

Summary: Intervention & Options

Department /Agency: Defra

Title: Impact Assessment of Better Regulation Review of Part B Activities

Stage: Consultation

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Available to view or download at: <http://www.defra.gov.uk/corporate/consult/brr-partb-activities/index.htm>

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What is the problem under consideration? Why is government intervention necessary? Whether current regulation of industrial air pollution can be simplified without detriment to the policy objectives. For some industry sectors the Local Air Pollution Prevention and Control (LAPPC) regime provides the framework for directly delivering one of several EU directives. For others the purpose is to reduce emissions to assist achieving other national policy objectives and compliance with broader international obligations to improve air quality and reduce national emissions. A Better Regulation Review was established to evaluate whether there remained a justification for regulating the sectors in the latter category under LAPPC and/or whether lighter touch regulatory options would be appropriate. The outcome is a proposal that pollution permits are no longer needed for 3 industry sectors, less burdensome simplified permitting is introduced for 2 sectors, and an assessment is made of the suitability of 45 other sectors for simplified permitting between 2009 and 2011. (Table 7.7 in paragraph 4.95 of the full assessment identifies which proposal applies to which sector.)

What are the policy objectives and the intended effects?

This is an evaluation of existing policy to ensure that existing regulation is proportionate and in line with better regulation principles. The intended effect is a regulatory regime tackling industrial air pollution which is proportionate to the policy purpose.

What policy options have been considered? Please justify any preferred option.

Seven regulatory options have been considered in relation to each of the 61 sectors within scope of the review. The options are: do nothing, transfer regulation to the Clean Air Act, transfer regulation to waste permitting, exempt from LAPPC and rely on statutory nuisance, exempt from LAPPC and rely on self-regulation, retain LAPPC but opt for simplified permitting, and retain LAPPC but alter the threshold for exempting individual activities on grounds of triviality. In earlier consultation rounds, stakeholders were also offered the opportunity to put forward new sectors for regulation. Different preferred options are proposed for different sectors and are justified by means of the multi-criteria analysis contained in the evidence base.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? The LAPPC regime is subject to on-going review. If a full, formal review is needed it should be linked to the reviews of pollution standards which take place at approximately 6-year intervals.

Ministerial Sign-off For Consultation Stage Impact Assessment:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

.....1.....Date:

Summary: Analysis & Evidence

Policy Option:

Description:

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups'
	One-off (Transition)	Yrs	
	£ 0	-	
	Average Annual Cost (excluding one-off)		
	£ 0		Total Cost (PV) £0
Other key non-monetised costs by 'main affected groups' Increased risk of pollution from sectors either removed from LAPPC or transferred to simplified permitting			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups' The main benefits arise from reduced administrative work by the public and private sector as described in Annex H.
	One-off	Yrs	
	£ 0	-	
	Average Annual Benefit (excluding one-off)		
	£ 2.04m		Total Benefit (PV)
Other key non-monetised benefits by 'main affected groups' Reduced administrative burdens enhances GB attractiveness as a place to do business.			

Key Assumptions/Sensitivities/Risks

The calculation of the £2.04m is sensitive to several assumptions. Key factors are the likelihood that the identified sectors will be suited to simplified permitting and that as a result they can be adequately regulated (without loss or diminution of policy objectives) by local authorities employing substantially reduced resources, as reflected in the assumed lower fees and charges. £1.78m of the savings comes from either reducing the complexity and the costs of permitting or, in the case of three sectors, dispensing altogether with permitting and the associated charges.

Price Base Year 2008	Time Period Years 2015	Net Benefit Range (NPV) £9.0-13.4m (+/- 20%)	NET BENEFIT (NPV Best estimate) £11.2m
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What is the geographic coverage of the policy/option?	England, Wales and Scotland			
On what date will the policy be implemented?	April 2009 - 2011			
Which organisation(s) will enforce the policy?	local authorities in England and Wales + SEPA in Scotland			
What is the total annual cost of enforcement for these	£0			
Does enforcement comply with Hampton principles?	Yes			
Will implementation go beyond minimum EU	Yes			
Will the proposal have a significant impact on	No			
Annual cost (£-£) per organisation (excluding one-off)	Micro £0	Small £0	Medium £0	Large £0

Impact on Admin Burdens Baseline (2005 Prices)				(Increase - Decrease)	
Increase of	£ 0	Decrease of	£238,229	Net Impact	£238,229

Key:

Annual costs and benefits: Constant Prices

Evidence Base (for summary sheets)

1. Introduction

- 1.1 This impact assessment addresses the scope for simplifying the air pollution regulation of Part B activities or installations, for which there is no direct obligation under an EU Directive for operators to obtain a pollution permit for their installation. Part B activities are undertaken mainly in factories, but include other premises such as some petrol stations and all dry cleaners – known as “installations”. The Part B regime regulates air polluting emissions and local authorities are the regulators. A list of Part B sectors covered by this Review can be found in Appendix B.
- 1.2 The outcome of the Review is a proposal that pollution permits are no longer needed for 3 industry sectors, less burdensome simplified permitting is introduced for 2 sectors, and an assessment is made of the suitability of 45 other sectors for simplified permitting between 2009 and 2011. This is a GB-wide assessment and covers approximately 6,000 installations.
- 1.3 Specifically, the conclusions are that:
- three industry sectors can be taken out the existing permitting regime altogether
 - two sectors are suited to a form of simplified permitting involving lower administrative costs and lower charges for business
 - 20 sectors have characteristics which may be suited to simplified permitting, and this will be assessed with the sectors when statutory guidance for those sectors is reviewed. A separate consultation paper is being issued simultaneously with this one on 28th October 2008 on the scope of these guidance reviews ([see http://www.defra.gov.uk/corporate/consult/guidance-partb-installations/index.htm](http://www.defra.gov.uk/corporate/consult/guidance-partb-installations/index.htm))
 - 25 sectors are unlikely to be suited to simplified permitting, but this will nonetheless be examined as part of the sector reviews
 - 9 sectors are ruled out of simplified permitting
 - none of the proposals made by previous consultees for sectors to be added to the existing permitting regime will be accepted, but this will be reconsidered if more evidence is provided to strengthen the cases made to date
 - the estimated net annual savings to business arising from these proposals is £2,037,313¹. This comprises administrative savings and fees and charges not paid to regulators (the regulatory service for

¹ the saving in England and Wales only is approximately £1.85m

which the fees and charges were paid would not be provided, with consequently a net benefit to society).

Table 7.7 in paragraph 4.95 below sets out which conclusion applies to which sector.

Background

- 1.4 Over 20,000 installations, in 80 different sectors, are regulated by local authorities to control air emissions. This is the Local Air Pollution Prevention and Control (LAPPC) regime [Air Pollution Control, in Scotland], and the installations are commonly referred to as "Part B". The installations require a permit to operate, for which an application must be made; the permit must contain conditions aimed at the use of the Best Available Techniques to minimise air emissions. Monitoring and inspection is undertaken to check and ensure compliance. Local authority and Scottish Environment Protection Agency (SEPA) regulatory costs are recovered from regulated businesses through fees and charges set centrally, with differential amounts according to the risk rating of each individual installation.
- 1.5 Five of the sectors are currently subject to a simplified permitting approach, whereby statutory guidance contains specimen applications and permits, and the simpler approach is recognised by lower fees and charges.
- 1.6 Of the 20,000+ installations, approximately 70% are required to be subject to a prior permitting regime in order to deliver the requirements of an EU Directive, such as the Solvent Emissions Directive and the Petrol Vapour Recovery Directive. These installations are not the subject of this impact assessment.
- 1.7 The assessment examines whether the remaining installations, spread over 61 different industry sectors², most appropriately continue to be regulated under LAPPC or whether the policy objectives could adequately be secured with either a) a different form of regulation, or b) no prior regulation (leaving them subject to the possibility of statutory nuisance action and perhaps self-regulation/voluntary measures. The assessment follows on from a number of formal and informal consultation and data-gathering exercises, in particular:
 - February 2006: consultation on criteria to be used in undertaking the better regulation review – <http://www.defra.gov.uk/environment/ppc/old-consultations/index.htm>
 - from January 2006 onwards: papers and discussions at each 6-monthly meeting of the two national stakeholder committees chaired by Defra: the Industry Forum and the Industrial Pollution Liaison Committee

² several of these sectors (particularly in the 'solvents' group also contain installations not within the scope of the Review

- May 2007: questionnaire sent to all relevant Part B trade associations (copy of questionnaire and summary of responses at Appendix F)
- 1.8 In addition, during the various formal and informal consultations carried on up to September 2008, several suggestions have been made as to sectors which should be added to LAPPC regulation, and this assessment considers these proposals as well.
- 1.9 The assessment began with a formal consultation on the criteria to be used in assessing each sector – see Appendix A. The subsequent assessment has been based around the following evidence
- a review of the environmental impact of each of the 61 sectors undertaken by the Environment Agency's Local Authority Unit
 - an assessment by Defra of the advantages and disadvantages of the different regulatory models (discussed at committees for key industry and local authority stakeholders) , including estimates of the Information Obligations associated with each regulatory option, and led to Part I of the Environmental Protection Act 1990³
 - a questionnaire survey of affected trade associations to obtain information and views.
- 1.10 Because of the complexity of drawing together conclusions on 7 regulatory options against 61 different sectors, the sectors were placed into 6 groups with similar characteristics.

2. Rationale for government intervention

- 2.1 The 61 sectors were first subject to this form of air pollution regulation in 1991 under Part I of the Environmental Protection Act 1990. There were several drivers, including:
- the EU Air Framework Directive (84/360/EEC) on the combating of industrial pollution from industrial plant. This has since been superseded by the Integrated Pollution Prevention and Control Directive (96/61/EC)
 - the 5th report of the Royal Commission on Environmental Pollution, published in 1976, which recommended that local authorities should have prior approval responsibilities for medium-pollution installations, in line with the then Alkali Inspectorate's responsibilities for more complex, potentially higher polluting installations
 - the replacement of the former Public Health Act offensive trades provisions with more robust prior permitting.

