up of a boiler or industrial plant where the emission could not be avoided and was not greater than Ringelmann shade 1 and continuous for no more than 15 minutes at a time.

## 6. FURNACES AND BOILERS

- 6.1 Section 51 of the Law allows the States to provide by Ordinance, “that no furnace or boiler shall be installed on any premises other than a dwelling house unless it is so far as practicable capable of being operated continuously without emitting smoke when burning fuel of a type for which it is designed”.
- 6.2 The Ordinance would place “limits on the rates of emission of grit, dust and other pollutants from the chimneys” of such non-domestic furnaces and boilers and would

include provisions allowing the Director to require;

- the installation and use of plant for arresting emissions of grit, dust and other pollutants
- the installation and use of apparatus for recording such emissions
- the maintenance and furnishing to the Director of records relating to such emissions
- the provision to the Director of information concerning the operation of such furnaces and boilers.

6.3 An Ordinance under this section would also require that the prior approval of the Director be obtained for the installation of such descriptions of furnaces and boilers; and of any chimneys, plant and equipment associated with them, as may be prescribed and make provision as to;

- the conditions to be attached to any such approval
- the consequences of it being granted and
- the rights (including a right of appeal) of a person aggrieved by its refusal, or by any condition attached to it.

6.4 The Director would, therefore, approve installations after considering the proposed plans and specifications before new furnaces or boilers (except of a domestic nature) are commissioned and would exercise controls over existing installations. If the installation is designed to burn;

- pulverised fuel
- any other solid matter at a rate of 45.4kg or more an hour or
- liquid or gaseous matter at a rate equivalent to 366.4 kW or more

then it would be required to be fitted with approved dust and grit arrestment equipment. These standards reflect the provisions detailed in the UK's Clean Air Act 1993. Additional pollution abatement measures may also be required dependant on, and proportionate to, other pollutants that may be emitted. These proposed powers would allow controls to be put in place, separate to planning permission or building control consents, which are specific to the protection of the health of Islanders and the maintenance of good air quality levels locally.

## 7. UNCONTROLLED BURNING

7.1 Section 52 of the Law allows, by Ordinance, the prohibition or restriction of "burning on land in the open air of any substance the burning of which is in the opinion of the States liable to cause pollution". The Director has extensive evidence of the burning of black bag waste, kitchen appliances, paint tins, fibre glass boats, building rubble etc. at various residential sites around the island. In the last two years the Director dealt with 303 cases of complaints about bonfires and smoke. The open burning of this kind of waste causes significant air pollution, impacts on public health, contamination of the land and the water supply so, therefore, it is recommended that it is prohibited.

7.2 The results of an Island-wide public consultation in April 2016 on air pollution and open

burning indicated that the majority of people believe that instances of open, uncontrolled burning should be limited to clean, dry garden waste being burned. This would include e.g. dry hedge cuttings, dry grass, Christmas trees etc. burned on the actual site it was derived from. Concern was also raised regarding the times when burning should be permitted.

- 7.3 The questionnaire and outcomes of the survey on air pollution and open burning can be found at <https://gov.gg/nuisances> and the survey is discussed in more detail in paragraphs 49-57 of this report.
- 7.4 It is, therefore, proposed that uncontrolled burning, including domestic bonfires, would be restricted only to dry garden waste produced on the premises where it is burnt and that weekends should be free from smoke from uncontrolled fires. This would substantially reduce the nuisance and the potential health effects from uncontrolled burning.
- 7.5 For the avoidance of confusion, this legislation is not intended to cover organised social events, camp fires and BBQs provided that they are supervised and using suitable fuels. Uncontrolled burning can be defined as open burning (i.e. not within a purpose-built receptacle) with the intent to dispose of waste materials. It is intended to prevent the disposal by burning of items such as white goods, cables, paint tins, domestic black bag refuse and other materials that are liable to cause pollution to air and ground water.
- 7.6 Exemptions, with conditions on the types and amount of material that could be burnt, would be permitted to allow public bonfires associated with designated events (e.g. Guy Fawkes' night) or certain designated activities (e.g. Scout and Guide events) providing that such fires do not give rise to risks of impacts on the health and well being of the public, contamination of land and ground water and do not give rise to emissions of dark smoke.

## 8. COMPOSITION OF FUELS

- 8.1 Section 53 of the Law states that, by Ordinance, the States may specify substances which may be present, or must not be present, in the composition of any fuel or of any description of fuel. The Ordinance would also "prohibit or restrict the possession, or the burning or other use, of any fuel which does not comply with the specifications therein set out".
- 8.2 Sulphur is naturally present in small quantities in petroleum and coal. Sulphur dioxide (SO<sub>2</sub>) is a major cause of acid rain and air pollution which cause damage the fabric of buildings, to ecosystems, biodiversity and human health.
- 8.3 Due to the known negative health effects of sulphur it is proposed that an Ordinance under this section would prohibit the use gas oils with a sulphur content higher than 0.1% by weight and the use of use heavy fuel oils with a sulphur content higher than 1% by weight. It is understood that current oil imports are mostly in compliance with this requirement through voluntary means. For existing, or new, prescribed operations requiring a licence under Part III of the Law that do not comply with these limits, additional sulphur dioxide attenuation measures could be specified by licence

condition.

- 8.4 The following exclusions would also be included within the proposed Ordinance;
- gas oil for maritime use by ships
  - fuels intended for processing before final combustion
  - fuels intended for processing in refineries
  - fuels intended for the purposes of research and testing
  - fuels used by ships on military service and by any ship to ensure its own safety or for saving life at sea, or the use of which is necessitated as a result of damage.
- 8.5 These limits and exemptions are equivalent to those set out in Directive 93/12/EEC, as subsequently amended, which is intended to combat emissions of sulphur dioxide across the European Union.
- 8.6 The Ordinance would also include provisions to require the verification of the sulphur content of fuels by sampling and analysis.
- 8.7 Additional restrictions could subsequently be placed on the composition of fuels dependant upon trends of pollutants measured across the Island and emerging research and scientific guidance from international sources such as the European Union, World Health Organisation etc. This would be introduced by Ordinance and subject to a further policy letter.
- 8.8 Currently fuels used on-Island are imported from EU States and compliance with the standards can generally be assumed. However, the Ordinance would ensure that it would be an offence to use any non-compliant fuels which are imported. A number of potential developers have already approached the Director to use processes to manufacture fuel from waste materials and this provision would allow proper control over the sulphur content of such fuels.
9. NOTICES TO PROVIDE INFORMATION
- 9.1 Section 54 of the Law allows the States to provide by Ordinance, for the Director to require “the owner or occupier of any premises, other than a dwelling house, or the owner of any vehicle, vessel, plant or machinery, to provide the Director with such information concerning air pollution, or risk of air pollution, arising from the premises, vehicles, vessels, plant or machinery, as may be specified in a notice served pursuant to that Ordinance”.
- 9.2 In order to be able to enforce the other sections of Part VII effectively provision must be made to obtain such information as deemed necessary to inform the Director of the nature and scale of potential or actual air pollution sources.
- 9.3 It is proposed that an Ordinance under this section will allow a Notice to be served upon any persons listed in section 54 of the Law to require specified information concerning air pollution to be provided to the Director.
- 9.4 The Ordinance would;

- specify the circumstances and manner in which a notice pursuant to it may be served i.e. where there are actual or potential instances of emissions of pollutants to the air
- prescribe fair and adequate procedures whereby the requirements of such a notice may be challenged
- set out the consequences (which may include liability to criminal proceedings and power for the Director to take such further steps as are therein set out) of failure to comply with such requirements.

## 10. PROVISION OF PUBLIC INFORMATION

10.1 It is important that air quality information is provided to the public to allow those with pre-existing respiratory conditions to make informed decisions about their daily activities. The existing air pollution monitoring stations have been linked to the States website via <http://guernseyair.ricardo-aea.com/> so that real-time monitoring data can be viewed at any time. The cost of this was met from within the existing budget.

## 11. FINANCIAL IMPLICATIONS

11.1 It is not anticipated that there will be any financial implications relating to the commencement of Part VII of the Environmental Pollution (Guernsey) Law 2004.

11.2 The implementation of the requirements of the Law has so far been delivered within budget, without any additional staffing. Income from fees for the Waste Licensing regime, which was implemented in 2010, now amounts to approximately £33,000 per annum for prescribed waste operations and approximately £40,000 every 3 years for waste transport operations.