³ EPA90 Part I was the predecessor to the Pollution Prevention and Control Regulations 2000 and, in England and Wales, the Environmental Permitting Regulations 2007. All three legislative vehicles provided for prior permitting and the achievement of Best Available Techniques in relation to essentially the same set of premises

2.2 Since that time there have been several what may be termed 'indirect' EU and international drivers for improvements in air pollution control, as well as national policy drivers:

- Part IV of the Environment Act 1995 introduced a requirement to publish a national air quality strategy containing air quality standards and objectives, and establishing the system of local air quality management
- the EU has adopted air quality objectives, setting objectives for different air pollutants
- the EU has adopted an emissions ceiling directive setting a national limit for the total amount of certain pollutants that can be emitted
- the United National Economic Commission for Europe has agreed various protocols to the Convention on Long-range Transboundary Air Pollution, which specify requirements affecting air pollution emissions
- improvements have occurred in air quality, as stated in the 2007 Air Quality Strategy for the UK

The current situation is positive in several respects. Over the past ten years the quality of our air has improved and we are meeting our current objectives for all air pollutants in over 99 per cent of the UK. From 1990 to 2001 the improvements have helped avoid an estimated 4,200 premature deaths per annum and 3,500 hospital admissions per annum.

- knowledge and understanding of the amounts and impacts of air pollution has developed considerable with, among other things, a recognition of the scale of premature death and hospital admissions arising from poor air quality. The Strategy states:

Air pollution is currently estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months with estimated equivalent health costs of up to £20 billion each year.

- following the Rogers Review of Local Authority Regulation Priorities, air quality, including regulation of pollution from factories and homes, was made one of 6 national enforcement priorities.

2.3 The contribution made by LAPPC regulation to the improvements that have occurred, and to the baseline which future improvements assume is already being delivered, varies from sector to sector.

2.4 In order to ascertain the rationale for government intervention in relation to each of the 61 sectors, Environment Agency's Local Authority Unit developed a spreadsheet for each sector containing:

- the number of installations permitted in that sector
- the pollutants for which emission monitoring is specified in the PG Note

- the mass emissions of each of these pollutants (if known) and the percentage this constitutes of total national emissions
 - the risk category of the sector in accordance with the risk-based methodology devised in conjunction with outside consultants and Part B stakeholders and first introduced in 2004
 - the potential for CO₂ emissions
 - the relative offensiveness of any offensive odours emitted
 - the nature of any solvents used, including their risk phrases
 - the typical location of installations within the sector: urban or rural
 - any international agreements which apply to pollutants emitted from the sector.
- 2.5 Total emissions for the UK were taken from the UK National Atmospheric Emissions Inventory, 1970-2004, (NAEI).⁴ This is not comprehensive for all pollutants, so the spreadsheet listing the sector pollutants also indicates whether, or not, that pollutant is reported by the NAEI.
- 2.6 Emissions data has been obtained for a small number of sites regulated in each sector, the accuracy of the data is therefore uncertain and should be treated as indicative for the purposes of this consultation. It is likely that the emissions figures presented are at the higher end of the range, and that actual figures will be lower than those reported.
- 2.7 A copy of the spreadsheets and text indicating the health and environmental impacts from the common pollutants emitted from the sectors covered by this review are in Appendix G.

3. Policy options

- 3.1 Initial work identified 10 options, as follows. Items 8, 9 and 10 were removed after consultation with the Industry Forum and Industrial Pollution Liaison Committee – national committees chaired by Defra for engaging industry and local authority stakeholders. A summary table of the pros and cons of the 10 options is at Appendix D.
1. Part B (no change)
 2. regulation under the Clean Air Act 1993;
 3. regulation as waste operations under the EP regulations
 4. removal from Part B and reliance on statutory nuisance
 5. Part B, but adoption of simplified permits
 6. Part B but amend or re-interpret the “triviality” definition
 7. removal from Part B and supplement statutory nuisance with self-regulation
 8. removal from Part B and rely on statutory nuisance plus the land use planning system

⁴ [UK Emissions of Air Pollutants 1970 to 2004.pdf](#) NAEI 31/12/2006 C J Dore, et al

9. regulation under the Control of Pollution Act 1974 Sections 60 and 61, and
10. removal from Part B and rely on health and safety regulation.

In overall terms, the existing Part B regime provides the strongest level of regulation, based around permits issued containing specific conditions, and robust powers of enforcement. Air quality policy objectives are most secure. Simplified permitting provides essentially the same safeguards, but is only suited where there is sufficient standardisation of operations within a sector. Waste and Clean Air Act permitting have limitations as to scope. Options 4, 6 and 7 are largely reactive in nature, and options 6 and 7 only address nuisance emissions so will not cover any emissions not noticeable to the public.

Option 1: Regulation under Part B (status quo)

Advantages

- 3.2 The main benefit of keeping processes within Part B is the proactive approach this requires. This is probably best seen for sectors where air pollution impacts would be significant if Part B or other measures to prevent and mitigate emissions failed. Industry is clear about what it has to do and it is held to account by regulators, who are in turn accountable to the public. Part B is also used to ensure that other UK-policies and commitments are achieved. Business may also benefit from having to improve its environmental performance to meet higher standards (perhaps through saving costs), gaining access to changing or newer markets, and improve its corporate image which may prove beneficial with suppliers, investors and consumers.
- 3.3 A number of industry as well as local authority respondents to the first consultation and questionnaire broadly stated their preference for retaining the existing system with most citing the certainty it provides as a desirable factor:

Scotch Whisky Association
 Association of the British Pharmaceutical Industry
 British Rigid Urethane Foam Manufacturers Association
 Quarry Products Association
 Local Authorities Co-ordinators of Regulatory Services
 British Glass
 Wood Protection Association
 Foundry Industry Environment Committee
 Environmental Industries Commission

those wishing to change either generally (BAA) or in relation to a specific sector (BCF) were:

Disadvantages

- 3.4 If there are activities which do not need to be regulated under Part B, then keeping them within this regime would burden industry with unnecessary costs. It would also detract limited resources which regulators could use to better effect on regulating activities which represent relatively higher risks.

Assessment

- 3.5 Part B is a proactive approach which provides assurance about what both industry and regulators must do, so that the risk of pollution can be prevented and/or managed effectively. It is also used to deliver some UK commitments and policies relating to air quality. It is these characteristics which suit it to more complex sectors or those which have a significant potential for emissions in terms of impacts on the local area.

Option 2: Clean Air Act 1993

- 3.6 The Clean Air Act (CAA) provides local authorities in England, Scotland and Wales with powers to approve the design of furnaces before installation, set chimney heights, require the fitting of arrestment plant to existing plant, and for operators to provide information on emissions. These controls only apply to a limited number of pollutants, which are smoke, grit and dust. The CAA also provides a general prohibition of emissions of dark smoke from chimneys serving furnaces, boilers and industrial plant and from open burning on industrial or trade premises. Local authorities can also declare smoke control areas in which emissions of smoke from chimneys are prohibited. People must either use an authorised smokeless fuel or install an exempt appliance that can burn inherently smoky fuels (wood, coal) without producing smoke. These controls apply to all premises in the area unless excluded by the Order establishing the zone, or they are regulated under Part B.

Advantages

- 3.7 The CAA is a less complex regulatory system for regulators and operators to follow compared to Part B and it is less costly to operate. It also retains a form of prior approval. It can be used to control smoke, grit and dust, and can be operated together with statutory nuisance (option 4).

Disadvantages

- 3.8 The CAA can only be used to control smoke, grit and dust. As it cannot be used to control emissions of fine particles or any of the national Air Quality Strategy pollutants or other pollutants such as dioxins and non-AQS heavy metals, then Part B (option 1) or other option(s) would have to be used to control them. Local authorities would have to meet the additional costs and effort of regulating any former Part B-activities using CAA.

Assessment

- 3.9 The CAA could only be used as an alternative option where emissions are predominantly of smoke, grit or dust; but it could be used in tandem with statutory nuisance (see option 4).

Option 3: Waste Permitting

- 3.10 Waste management permits are issued by the Environment Agency and work to ensure that authorised activities do not cause pollution of the environment, harm to human health or serious detriment to local amenities.⁵ There are two types of waste permitting: a waste operation permit (formerly known as waste licence, authorising the deposit, recovery or disposal of controlled waste in or on land), or a mobile plant permit (authorising the recovery or disposal of controlled waste using certain types of mobile plant). Lower risk waste management activities, such as some reclamation and recycling activities, are usually not seen as a threat to the environment or human health, and are, therefore, exempt from the need to obtain a waste permit. There are around 45 categories of exemption, most of which are subject to specific constraints on waste types, quantities, capacities and duration of storage. The exemptions system is intended to be a light touch regulatory regime that aims to encourage low risk waste recovery operations. It is therefore less onerous on industry than waste management licensing in terms of what is needed when registering and there are fewer requirements on the regulator in terms of what it needs to do to ensure compliance.

Advantages

- 3.11 Waste permitting is a proactive regime which requires a licence to operate. This regime must deliver the Waste Framework Directive article 4 objectives (waste to be recovered or disposed of “without endangering human health and without harming the environment, and in particular:- without risk to water, air, soil and plants and animals – without causing a nuisance through...odours”). Waste permitting excludes lower risk waste management activities.