11.3 It is, therefore, proposed that some of this income is used to fund the appointment of a local science graduate as an Environmental Pollution Technician to support the delivery of the waste licensing regime and in order to release existing staff work on the Water Pollution Part of the Law. This is likely to cost approximately £35,000 per annum.

11.4 As further Parts of the Law are commenced, there will be further income from fees.

## 12. PUBLIC CONSULTATION

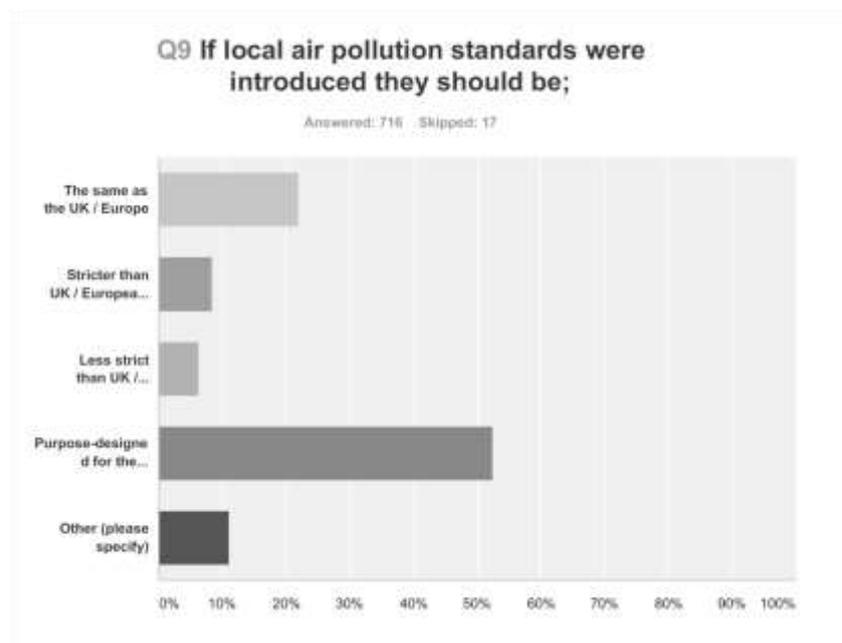
12.1 The 'indicator' for outcome 6 of the Environmental Policy Plan ("education about environmental issues") includes conducting "Island wide census / survey" and "other relevant surveys".

12.2 A public consultation was undertaken in April, 2016 using SurveyMonkey. The questions referred to health issues and impacts from air pollutants. The issue of uncontrolled burning was a focus for the survey due the high number of public complaints received by the OEHP. 731 responses were received electronically or as hard copies.

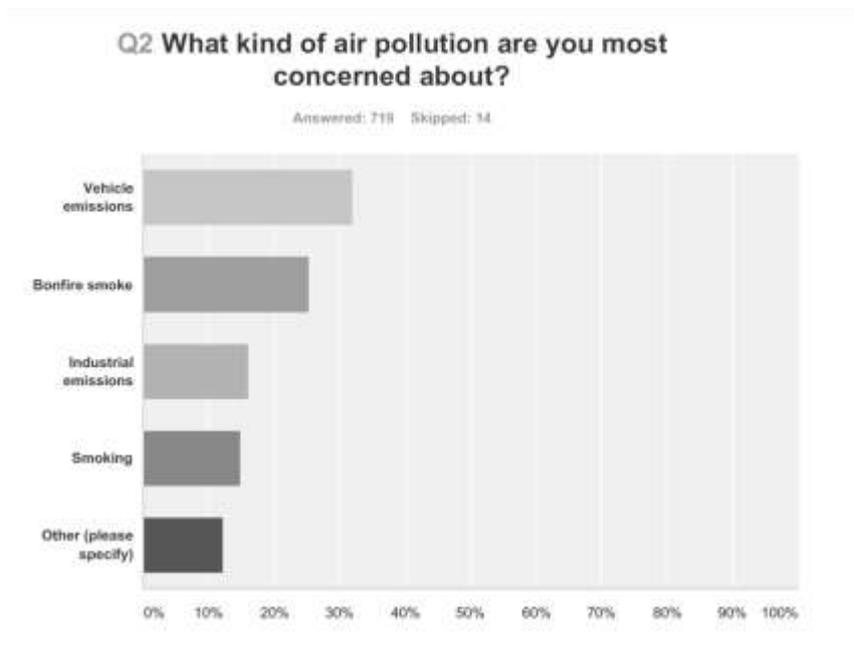
12.3 Contributions to the consultation were included from a number of sources including

the BBC Radio Guernsey, the Guernsey Press Blog, email comments sent directly to the Department and from the Parishes.