⁵ A waste management licence is a legal document, issued under section 36 of the Environmental Protection Act 1990, with more detailed provisions being contained within the *Waste Management Licensing Regulations 1994*. Since the Review began, waste management licensing has been incorporated in England and Wales in the new environmental permitting regime established by the Environmental Permitting (England and Wales) Regulations 2007

Disadvantages

- 3.12 Waste permitting can only be used to regulate waste-related activities and so cannot be applied to non-waste air pollution activities. The Environment Agency would have to meet the additional costs and effort of regulating any former Part B activities.
- 3.13 Note. Waste permitting is regulated by the Environment Agency and covers a wider range of impacts than just air pollution. PPC and waste permitting have been amalgamated under the framework of the Environmental Permitting Regulations 2007⁶. On 31 July 2008, Defra, the Welsh Assembly Government and the Environment Agency issued a consultation paper <http://defraweb/corporate/consult/waste-exemption-review/index.htm> which, among other things, examines the interface in certain sectors between waste exemptions and Part B regulation. The review will deliver revised exemptions from the need for an EPP permit, but revised exemptions are not due to be in place until October 2009.

Assessment

- 3.14 Transferring Part B activities to waste permitting would only be a possibility for waste-related activities. The waste-related Part B activities which come within the scope of this review are at present generally listed for exemption from waste permitting on the basis of avoiding overlapping regulation and because Part B regulation delivers the objectives in Article 4 of the Waste Framework Directive. The Environmental Permitting Regulations allow operators to apply for a direction to enable them to come under just one regulator where an installation requires both an LAPPC and waste permit.

Option 4: Statutory Nuisance

- 3.15 The system of statutory nuisance has been in place for a long time and is currently enshrined in Part III of the Environmental Protection Act 1990. It is a largely reactive system of pollution control, responding to problems as and when they arise. Local authorities have a duty to take reasonably practicable steps to investigate complaints of various nuisances, including: "any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance".
- 3.16 For industrial, trade and business premises there is the defence of Best Practicable Means (BPM) in the courts following the serving of an abatement notice. BPM is different from Best Available Techniques (BAT) insofar as it can only be determined by a court upon appeal against an abatement notice, or by a court where action is being taken for non-compliance to an abatement notice or magistrates' court order. Statutory nuisance has its basis in case

⁶ Information about the Environmental Permitting Programme is available at: <http://www.defra.gov.uk/environment/epp/index.htm>

law and BPM should be determined on a case-by-case basis by the courts. A local authority must serve an abatement notice if satisfied that a statutory nuisance exists but it remains for the court to rule on whether BPM can be used as a defence. No Government Code of Practice exists for what constitutes BPM as such a decision can only be made by the courts on a case-by-case basis. A Code of Practice covering England and Wales on odour nuisance from sewage treatment works was published in April 2006, and includes a clarification on how the BPM defence applies.⁷ In Scotland, a voluntary code of practice on odour control from waste water treatment works was published in May 2005. The Scottish Government consulted in October 2005 on whether to put this code onto a statutory footing and a statutory code was issued in April 2006⁸.

Advantages

- 3.17 Statutory nuisance is a largely reactive approach, so that controls would only be exercised where nuisance was caused. Business is in effect not regulated unless complaints are received. It is generally less expensive for business because costs only arise where nuisance complaints are made. Although there is a risk of business being confronted with unplanned costs; these would largely relate to environmental performance and so may be justified. Local authority powers include being able to serve abatement notices and powers of entry.

Disadvantages

- 3.18 Statutory nuisance does not provide protection where activities have air emissions which cause impacts which are not an odour or dust nuisance. Business does not benefit from knowing the standards it must meet from the outset. Compared to Part B (option 1), which has relatively open procedures, there would be a loss of accountability of the business to the local authority on behalf of the public. Under statutory nuisance, enforcement of specific conditions is generally more difficult compared to Part B. Pollution would have to occur before the local authority could take action, which may be detrimental to human health and the environment. Local authorities cannot recover regulatory costs from business except through an award of costs in court proceedings. Statutory nuisance can also overlook cumulative effects. Local authorities would have to meet the additional costs and effort of regulating any former Part B-activities.

Assessment

- 3.19 Statutory nuisance is suited to the control of many sorts of nuisance, but it does not provide the proactivity and transparency of prior permitting. There

⁷ The *Code of Practice on Odour Nuisance from Sewage Treatment Works* can be viewed at: <http://www.defra.gov.uk/environment/localenv/odour/cop.htm>.

⁸ The Scottish Statutory Code and guidance can be viewed at: <http://www.scotland.gov.uk/Publications/2006/04/20140331/0>

are differing opinions among business whether activities with a potential for nuisance – such as those formerly defined as ‘offensive trades’ – are better suited to the clarity and accountability of Part B, or whether they can be equally well regulated through statutory nuisance (with or without a code of practice).

Option 5: Simplified PPC Permits

- 3.20 LAPPC for England and Wales currently provides specimen applications and permits for four sectors: small waste oil burners, service stations, dry cleaners, and vehicle refinishing. These simplified procedures entail less administrative work for business (less information is required by way of applications, permits are largely standardised, etc) and trigger a much-reduced application fee and annual subsistence charge. In Scotland, simplified application forms for small waste oil burners and petrol stations have been developed and can be found on SEPA’s website. Bespoke application forms and/or permit templates are also being developed for dry cleaners and vehicle refinishers.
- 3.21 The simplified permit approach is based on these sectors being amenable to standardisation of approach because they involve simple processes with little deviation in their nature, and because the pollution control requirements are likely to be similar irrespective of location although site-specific BAT still pertains.
- 3.22 The Environmental Permitting Regulations provide for the alternative option of General Binding Rules whereby, in effect, permit conditions are determined at national level and may, subject to detailed procedures, be taken up by facilities which are within scope. As long as the activities are undertaken in compliance with the specified conditions, then the GBR provides the authorisation.
- 3.23 In accordance with the second consultation paper on what has become the Environmental Permitting Regulations, in England and Wales it is intended to wait for the first two years’ experience the Environment Agency has in operating under standard permits before assessing the respective merits of the simplified permitting and standard permit approaches.
- 3.24 In Scotland, the PPC Regulations still apply. These regulations provide for the possibility of introducing General Binding Rules. However, the Scottish Government are considering amending the PPC Regulations to enable “standard rules” to be introduced for certain lower risk activities. A full public consultation would be carried out before any changes are made. It is expected that standard rules permits will not be dissimilar to simplified permitting arrangements.

Advantages

- 3.25 Simplified PPC permits involve less work for industry and regulators in making applications and producing permits respectively, provided the individual installations do not differ significantly from the expected 'norm'. They may possibly involve a reduced level of inspection at a level which provides adequate environmental protection. As a consequence and under a risk-based charging scheme, operators will pay lower fees and charges.

Disadvantages

- 3.26 Simplified PPC permits will only be successful where all processes in a sector are broadly alike and can be regulated by largely the same conditions. They are unworkable if there are significant process differences or business wants greater flexibility in agreeing site-by-site standards leading to substantial site-specific regulatory work. A reduced inspection frequency would be dependent on risk assessment, as with 'mainstream' permitted activities.
- 3.27 Note. The second EPP consultation (para 2.60) proposed that standard rules permits (SRP) should be trialled first by the Environment Agency, given that simplified permitting arrangements are already in operation for LA-regulated PPC. SRP are an alternative approach to simplifying PPC permitting.

Assessment

- 3.28 Simplified permits appear to have worked well for four sectors so far. Extension of simplified permits to other sectors should be considered wherever the characteristics of all installations within a sector are broadly similar, where the adoption by regulators of a standardised approach will not reduce the level of environmental protection (including Review criterion 1), and where businesses in the sector are content to operate under generally standard conditions. Reduced inspection frequencies may be appropriate, but will be dependent on risk assessments. Where a sector meets the above criteria and thereby is suited to simplified permitting, reduced application fees and subsistence charges are likely to be appropriate.

Option 6: change in PPC triviality definition or its interpretation, whether across all Part B sectors or for specific sectors

- 3.29 Part B already provides that activities are exempted if their releases are trivial.⁹ This allows for individual installations within a given sector to be

⁹ Schedule 1, Part 1, paragraph 6 of the Environmental Permitting Regulations 2007 provide: "2(1) Subject to sub-paragraph (2), an activity must not be taken to be a Part B activity within Part 2 of this Schedule if it cannot result in the release into the air of a substance listed in sub-paragraph 3 or there is no likelihood that it will result in the release into the air of any such substance except in a quantity which is so trivial that it is incapable of causing pollution or its capacity to cause pollution is insignificant.

"2(2) Sub-paragraph (1) shall not apply to— (a) an SED [Solvent Emissions Directive] activity; or (b) an activity which may give rise to an offensive smell noticeable outside the site where the activity is carried out." Similar provisions are contained in Schedule 1, Part 2, paragraphs 2(1) and 2(2) to the Pollution Prevention and Control (Scotland) Regulations 2000 (as amended).

excluded from regulation because the particular way in which that installation will be operated will, in effect, have minimal air pollution impacts. The current definition is written in terms of likelihood to result in air emissions and an issue which may arise in any possible widening of the definition would be how reliant the exemption would be on adequate operator performance, maintenance etc and, if there was significant reliance, how this could be assured.

Advantages

- 3.30 If the better regulation review finds that there are low polluting categories within sectors which are nonetheless caught by Part B because of the current definition of 'triviality' in paragraph 2 of Part 2 of Schedule 1 to the PPC Regulations, this would be a mechanism for excluding them from PPC regulation. An alternative would be to amend individual sector definitions in Part 1 of Schedule 1 to the regulations, for example to amend the threshold at which PPC was triggered.

Disadvantages

- 3.31 There has been no feedback to date that the triviality exemption is not operating appropriately. Care would need to be taken that any revised definition only excluded sectors which warranted it. Guidance was issued in July 2008 with specific advice on triviality for small-scale mobile crushing plant.

Assessment

- 3.32 Amending the triviality definition would be a means of generically excluding low polluting processes rather than changing individual sector definitions, but it might be too 'blunt' an instrument. Individual sector definitions could be amended. Any proposals would need to be tested robustly against criterion 1 of the Review.

Option 7: different forms of 'self-regulation'

- 3.33 Self-regulation can take many forms, including voluntary agreements, the use of environmental management systems (EMS), codes of practice which members of trade associations can follow, or co-regulation (which are can be codes with statutory backing or some other form of Government involvement). There are also different types of economic instruments or incentive-based structures, which are government interventions in the market in order to promote particular behaviour by industry to deliver public goods, prior to regulation. Examples include: tradeable permits or quotas, price caps, targets, taxes, tax credits and subsidies.¹⁰ A burden sharing system has been devised for the cremation sector, but this operates within Part B.

¹⁰ See *Alternatives to Regulation* (2004) by the Better Regulation Task Force:

Advantages

- 3.34 Self-regulation would result in industry facing much reduced costs, effort and resources. There would also be few direct costs to Local and Central Government. It is very likely it would allow greater flexibility by industry to adapt to changing circumstances including market trends.

Disadvantages

- 3.35 Self-regulation would result in greater uncertainty about whether industry would deliver necessary standards of environmental performance. Although some industrial operators may exhibit very good environmental performance or have low impacts, a lack of regulatory controls means there would be no assurance that industry would behave in a way to promote the public good of environmental protection, and there would be no way of to enforce good industry behaviour. Other non-Part B options (e.g. statutory nuisance) would have to be used by regulators in the event that self-regulation did not deliver sufficient environmental protection, which in turn would have to be funded by regulators. Approaches such as formal EMS are only used by a few Part Bs and codes of practice and co-regulation can be anti-competitive, because they provide a barrier to entry for smaller firms.
- 3.36 As there is no single governing body to enforce self-regulation this could result in uncertainty as to who is monitoring compliance with agreements etc. There would also be a lack of clarity as to how it should be funded and generally a lack of accountability.
- 3.37 However, reliance on business good practice, backed up by statutory nuisance, could be appropriate for low impact sectors with a track record of good environmental performance.

Assessment

- 3.38 It is very likely that self-regulation would only be appropriate where environmental impacts are very low and the robustness of enforceable regulation is not considered necessary to ensure criterion 1 of the review is met. Such approaches could be used in combination with statutory nuisance (option 4) and/or other options would have to be used by regulators if environmental protection was not maintained..
- 3.39 The Information Obligations associated with each of the 7 options are set out in table 1 overleaf. The basis for these totals and the underpinning assumptions can be found in a more extensive table and notes in Appendix H. The assumptions are assessed as having a medium sensitivity.

Table 1 – total cost of information obligations associated with 7 options

IO type	OPTION 1 PPC			OPTION 2 CAA		OPTION 3 Waste		OPTION 4 Statutory Nuisance		OPTION 5 Simplified		OPTION 6 Triviality		OPTION 7 Self- regulation (formal EMS)					
	hours (hrs)	No. of installat ions (inst)	total cost (assumes hourly rate at £17.80)	hrs	inst	hrs	inst	hrs	inst	hrs	inst	hrs	inst	hrs	inst				
SUB-TOTAL – high risk			£48,416			£13,969			£49,699			£34,870			£23,103			-----	£21,286
SUB-TOTAL – medium risk			£288,608			£224,992			£427,485			-----		£119,331			£14,240		£343,184
SUB-TOTAL – low risk			£491,583			£426,916			£445,374			-----		£432,345			£20,292		£445,374
SUB-TOTAL – no risk categories			£189,338			£72,054			£305,910			-----		£59,024			£17,711		£43,591
GRAND TOTAL			£1,017,945			£737,931			£1,228,468			-----		£633,803			£52,243		£853,435
Charging expenditure in England and Wales	A p p l i c a t i o n		£98,410 (65 installations x £1514)						£182,000 (65 installations x £2800)					£21,580 (65 installations x £332)					
	A n n u a l		£4,578,640 (5393 installations x the relevant charges for each % risk category)						£8,698,909 (5393 installations x £1613)					£1,806,655 (5393 installations x £335)					
Charging expenditure in Scotland	A p p l i c a t i o n		£70,620 (30 installations x £2354)						£87,970 (30 installations x £2929)					£11,880 (30 installations x £396)					
	A n n u a l		£431,270 (620 installations x the relevant charges for each % risk category)						£3,039,860 (620 installations x £4903)					£205,220 (620 installations x £331)					

- 3.40 An assessment of the implications social impacts of the better regulation review, is in Appendix I. This covers rural communities, human rights, ethnic minorities, gender equality, disabled people, children and young people, older people, income groups, devolved countries, and particular regions of the UK.
- 3.41 Appendix J contains a small firms impact test. Appendix K contains a competition assessment. Appendix L contains an assessment of enforcement, sanctions and monitoring.

4. Evaluation of options and cost-benefits

- 4.1. Because of the lack of concrete evidence and the scale of the review (of 7 x 61 individual assessments taking each sector at a time, or 7 x 6 using the sector groups), it has not proved possible to provide extensive quantification of the benefits/disbenefits of the options. This Impact Assessment will be developed further if evidence is provided by those being consulted on it.
- 4.2. The following multi-criteria analysis seeks to draw together the evidence on the alternative regulatory options, their applicability to the sectors covered by the review, the social and other impact considerations referred to in paragraphs 3.40 and 3.41 above, and the views expressed so far in the responses to the first consultation and the 2007 questionnaire. It uses the grouping of the 61 sectors described in Appendix G, i.e. 5 main groups, with a further 'others' category containing sectors with individual characteristics. (Where comments made about the environmental impacts of certain pollutants in respect on one group apply equally to another group, they have not been repeated. The same applies to stakeholder views.) Data on numbers of installations is for 2006/7 unless otherwise indicated.
- 4.3. Paragraph 4.95 contains a summary of the regulatory option proposed for each of the 61 sectors. Paragraph 4.96 summarises the savings that would accrue.
- 4.4. The analysis takes account of:
- the environmental impacts as covered in detail in Appendix G
 - the analysis of social impacts contained in Appendix I
 - the views of respondents to the May 2007 questionnaire referred to in paragraph 1.7
 - the advantages and disadvantages of the 7 regulatory options

and contains conclusions based around tests of applicability, proportionality, and policy delivery.

Group 1 - solvents

4.5. The solvent group comprises the following sectors listed in Table 7.1 below, and the overriding reason for regulation is to reduce emissions of VOCs. Different VOCs have different potential as a factor in causing ground-level ozone, as a greenhouse gas, as an ozone depleting agent, and because of their direct toxicity when breathed in. The total figure of 465 installations in these sectors includes installations required to be regulated under the Solvent Emissions Directive (SED); it is estimated that less than 20% of the total (<90 installations) will come within the scope of this better regulation review.

Table 7.1: sectors in the solvents group

sector description	guidance note	no. of installations		
		England and Wales	Scotland	GB
Chemical treatment of timber, <25te consumption	PG 6-03	47	11	58
Coil coating, <25te consumption	PG 6-13	6*	0	6
Printworks using non SED technique > 5te consumption	PG 6-16a	86	9	95
Printing of flexible packaging, Installation > 5te, coating activity <5te	PG 6-17a	}82	4	86
Printing of flexible packaging, Installation > 5te, coating activity <15te	PG 6-17b			
Printing of flexible packaging, using non SED technique, consumption >15te	PG 6-17c			
Vegetable oil extraction, fat and oil refining – heat refining processes	PG 6-25	18	4	22
Rubber activities, using carbon black and <15te consumption	PG 6-28	46	1	47
Wood coating, consumption between 5 & 15 te	PG 6-33	105	14	119
Pharmaceutical formulation, consumption between 5 & 50 te	PG 6-43	5	0	5
Totals:		395	43	438

*2005/6 figure

4.6. Although the individual contribution of each sector will be small (which is typical generally of the position regarding industrial VOC emissions) this group of sectors contribute towards existing baseline compliance with the National Emissions Ceilings Directive and the Gothenburg Protocol to the UNECE Convention on Long Range Transboundary Air Pollution – both of

which specify emission ceilings for VOCs - and towards achieving ozone air quality objectives. So the contribution of existing LAPPC regulation is a given in current compliance calculations.

- 4.7. Further tightening of the NECD and GP is anticipated, with consequent pressures to find emissions reductions from additional sources. Whilst this does not automatically imply that such reductions should be sought, in part or in whole, from solvent-using industries, given current estimates that the solvent use sector will be the largest single source of VOC emissions, any cuts in the reductions currently secured would only serve to worsen the shortfall.
- 4.8. The May 2008 consultation draft of a report by the Air Quality Expert Group, "Ozone in the UK"¹¹ said that annual mean concentrations of ozone had generally increased over last 10 years in urban areas (mainly due to NOx reductions) but less markedly in rural areas, and predicted an increase in urban ozone over the coming 20 years to the levels in the surrounding rural areas. The risk rating of all installations in this group of sectors is medium, apart from the chemical treatment of timber (low risk) and vegetable oil extraction (high risk).
- 4.9. It is estimated that by 2010 the solvent use sector will be the largest single source of VOC emissions, which will be material if VOC reductions are needed to achieve VOC ceilings under the NECD or GP or to secure compliance with EU air quality targets or UK objectives for ozone.
- 4.10. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this solvents group.
- 4.11. All the installations in this group are in sectors where installations with a larger solvent consumption are required to be regulated under the Solvent Emissions Directive. While, on the one hand, this means that these smaller-consuming installations are regulated domestically, but may not be in other EU countries; on the other hand, in terms of domestic competition within the sectors, inclusion of some smaller consumers produces a more level playing field. Installations which apply coatings, whether subject to the SED or below the SED consumption thresholds, are typically SMEs.
- 4.12. The views expressed by those responding to the 2007 questionnaire relevant to this group were:
 - the Association of British Pharmaceutical Industry comment is understood to be to take out of PPC regulation any pill coating installations which are between 5 and 50 tonnes solvent

¹¹ <http://www.defra.gov.uk/corporate/consult/ozone2008/index.htm>

consumption a year (ie below the 50th SED threshold and above the 5th PPC threshold). In effect, this would be reverting to statutory nuisance. An ABPI member commented a) that simplified permits would only succeed if activities are broadly alike and not too diverse and b) that alternative forms of regulation were a possibility, but that market-based instruments could result in too much bureaucracy.