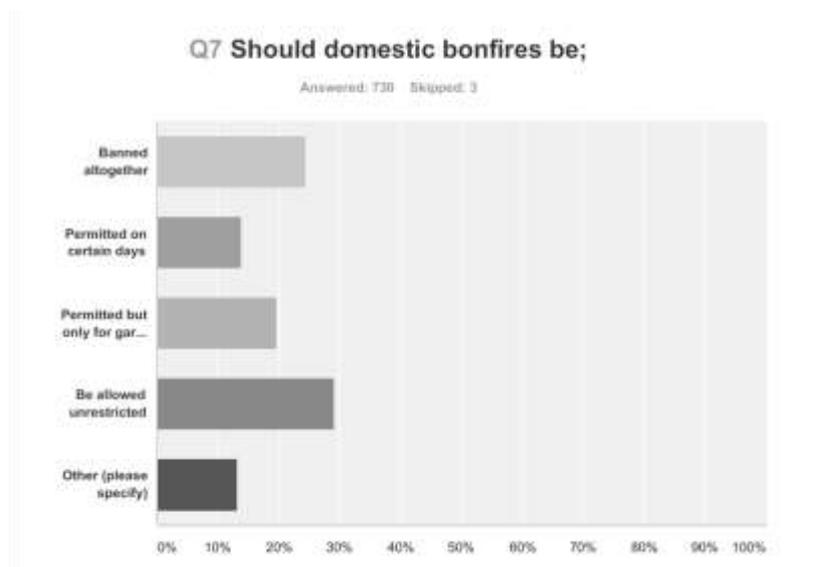
- 12.4 From the questionnaire data, 34% of people thought that air pollution in Guernsey was a problem and 11% thought that air pollution had impacted on their health and well being. 52% of respondents thought that air quality standards should be introduced to set limits for common air pollutants in a context suitable for Guernsey, 22% of respondents thought the UK standards should be introduced, 8% thought the standards should be stricter than the UK/EU whilst 6% thought the standards should be less strict than the UK/EU.



- 12.5 32% of respondents were concerned about the health impacts from traffic emissions, 25% from bonfires, 16% were concerned about industrial emissions, 14% about smoking and a further 12% were concerned about emissions from incinerators, the burning of plastic, rubber, and aircraft etc.



12.6 71% of respondents thought that uncontrolled burning, particularly garden bonfires, should be regulated and 24% stated that they would like to see a complete ban on bonfires. 46% of respondents said that bonfires should be regulated so that only garden waste should be permitted to be burned on certain days or certain times of day. There were a number of comments on how this could be achieved.



12.7 Many of the respondents who commented on bonfires thought that education campaigns should be introduced to promote recycling and other disposal methods. A number thought that common sense should prevail and that people should be good neighbours so that their bonfires did not cause nuisance to neighbours.

12.8 It was interesting to note that 47% of respondents did not think uncontrolled open burning affected the water supply, and 35% of people did not think that uncontrolled open burning affected air quality. The Director will instigate an education campaign to advise the public about the impacts of pollution to ground water and the drinking water supply as well as to the air of pollutants associated with uncontrolled open

burning. 79% of respondents were aware that the OEHPR could investigate complaints about air pollution.

12.9 It should be noted that, although there was a good response to the consultation, the data set is small in population terms and so the percentages are subject to variation.

### 13. INDOOR AIR QUALITY

13.1 Whilst the controls proposed above relate to outdoor air pollution from processes, vehicles, plant etc., the definition of 'air' the 2004 Law includes air within buildings and structures.

13.2 As yet there are no specific standards for indoor air quality in Guernsey, although the UK Committee on the Medical Effects of Air Pollution (COMEAP) has produced guidelines for indoor air. It is known that people spend up to 80% of their time indoors and therefore indoor air quality is an important indicator for human health.