- the British Coatings Federation commented on powder coating (see 'contained particulates' group), but not on the solvent using sectors. It is therefore assumed that the BCF accepts the "no change" option.
- the Wood Preservation Association were content with no change.
- the British Rigid Urethane Foam Manufacturers' Association expressed support for the current PPC regime and wished there to be no change.

4.13. The following responses applied to across the board to all six industry groups:

- the Environmental Industries Commission said that no steps should be taken which increase air pollution and therefore damage public health. Their members consider that current technical requirements on Best Available Techniques (BAT) are implemented and working well and any relaxation of technical requirements would have significant negative impact on environment, in particular increased emissions of PM₁₀. EIC said that the review of the National Air Quality Strategy reflected the growing body of evidence and realisation that particulate (PM₁₀ and metal particles) is a major contributor to health and respiratory problems. The review of the NAQS concluded that particulate emissions reduced life expectancy in the UK by 8 months in 2005 at a cost of £9.1-21.4 billion p.a. They believed that any departure from current technical requirements would result in an increase in particulate emissions with negative health and environmental repercussions. They commented that transfer to statutory nuisance (or visibility) would only suffice to detect particulate concentrations above 100mg/m³ (when it is visible) which are much higher than the current emissions of 5mg/m³ from abated industrial processes. EIC provided data to support their conclusions.

Defra note: the Government's September 2008 manufacturing strategy, referred to in Chapter 4, refers to the export and employment benefits of environmental goods and services.

- the Local Authority Coordinators of Regulatory Services (Lacors) and their advisers variously expressed concern about any drawing

back from PPC regulation, and about extending the use of simplified permits. It was considered that none of the alternatives to Part B regulation provided the same level of proactive control, consistency of regulation and certainty of cost and outcome for local residents and businesses.

4.14. Three of the regulatory options would be inappropriate for this group:

- Clean Air Act: does not address VOC emissions
- waste permitting: these are not waste operations
- statutory nuisance: whilst some solvent-using installations can give rise to odorous emissions, the main rationale for regulating them is to reduce VOC emissions which will not necessarily be noticeable to those living in the vicinity or, if there is a smell, it may not be sufficient to amount to a statutory nuisance.

4.15. Of the remaining four options:

- triviality: it is unlikely that any installations of the size covered by this group of sectors would be capable of being classified as having trivial emissions, even if the guidance were to be revised.
- alternative forms of regulation: the Paints Directive uses a marketing and use approach to regulating solvent emissions, but is currently limited to decorative paints and those used for vehicle refinishing. It is possible that a similar approach could work for one or more of the sectors in this group. This would not, however, fit with the way the SED operates, and since it is likely the same coating products could be used in SED sectors, it would not seem viable to establish a compliant coating regime for each of the 10 sectors in this group of 465 installations. But Defra, THE Welsh Assembly Government (WAG) and the Scottish Government would be open to proposals from individual trade bodies to commit to using particular lower-solvent coatings. The appropriateness of this option would depend on the level of commitment and subsequent delivery.
- simplified permitting: if compliant coatings were adopted by a sector as described above, the simplified permitting model used for vehicle refinishing installations consuming more than 1te of solvents a year (see process guidance note PG6/34b) would be an alternative option to a voluntary agreement. It is not considered that simplified permits would be successful otherwise, because of the variation and level of complexity of the installations in these sectors.
- do nothing: risk-based regulation was introduced in 2006, and a review of all the PG notes is planned for 2009-11, which for the

solvent sectors will among other things focus on simplifying the existing guidance.

- 4.16. Standard cost model. No financial information was provided in response to the 2007 questionnaire.
- 4.17. Conclusion. The first two options in paragraph 4.14 would result in a diminution of regulatory oversight with the prospect of reductions in the quantity of emissions prevented. It would be inappropriate to reduce the scope of LAPPC in respect of VOC emissions at a time when there are significant pressures for further reductions of VOCs. The NECD and Gothenburg Protocol are designed to allow flexibility for member countries to decide where to target to achieve the national ceilings, thus going beyond the Solvent Emissions Directive is one of the options. However, there will be opportunity during the forthcoming 6-year review of the PG notes to discuss with industry representatives and other interested parties the scope for any simplified permitting arrangements, although for the above reasons Defra, WAG and the Scottish Government believe they are unlikely to be achievable because of the complexity of the sectors. It is intended to include the issue of simplified permitting on the agenda for the relevant Technical Working Groups convened to discuss revision of the PGs listed in table 7.1. These meetings will also afford the industry an opportunity to offer any proposals for voluntary arrangements to use compliant coatings. The 6-year review will also be used as an opportunity to follow up the work Defra commissioned from AEA Energy and Environment "Climate Change Consequences of VOC Emissions Controls"
<http://defraweb/environment/ppc/localauth/pubs/guidance/index.htm> in order to review whether any currently-specified abatement provisions in the PG notes have overall negative carbon impacts.
- 4.18. Additional sectors. The initial review of proposals for additional sectors to be regulated produced a short-list of eight sectors. None of these comes in the solvents group.

Group 2 – metals

- 4.19. The metals group comprises the sectors listed in Table 7.2 below. The sectors generally have the potential for fine particulate emissions as well as variously emissions of VOCs, heavy metals, CO₂ (and SF₆ a far more potent greenhouse gas), chlorides, sulphur and nitrogen oxides, and dioxins. There is also some emerging evidence that some metals can play a role in the toxicity of particulate matter. All activities are medium risk, apart from gas/electric fed electrical and rotary furnaces (low risk) and recovery of non-ferrous metal from scrap, cupolas and lead glass manufacturing (high risk).

Table 7.2: sectors in the 'metals' group

sector description	guidance note	no. of installations		
		England and Wales	Scotland	GB
Recovery of non-ferrous metal from scrap	PG 2-01	45	5	50
Hot dip galvanising	PG 2-02	7	2	9
Electrical and rotary furnaces, crucible gas, gas/electric fed	PG 2-03a	}14	}8	22
Electrical and rotary furnaces, others	PG 2-03b			
Iron and steel processes	PG 2/04a	185	9	194
Hot & cold blast cupolas	PG 2-05	1	0	1
Aluminium and aluminium alloy processes	PG 2-06a	}123	}12	135
Magnesium and magnesium alloy processes	PG 2-06b			
Zinc and zinc alloy processes	PG 2-07	23	1	24
Copper and copper alloy processes	PG 2-08	45	2	47
Lead glass manufacturing	PG 3-04	8	1	9
Thermal spraying processes	PG 6-35	46	4	50
Totals:		497	35	532

4.20. The recovery of non-ferrous metal from scrap would be subject to waste permitting if it were not regulated under Part B. Since waste regulation is required by the Waste Framework Directive, and since the WFD requirements are delivered through the Part B permitting system, there are unlikely to be any better regulation benefits for business from

taking these installations out of Part B. However, the provision in the Environmental Permitting Regulations to enable the Secretary of State or WAG to direct that there is one regulator per site – as set out in chapter 2 of the General Guidance Manual

<http://defraweb/environment/ppc/localauth/pubs/guidance/manuals.htm> - offers the potential for better regulation benefits where these Part B furnaces operate in conjunction with a waste operation.

4.21. As for the remaining sectors in the metals group, the individual contribution of each sector to overall emissions of different pollutants will be relatively small, but the achieved emissions reduction has already been taken into account in relation to UK delivery of emissions ceilings requirements for VOCs and heavy metals, the protocol on Persistent Organic Pollutants regarding dioxins, and air quality objectives. The Part B regime is listed in the summary of measures in the UK Government's August 2008 consultation paper in relation to resolving breaches of EU limit values (plus margins of tolerance for nitrogen dioxide) in certain zones and agglomerations of the UK in the calendar year 2006. The relevant limit values for these pollutants are established by the First Air Quality Daughter Directive (1999/30/EC) – see <http://www.defra.gov.uk/corporate/consult/air-limitvalues2006/consultation.pdf> . The fourth Daughter Directive sets target values for arsenic, cadmium and nickel, whilst the first daughter directive sets a limit value for lead. The latter will be superseded by the new air quality directive (2008/50/EC) when it comes into force in June 2010 and has retained the same limit value for lead. The April 2007 UK National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants - <http://www.defra.gov.uk/environment/chemicals/pdf/pop-nationalplan.pdf> - lists the Part B controls among the current UK requirements.

4.22. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this solvents group.

4.23. The views expressed by those responding to the 2007 questionnaire relevant specifically to this group were:

- the FIEC (Foundry Industry Environmental Committee) said it supported the current PPC regime and considered that the Clean Air Act would lead to higher management costs without a substantial reduction in the annual subsistence charges for all options. They considered that simplified permits were a possibility but due to the diversity of the metal sectors it might be difficult to implement.

- British Glass expressed support for the current PPC regime and commented that most operators had probably by now come to an equilibrium with their regulators. They considered simplified permits to be a possible option; although doubted whether it was worth the trouble to devise them given that there were so few installations; and such rules could result in inflexibility and unnecessarily complicate the situation. They referred to one firm which already has an environmental management system and under LAPPC has already moved to a lower tier risk; the firm remark that although it took extra work to implement it, there have been benefits, including lower fees. British Glass saw triviality coupled with statutory nuisance as possibilities; commented that it seemed rather retrograde given the time it had to get to the present point; although felt that by now for most sites it ought to be really a question of liaison (oversight and self regulation), but this would not cater for any up-and-coming poor operators.

4.24. Three of the regulatory options would be inappropriate for this group:

- Clean Air Act: does not address the full range of emissions from any of the processes in this group.
- waste permitting: these are not waste operations, other than PG2/1 which is discussed above.
- statutory nuisance: whilst some metals installations can give rise to emissions of odour, dust or corrosive particles, nuisance potential is only a part of their environmental footprint. main rationale for regulating them is to reduce VOC emissions which will not necessarily be noticeable to those living in the vicinity or, if there is a smell, it may not be sufficient to amount to a statutory nuisance.

4.25. Of the remaining four options:

- triviality: it is unlikely that any installations of the size covered by this group of sectors would be capable of being classified as having trivial emissions, even if the guidance were to be revised.
- alternative forms of regulation: the main possibility would be a voluntary agreement for each of the 11 sectors to secure the level of pollution control currently delivered by Part B, with the possible back-up of a formal environmental management system. It is not considered that this approach would be likely to reliably deliver the complexity of controls that regulation now secures, and there is no evidence of an industry appetite to go down this route, although the British Glass comments are slightly ambivalent.

- simplified permitting: in line with the FIEC's views, the broad expectation is that the sectors are internally too diverse to devise a common set of rules. It would seem that British Glass are, on balance, not in favour of simplified permits.
- do nothing: risk-based regulation was introduced in 2006, and a review of all the PG notes is planned for 2009-11.

4.26. Standard cost model. No financial information was provided in response to the 2007 questionnaire.

4.27. Conclusion. Many of the pollutants emitted from these sectors are already assumed to be fully regulated for the purposes of meeting various air quality and ceilings requirements. The first two options in paragraph 4.24 would result in a diminution of regulatory oversight with the prospect of reductions in the quantity of emissions prevented. However, there will be opportunity during the forthcoming 6-year review of the PG notes to discuss with industry representatives and other interested parties the scope for any simplified permitting arrangements – albeit that the industry accepts that the diversity of installations in the sectors makes it less likely. Defra, WAG and the Scottish Government propose to include this on the agenda for the relevant Technical Working Groups convened to discuss revision of the PGs listed in table 7.2.

4.28. Additional sectors. The initial review of proposals for additional sectors to be regulated produced a short-list of eight sectors. None of these comes in the metals group.

Group 3 – combustion

4.29. The combustion group comprises the sectors listed in table 7.3 below. Combustion installations have the potential to emit primary particulates (including final particles), acid gases (SO_x and NO_x) which also comprise secondary particulates, and - where waste materials are burned as a fuel or the combustion plant is associated with other activities - pollutants such as organic compounds, chlorine, dioxins and hydrogen cyanide.

Table 7.3: sectors in the 'combustion' group

sector description	guidance note	no. of installations		
		England and Wales	Scotland	GB
Boilers & Furnaces 20 - 50 MW, gas fired	PG 1-03a	}6	}2	8
Boilers & Furnaces 20 - 50 MW, other fuel fired	PG 1-03b			

Gas Turbines 20 - 50 MW	PG 1-04	1	1	2
Reheat furnaces	PG 1-11	1	0	1
Combustion of solid fuel, non WID feedstocks	PG 1-12	50	1	51
Plaster production	PG 3-12	7	0	7
Roadstone coating, gas fed	PG 3-15a	}318	}25	343
Mineral Drying, gas fed	PG 3-15b			
	Totals:	383	29	412

4.30. As with the solvent sector, although the individual contribution of each sector to national emission totals will be small, this group of sectors contribute towards existing baseline compliance with the National Emissions Ceilings Directive and the Gothenburg Protocol to the UNECE Convention on Long Range Transboundary Air Pollution – both of which specify emission ceilings for SO_x and NO_x, and with the prospect of future ceilings for PM_{2.5}-.and towards achieving air quality objectives for these substances. The new EU Air Quality Directive (2008/50/EC) sets air quality limit values for, among other pollutants, SO₂ and NO₂nitrogen dioxide. It also provides for the possibility for extended compliance deadlines for NO₂ and for the possibility of postponing NO₂ limit values by a maximum of five years for a particular zone or agglomeration where conformity with the limit values cannot be achieved by 2010, provided that the limit value is not exceeded by more than the maximum margin of tolerance. The UK plans to submit an application in 2010. The UK also consulted in August 2008 on a report to the European Commission on actions as regards exceedances of the NO₂ limit values (plus margin of tolerance) in 2006 – see <http://www.defra.gov.uk/corporate/consult/air-limitvalues2006/consultation.pdf>. (There is similar provision for compliance deadline extension in relation to PM₁₀ which the UK plans to apply for in 2009.)

4.31. The proposal for an Industrial Emissions (IPPC) Directive <http://ec.europa.eu/environment/air/pollutants/stationary/ippc/index.htm> currently includes the extension of the IPPC Directive to include all combustion plant in the range 20-50MW; this includes where several plant aggregate up to this range (excluding any below 3MW), unlike domestic regulations which cover only plant which are individually within range. Many combustion plant in the 20-50MW range will already be regulated under PPC by virtue of being technically connected to another Part B or A installation (which, together with the absence of aggregation) accounts for the small number of Part B boilers and furnaces.

4.32. The impacts of fine particles are described in the text on group 4 sectors.

4.33. The waste combustion installations covered by Part B are those which are exempted from the Waste Incineration Directive, largely by virtue of

the exemption for plants treating only "wood waste with the exemption of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood-preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste". (The Industrial Emissions (IPPC) Directive proposal, in incorporating the WID, currently removes the words after "coating".) The statutory guidance for Part B waste combustion plant is less stringent than WID.

- 4.34. Most of the sectors in this group have a risk rating of 2 (medium). All glass installations are currently of a size to bring them under IPPC and therefore not subject to this review: they would have a rating of 3 (high). Roadstone coating and mineral drying installations are rated 1 (low), although the rating for the former might be subject to review in the light of conclusions reached on the status of processed fuel oil used in these processes – see <http://www.environment-agency.gov.uk/subjects/waste/1019330/1334884/2091639/?version=1&lang=e>. It is understood that plaster installations may now or in future be regarded as Part A(1) for Environment Agency regulation.
- 4.35. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this solvents group.
- 4.36. The views expressed by those responding to the 2007 questionnaire relevant specifically to this group were:
- the Quarry Products Association has an interest as regards roadstone coating. No specific comments were made about this sector. The general comments were that the majority view was that Part B regulation generally remains appropriate for the industry. It establishes known operational standards and provides a means of delivering continuous improvement for environmental protection. However, there still remain some concerns among QPA members over the competency of regulators and the inconsistency of application of Process Guidance notes. QPA believe that a combination of outcome focused simplified permits and improved regulator knowledge of our industry would lead to permits being less prescriptive and more risk based.
 - the British Aggregates Association has an interest as regards roadstone coating and strongly supports deregulation.
 - the Scottish Whisky Association supports no change.
 - British Glass, the trade organisation for the glass industry, supports the current PPC regime. It sees statutory nuisance as a retrograde, backwards step as an alternative option to PPC but considers

simplified permits to be a possible option but that simple rules for so few may lead to inflexibility and unnecessarily complicate the situation. It regards triviality as a possible option and suggests a step-based approach to this option in conjunction with self-regulation. Self-regulation is a possible option, and considers the EMS system and risk-based system to be working well. As for triviality, BG suggests a step-based approach to this option.

4.37. All of the regulatory options are potentially viable for one or more sectors in this group.

- Clean Air Act: boilers and furnaces, gas turbines, and waste combustion plant would be regulated for smoke, grit and dust if they were moved across to the CAA. There would be no controls over SO_x and NO_x or other pollutants in relation to waste combustion. None of the questionnaire respondents supported this option.
- waste permitting of waste combustion plant would have little impact on regulatory burdens under the Environmental Permitting Regulations, other than a likely transfer of regulator to the Environment Agency which is the primary regulator for waste permitted facilities.
- statutory nuisance: whilst some metals installations can give rise to emissions of odour or dust, nuisance potential is only a part of their environmental footprint. The main rationale for regulating them is to reduce emissions of SO_x and NO_x, particulates, and the other pollutants referred to above, which are unlikely to be noticeable to those living in the vicinity.
- triviality: since installations in these sectors require abatement plant in order to reduce emissions, it is unlikely that any would be capable of being classified as having trivial emissions, even if the guidance were to be revised.
- alternative forms of regulation: the main possibility would be a voluntary agreement for each of the 9 sectors to secure the level of pollution control currently delivered by Part B, with the possible back-up of a formal environmental management system. It is not considered that this approach would be likely to reliably deliver the complexity of controls that regulation now secures, and there is no evidence of an industry appetite to go down this route, although the British Glass comments are slightly ambivalent.
- simplified permitting: subject to detailed consideration of each PG note (and their practical application) to assess whether the provisions can be distilled into a set of standard conditions, there is scope to consider extending the simplified permitting approach to this group. Some sectors may prove to be too diverse to warrant this approach,

and only three sectors (waste combustion roadstone coating and mineral drying have, on current data, sufficient of a critical mass of installation to justify the work necessary to develop simplified permits.

- do nothing: risk-based regulation was introduced in 2006, and a review of all the PG notes is planned for 2009-11. Regulation of small combustion plant may need to be extended to comply with a future Industrial Emissions Directive or in the light of any assessment that may be made in the context of the National Air Quality Strategy or for the purposes of delivering emissions ceilings requirements.

4.38. Standard cost model. The BAA estimate the cost of information obligations at two days per year for a senior manager at £16.23 per hour, which the BAA argue needs to be doubled to account for indirect costs* – making a total of £600 pa. BAA comment that in practice this is more like £1k. On top of this is the annual subsistence charge. They add: "This assumes that the local authority is competent, very many are not. In these cases the costs of professional and legal external assistance can be £50,000 per installation. These are your 'admin costs'". No other financial information was provided in response to the 2007 questionnaire. Simplified permitting would bring the benefits of reducing Information Obligations set out in Appendix H (Part A).

(Defra note: according to Annex 3 to the BERR Standard Cost Model Manual, 30% is the level of overhead generally used
<http://www.berr.gov.uk/files/file44505.pdf> .)