13.3 Recent research in Guernsey into indoor air quality (Cameron, 2014) indicated that outdoor air pollutants were found indoors and that the design and layout of indoor spaces could allow the development of micro-environments and elevated concentrations of pollutants. This was exacerbated by the location of indoor combustion sources such as open fires, location of central heating boilers etc.

13.4 The Director is normally consulted by the Committee *for the* Environment & Infrastructure in relation to planning applications relating to potentially polluting developments. The Director proposes to include comments on indoor air quality in responses so that such considerations can be taken into account in relation to relevant major developments.

### 14. APPEALS, ENFORCEMENT, PROCEDURAL AND FEES PROVISIONS

14.1 It is proposed that there is a right of appeal to the Environmental and Public Health Appeals Tribunal in relation to refusals by the Director of approvals to install commercial boilers and furnaces. Rights of appeal in relation to decisions of the Director relating to licences under Part III are already provided for under section 25 of the Law.

14.2 Standard procedural (relating to applications etc.) and civil, including civil notice, and criminal enforcement and defence provisions are proposed in relation to all the above proposals.

14.3 Appropriate transitional provisions are proposed in relation to existing operations which are prescribed as prescribed operations requiring a licence under Part III of the Law, so as to allow existing businesses adequate time to apply for a licence once the provisions come into force.

14.4 It is proposed to charge a fee in relation to applications relating to licences for prescribed operations as for the current applications in relation to waste licensing operations and to make provision for the Director to set such fees by Regulations. It is

also proposed that a fee is charged in relation to approvals for the installation of boilers and furnaces using existing powers to set fees by regulations under section 8 of the Law.

DR VALERIE CAMERON

Director of Environmental Health and Pollution Regulation

1st May, 2015.

AIR QUALITY STANDARDS & OBJECTIVES

UK Air Quality Objectives 2007

Summary of objectives of the UK Air Quality Strategy 2007			
Pollutant	Objective	Measured as	To be achieved by
Benzene All Authorities	16.25 µg/m <sup>3</sup>	Running Annual Mean	31 December 2003
Benzene Authorities in England and Wales only	5 µg/m <sup>3</sup>	Annual Mean	31 December 2010
Benzene Authorities in Scotland and Northern Ireland only	3.25 µg/m <sup>3</sup>	Running Annual Mean	31 December 2010
1,3-Butadiene	2.25 µg/m <sup>3</sup>	Running Annual Mean	31 December 2003
Carbon monoxide Authorities in England, Wales and Northern Ireland only	10.0 mg/m <sup>3</sup>	Maximum daily running 8 Hour Mean	31 December 2003
Carbon monoxide Authorities in Scotland only	10.0 mg/m <sup>3</sup>	Running 8 Hour Mean	31 December 2003
Lead	0.5 µg/m <sup>3</sup>	Annual Mean	31 December 2004
	0.25 µg/m <sup>3</sup>	Annual Mean	31 December 2008
Nitrogen dioxide	200 µg/m <sup>3</sup> Not to be exceeded more than 18 times per year	1 Hour Mean	31 December 2005
	40 µg/m <sup>3</sup>	Annual Mean	31 December 2005
Nitrogen Oxides**	(V) 30 µg/m <sup>3</sup>	Annual Mean	31 December 2000
Ozone*	100 µg/m <sup>3</sup>	Running 8 hour Mean Daily maximum of running 8 hr mean not to be exceeded more than 10 times per year	31 December 2005
Particles (PM <sub>10</sub> ) (gravimetric)	50 µg/m <sup>3</sup> Not to be exceeded	24 Hour Mean	31 December 2004