4.39. Conclusion. In view of the environmental and health impacts of the various pollutants emitted from these sectors, which generally do not involve nuisance, it is considered that some form of prior approval regulation remains necessary. The Clean Air Act would not be suitable because of it doesn't address some of the key pollutants. The NECD and Gothenburg Protocol are designed to allow flexibility for member countries to decide where to target to achieve the national ceilings, thus going beyond installation-based EU requirements is one of the options. However, there would seem to be scope for investigating the introduction of lighter-touch simplified permitting, and it is proposed that this be developed on a sector-by-sector basis as part of the forthcoming review of all the PG notes.

4.40. Additional sectors. None of the short-listed eight sectors fall in this group.

Group 4 - contained particulates

4.41. The contained particulates group comprises the following sectors listed in Table 7.4 below with a total of 2342 installations, and the overriding reason for regulation is to reduce emissions of particulates. All

sectors have primary emissions of coarse particulates (particulate matter over 10 microns) and all those which require abatement to be fitted – which is the large majority in this group - have the potential to emit particulates less than 10 microns (PM₁₀) and in many cases fine particulates less than 2.5 microns (PM_{2.5}).

Table 7.4: sectors in the 'contained particulates' group

sector description	guidance note	no. of installations		
		England and Wales	Scotland	GB
Cement batching plants – blending, packing, loading and use of bulk cement	PG 3-01	1369	166	1535
Manufacture of heavy clay and refractory goods	PG 3-02	42*	3	45
Coal, coke, etc processes, bagging plant	PG 3-05a	}140	43	183
Coal, coke, etc processes, processes other than bagging plant	PG 3-05b			
Production of vermiculite, perlite etc	PG 3-07	9	0	9
Lime production	PG 3-14	47	4	51
China and ball clay processes (i.e. spray drying 1 taken out?)	PG 3-17	31	3	34
Manufacture of timber based products	PG 6-02	459*	23	482
Powder coating	PG 6-31	101	21	122
	Totals:	2198	263	2461

*2005/6 figure

4.42. Fine particulates have no threshold for adverse health effects. At present the PGs contain limit values and/or control measures for PM, but none identify limits for PM₁₀ or smaller fractions due to issues of technical feasibility and cost of monitoring.

4.43. There are air quality objectives for PM₁₀ and PM_{2.5}, the latter having been introduced by the 2008 Air Quality Directive. The UK plans to submit an application to the European Commission in 2009 to defer conformity with the PM₁₀ limit values. The new Directive specifies target values for PM_{2.5} for 2010, a binding limit value for 2015, and an exposure reduction target to be achieved by 2020 with the possibility that this will become mandatory as a result of a review of the Directive in 2013. The exposure reduction approach is based on the principle that for pollutants with a low or zero threshold for adverse effects, it will generally be more beneficial to public health, and potentially more cost-effective to reduce pollutant levels across the whole population of an urban area or region rather than in a small area or “hotspot”.

4.44. Current expectations are that the NECD and GP, when reviewed in the near future, will include emission ceilings for PM₁₀. Volume 2 of the 2007 UK Air Quality Strategy contains the following data for total UK emissions used for modelling concentrations (in kilotonnes). The inventory information for the PM₁₀ figures have a stated uncertainty of -20 to +50; for PM_{2.5} it is -20 to +30

	2002	2003	2004	2005	2010	2015	2020
PM₁₀	161	156*	n/a	148	134	134	142
PM_{2.5}	93	89*	n/a	81	73	72	75

* value interpolated from the 2002 and 2005 emission totals.

4.45. The risk rating of the installations in this group is: heavy clay good - high, coal plant and china/ball clay - medium, and the remainder – low.

4.46. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this contained particulates group.

4.47. The views expressed by those responding to the 2007 questionnaire relevant specifically to this group were:

- the Quarry Products Association commented in relation to cement batching (3/1) and lime production (3/14) activities in this group. The majority view was the Part B regulation generally remained appropriate for the industry. QPA said that it established known operational standards and provided a means of delivering continuous improvement for environmental protection. They supported a combination of outcome focused simplified permits and improved regulator knowledge of the sectors, resulting in permits being less prescriptive and more risk-based. Some individual members of QPA argue that ready-mixed concrete plant should be taken out of PPC.
- the British Aggregates Association commented that they were deeply uncomfortable with the regulatory guidance, enforcement and appeals systems and the absence of any benefits to the public arising from "this wasteful and unnecessary bureaucracy". They consider that the activities covered by PG3/1, 8, 15a, 15b and 16 "do not produce a significant source of air pollutants; and controls are covered in other legislation". They commented that they were all in the lowest risk category 1. "None of it is required by European law, there are no benefits which might in the near or medium term arise from its continuation. None of it will be missed, except by the bureaucrats who currently run the system, both in Government, in councils in the appeals system, and in the major

companies for whom it is an excuse for anti competitive advantage." BAA support statutory nuisance and self-regulation provided this does not involve the use of PG notes.

Note. According to their web sites, the QPA represent more than 120 quarry operators who together produce more than 90% of the UK's aggregate-based construction materials. The BAA represents independent quarry operators and its website lists 54 members.

- the Environmental Industries Commission's comments summarised above are relevant in considering the impacts of removing emitters of particulate matter from PPC.

4.48. Two of the regulatory options would be inappropriate for this group:

- Clean Air Act: relates to smoke, grit and dust from furnaces
- waste permitting: these are not waste operations.

4.49. Of the remaining five options:

- statutory nuisance: to the extent that these activities are responsible for causing nuisance dust, statutory nuisance would provide a reactive means of addressing problems that arise. This is supported by the BAA, whereas QPA appear to favour the benefits of a prior approval system: foreknowledge of what is required of them. However, most installations in all these sectors will require abatement plant to be fitted to tackle nuisance dust, which in turn leads to the potential for fine particulate emissions. These fine particulates, whether PM₁₀ or PM_{2.5} are unlikely to be noticeable and therefore not be complained of as a nuisance. However, it is the fine particulates which are most implicated as regards health effects; volume 2 of the 2007 Air Quality Strategy states:

Evidence has accumulated in recent years to show that day to day variations in concentrations of airborne particles, measured as PM₁₀, PM_{2.5}, Black Smoke or other measures, are associated with day to day variations in a range of health end-points. These include daily deaths, admissions to hospital for the treatment of both respiratory and cardiovascular diseases and symptoms amongst patients suffering from asthma. In addition to these effects there is evidence from the United States that long-term exposure to particulate air pollution is associated with a decrease in life expectancy. This effect has been discussed in a 2001 Committee on the Medical Effects of Air Pollutants (COMEAP) report; and a fuller updated report has recently been published as a draft for technical comment.

- triviality: since most installations in these sectors require abatement plant in order to reduce particulate emissions, it is unlikely that any

would be capable of being classified as having trivial emissions, even if the guidance were to be revised.

- alternative forms of regulation: while there is no suggestion that these industries are characterised by operators who are not committed to good environmental performance (witness for example the QPA's Sustainability Strategy), installing, monitoring and maintaining abatement equipment are key to the minimisation of particulate emissions. Notwithstanding the comments from the BAA, a regulatory model provides the reassurance for all concerned that necessary standards will be met and continue to be complied with. QPA commented that they did not believe that other forms of regulation were suitable for their industry. BAA expressed support for alternative forms of regulation provided the whole existing PG system was discarded in its entirety. No suggestions were offered as to what alternatives might be appropriate.
- simplified permitting: subject to detailed consideration of each PG note (and their practical application) to assess whether the provisions can be distilled into a set of standard conditions, there would seem to be good potential to extend the simplified permitting approach to some or all sectors in this group
- do nothing: risk-based regulation was introduced in 2006, and a review of all the PG notes is planned for 2009-11.

4.50. Standard cost model. The BAA estimate the cost of information obligations at two days per year for a senior manager at £16.23 per hour, which the BAA argue needs to be doubled to account for indirect costs* – making a total of £600 pa. BAA comment that in practice this is more like £1k. On top of this is the annual subsistence charge. They add: "This assumes that the local authority is competent, very many are not. In these cases the costs of professional and legal external assistance can be £50,000 per installation. These are your 'admin costs'". No other financial information was provided in response to the 2007 questionnaire. Simplified permitting would bring the benefits of reducing Information Obligations set out in Appendix H (Part A).

(Defra note: according to Annex 3 to the BERR Standard Cost Model Manual, 30% is the level of overhead generally used
<http://www.berr.gov.uk/files/file44505.pdf> .)

4.51. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this contained particulates group.

4.52. Conclusion. In view of the health implications of particulate emissions and the fact that the fine particulates would not be susceptible to statutory

nuisance regulation, it is considered that some form of prior approval regulation remains necessary for installations of all scales. The NECD and Gothenburg Protocol are designed to allow flexibility for member countries to decide where to target to achieve the national ceilings, thus going beyond installation-based EU requirements is one of the options. However, there would seem to be scope for introducing lighter-touch simplified permitting, in particular in relation to cement batching plant, and it is proposed that this be developed on a sector-by-sector basis as part of the forthcoming review of all the PG notes.