All authorities	more than 35 times per year		
	40 µg/m <sup>3</sup>	Annual Mean	31 December 2004
Particles (PM <sub>10</sub> ) Authorities in Scotland only	50 µg/m <sup>3</sup> Not to be exceeded more than 7 times per year	24 Hour Mean	31 December 2010
	18 µg/m <sup>3</sup>	Annual Mean	31 December 2010
Particles (PM <sub>2.5</sub> ) Exposure Reduction Authorities in UK (except Scotland)	25 µg/m <sup>3</sup>	Annual Mean	2020
Particles (PM <sub>2.5</sub> ) Exposure Reduction Authorities in Scotland only	12 µg/m <sup>3</sup>	Annual Mean	2020
Particles (PM <sub>2.5</sub> ) Exposure Reduction Authorities in UK urban areas	Target of 15% reduction in concentrations at urban background	Annual Mean	Between 2010 and 2020
Polycyclic aromatic hydrocarbons All authorities	0.25 ng/m <sup>3</sup>	Annual Mean	31 December 2010
Sulphur dioxide	266 µg/m <sup>3</sup> Not to be exceeded more than 35 times per year	15 Minute Mean	31 December 2005
	350 µg/m <sup>3</sup> Not to be exceeded more than 24 times per year	1 Hour Mean	31 December 2004
	125 µg/m <sup>3</sup> Not to be exceeded more than 3 times per year	24 Hour Mean	31 December 2004
	(V) 20 µg/m <sup>3</sup>	Annual Mean	31 December 2000
	(V) 20 µg/m <sup>3</sup>	Winter Mean (01 October – 31 March)	31 December 2000
µg/m <sup>3</sup> – micrograms per cubic metre                      mg/m <sup>3</sup> – milligrams per cubic metre			

\*Ozone is not included in the Regulations \*\* Assuming NO<sub>x</sub> is taken as NO<sub>2</sub>

Standards within the Air Quality Standards Regulations 2010

Limit Values

Pollutant	Averaging Period	Limit Value	Margin of Tolerance
Sulphur Dioxide	One hour	350 µg/m <sup>3</sup> not to be exceeded more than 24 times a calendar year	150 µg/m <sup>3</sup> (43%)
	One day	150 µg/m <sup>3</sup> not to be exceeded more than 3 times a calendar year	
Nitrogen Dioxide	One hour	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a calendar year	
	Calendar year	40 µg/m <sup>3</sup>	
Benzene	Calendar year	5 µg/m <sup>3</sup>	
Carbon Monoxide	Maximum daily 8 hour mean	10 mg/m <sup>3</sup>	
Lead	Calendar year	0.5 µg/m <sup>3</sup>	100%
Particles (PM <sub>10</sub> )	One day	50 µg/m <sup>3</sup> not to be exceeded more than 35 times a calendar year	50%
	Calendar year	40 µg/m <sup>3</sup>	20%
Particles (PM <sub>2.5</sub> )	Calendar year	25 µg/m <sup>3</sup> to be achieved by 1 January 2015	20% on 11th June 2008, decreasing on the next 1st January and every 12 months thereafter by equal annual percentages to reach 0% by 1st January 2015

Target Values

Pollutant	Target Value for the Total Content in the PM <sub>10</sub> Fraction Averaged Over a Calendar Year	Date by Which Target Value Should Be Met
Arsenic	6 ng/m <sup>3</sup>	31 December 2012

Cadmium	5ng/m <sup>3</sup>	31 December 2012
Nickel	20 ng/m <sup>3</sup>	31 December 2012
Benzo(a)pyrene	1 ng/m <sup>3</sup>	31 December 2012

Pollutant	Objective	Averaging Period	Target Value
Ozone	Protection of human health	Maximum daily eight hour mean	120 µg/m <sup>3</sup> not to be exceeded on more than 25 days per calendar year averaged over three years
	Protection of vegetation	May to July	AOT 40 (calculated from 1 h values) 18000 µg/m <sup>3</sup> .h averaged over five years

Pollutant	Averaging Period	Target Value
Particles (PM <sub>2.5</sub> )	Calendar Year	25 µg/m <sup>3</sup>

**EMISSIONS INVENTORY**

Old Government House Hotel  
Duke of Richmond Hotel  
Peninsula Hotel  
St. Pierre Park Hotel  
Rocquettes Hotel  
Moores Hotel  
La Grande Mare Hotel and Country Club  
Cobo Bay Hotel  
Fermain Valley Hotel  
Hotel de Havelet  
Waitrose, Admiral Park  
Waitrose, Rohais  
Alliance Cash and Carry  
B & Q  
Office developments, Admiral Park  
Royal Bank Place  
Guernsey Post Ltd  
Princess Elizabeth Hospital  
Castel Hospital  
States Prison  
Guernsey Electricity Ltd