- 4.53. Additional sectors. The initial review of proposals for additional sectors to be regulated produced a short-list of eight sectors. Three of these sectors – furniture and wood machining, timber shredding, and wet powder spraying – would come within this group if the Regulations were amended to add them.
- 4.54. The furniture and wood machining sector was proposed by the Environmental Industries Commission. It is agreed that installations in this sector may have the potential for particulate matter emissions, but the Government would need strong evidence showing the potential for such emission, the mass and concentration of emissions, the size fractions of the emissions, and the costs of emission reduction as against identified health and environmental benefits. The EIC is invited to support its proposal with such information, and information would also be welcome from other stakeholders. This information would be used as evidence in any future work looking at additional measures that may be needed to deliver air quality objectives or national ceilings reductions.
- 4.55. It was noted by Chelmsford Borough Council that wood shredding is regulated under the Scottish PPC Regulations. In the absence of strong evidence suggesting that such activities require PPC regulation in England and Wales (and lack of information whether this activity is, in fact, carried out in England and Wales), it is not proposed to add them.
- 4.56. The Midland Joint Advisory Council for Environmental Pollution proposed that wet powder spraying should be added. These are generally small-scale activities and carried out in enclosed booths. On the basis that the carrier will be water, it can be expected that the potential for particulate emissions will be less than for dry powder coating. To the extent that wet powder spraying involves enamel frits, as mentioned by MJAC, it is expected that such an installation would be either regulated under IPPC Part A(1) or under the Solvent Emissions Directive by virtue of its use of organic solvents.
- 4.57. It is therefore not proposed to add any of these three sectors as a result of this review.

Group 5 - odour and fugitive particulates

4.58. This group comprises sectors where the main rationale for regulation is either potential for dust/odour nuisance and/or emissions of particulate matter, generally in the form of fugitive emissions.

Table 7.5: sectors in the 'odour and fugitive particulates' group

sector description	guidance note	no. of installations		
		England and Wales	Scotland	GB
Odouring natural gas – liquefied petroleum gas	PG 1-15	110	15	125
Quarry processes	PG 3-08	277	151	428
Mobile crushers	PG 3-16	1102	44	1146
Maggot breeding	PG 6-05	21	0	21
Manufacture of sausage casings	PG 6-12	9	0	9
Fish meal production	PG 6-19	3	1	4
Wet pet food manufacture - no cooking involved	PG 6-24aa	31	2	33
Wet pet food manufacture - cooking involved	PG 6-24ab			
Dry pet food manufacture	PG 6-24b			
Animal feed compounding	PG 6-26	76	12	88
Vegetable matter drying	PG 6-27	13	6	19
Mushroom compost production	PG 6-30	5	0	5
Tobacco processing	PG 6-36	5	0	5
Asphalt processes	PG 6-42a	}41	3	40 [44**]
Bitumen and tar: non-asphalt activities	PG 6-42b			
Totals:		1693	234	1923

** it is assumed 40 are non-asphalt activities and 4 asphalt activities – the latter come under group 6

4.59. To the extent that particulates are emitted (as distinct from dust with potential nuisance implications), the explanation of impacts for group 4 sectors applies. The risk rating for maggot breeding and fish oil production is 3; for gas odouring, quarry processes, mobile crushing, wet pet food, and asphalt processes is 1; and the remainder 2. Because of the differences between the sectors covered in this group, the sectors are addressed below either singly or in groups.

4.60. Odouring of natural gas. The potential is for odour in the event of a spillage during delivery of odorants or due to catastrophic failure of the plant. There is very little involved in the active regulation of these installations, and the Government believes that odour incidents are uncommon. It is therefore proposed, therefore, to encourage the industry to adopt the provisions of PG1/15 as standard industry practice and remove the sector from PPC, leaving individual incidents to be addressed under statutory nuisance.

4.61. Quarry processes. The sector has made substantial strides forward in reducing its environmental footprint as a result of the PPC controls since

1991. Dust from these installations can have a serious impact on quality of life of residents living in the vicinity if not properly controlled. If quarry processes were removed from proactive regulation under PPC, there is a significant risk that the improvements secured would not be maintained throughout the industry. There is a difference of opinion between the two representative industry bodies as to the appropriateness of PPC: the QPA support PPC continuing QPA believe that a combination of outcome focused simplified permits but support simplified permitting; the BAA favour removal of PPC because there were no benefits from it. It is proposed to develop a simplified permit for this sector, which will ensure that current levels of dust mitigation are continued while reducing the administrative impacts of regulation.

- 4.62. Mobile crushers and screens. These plant essentially carry out the same operations as quarry processes, but comprise equipment which is moved from site to site with varying regularity. In July 2008 Defra and WAG published new guidance (see chapter 38 of the General Guidance Manual www.defra.gov.uk/environment/ppc/localauth/pubs/guidance/manuals.htm) which a) indicated that so-called "micro" crushers should normally be exempted on grounds of triviality; and "mini" crushers might in some cases warrant a triviality exemption. In addition, the guidance introduced a new permit transfer system substantially reducing the effort and cost involved where a mobile crusher is obtained by a contractor from a hire company. Proposals have been published in England for mobile plant to be included in the risk-based charging scheme, triggering reduced annual fees for low risk plant. It is proposed that these arrangements should remain in place under PPC, and that a simplified permit should additionally be developed.
- 4.63. Maggot breeding, sausage casings etc manufacture, and fish meal production. Breeding maggots from putrescible material, manufacture of fish meal, and offal nettlings and chitterling boiler, were what was known as an "offensive trades" up until 1990. As such they required more extensive regulation than other activities subject to 'standard' nuisance procedures. These designations were recognised by the inclusion these trades within the scope of the permitting arrangements of Part I of the Environmental Protection Act 1990. Applying the Environment Agency's criteria in their technical guidance on odour, odours from sausage casings manufacture have medium offensiveness, and those from both maggot breeding and fish meal production a high offensiveness. It is proposed that the current proactive regulatory regime needs to continue to minimise odours from these particularly offensive activities and it is not anticipated, because of the variability of installations and the importance of location, that there will be scope for simplified permits.
- 4.64. Pet food manufacture and animal feed compounding. There are three types of pet food manufacturing plant: production of dry pet food, wet pet food involving cooking, and wet pet food not involving cooking. Odours

from wet pet food manufacture involving cooking have a high offensiveness and those not involving cooking a medium offensiveness. The main impact of manufacturing dry pet food and animal feed compounding is fine particulate matter. In line with the above proposals, it is proposed that these activities remain under Part B and are not suited to simplified permits.

4.65. Vegetable matter drying. Installations which process vegetable raw materials to make food products, with a finished product production capacity of more than 300 tonnes a day, are required to be regulated under the IPPC Directive. These are Part A(1) activities regulated by the Environment Agency. Those would-be Part B drying installations carried on in a farm or agricultural holding other than the manufacture of goods for sale, are an excluded activity under the present Environmental Permitting Regulations, as is the drying of grain or pulses and the storage of vegetable matter in most cases. Vegetable matter drying is identified as having a low relative offensiveness of odour and the efficient harvesting methods now used are likely to have reduced further the relatively low particulate emission potential. Where combustion plant in the range 20-50MW (unaggregated) or over 50MW (aggregated) are used, these plant will be regulated as combustion installations. In the circumstances, it is proposed to encourage the industry to adopt the provisions of PG6/27 as standard industry practice and remove the sector from PPC, leaving individual incidents to be addressed under statutory nuisance.

4.66. Mushroom compost production. Paragraphs 3.4.6-9 of the July 2008 Defra/WAG consultation paper on waste exemptions <http://www.defra.gov.uk/corporate/consult/waste-exemption-review/consultation.pdf> referred to the historic split whereby on-farm mushroom composters have been regulated by the Environment Agency through a waste exemption, and off-farm commercial mushroom composters have been regulated under Part B. It stated:

3.4.8 The Government considers it better that the production of compost for mushroom growers is subject to a single permitting regime, rather than split between Part B and waste permitting according to whether some or all of the compost is produced for off-site sale. On the one hand, the Environment Agency already regulates all other composting operations. On the other hand, mushroom composting is a specialised operation, generally involving the use of chicken manure which raises particular regulatory issues, and local authorities already have experience of dealing with these issues in accordance with statutory Part B guidance issued by the Secretary of State and WAG. On balance, it is felt more sensible to retain local authorities' regulatory background in this area, and that all mushroom composting operations should be included in Part B permitting.

4.67. Subject to the conclusions reached following the waste exemptions consultation, it is not proposed to alter the PPC status of Part B mushroom composting. Furthermore, experience with the largest such composting

plant suggests that the complexities and potential for local variability are too great to be suitable for simplified permitting. Tobacco processing. These installations give rise to emissions of fine particulates, volatile organic compounds and sulphur dioxide. Odour emissions are relatively low in offensiveness. It is proposed that the current proactive regulatory regime should remain in place, in particular to address the potential for fine particulate emissions, but the scope for simplified permits will be examined when the guidance notes are reviewed.

- 4.68. Asphalt processes. These installations have the potential for dust and odour, but also tar and bitumen fume, volatile organic compounds, SO_x and hydrogen sulphide. The odour is classified as 'high' in accordance with the criteria in the Environment Agency's technical guidance on odour. Because of the significance of the potential odour, which merits pro-active regulation, and because of the other non-nuisance pollutants emitted, it is proposed that this sector should continue under PPC but the scope for simplified permits will be examined when PG6/42 is reviewed.
- 4.69. Standard cost model. No financial information was provided in response to the 2007 questionnaire. Simplified permitting would bring the benefits of reducing Information Obligations set out in Appendix H (Part A).
- 4.70. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this contained particulates group.
- 4.71. Additional sectors. The following out of the short-listed sectors falls in this group: handling dusty products at ports. It was suggested by the Hull and Goole Port Health Authority, who mentioned cargoes such as soya meal, Dical, grain dust, and clay products, and by the Norfolk Environmental Protection Group who listed bulk minerals and fertilizers. The Quarry Products Association commented in response to the 2007 questionnaire that handling of cementitious type dusty material is already covered by PPC and any extension of regulation to other activities should be risk-based. The QPA do not believe that the level of emissions is significant in these activities.
- 4.72. It could be argued that it would anomalous to regulate coal loading and unloading, which can occur at ports, and not other activities with a dust potential. Also, handling dusty cargoes at ports could lead to increased levels of particulate matter in the air. The matter is currently managed through the Department for Transport who published a Ports Policy Review Interim Report in July 2007
<http://www.dft.gov.uk/pgr/shippingports/ports/portspolicyreview/portspolicyreviewinterimreport> . The report states in paragraph 19:

'Supporting and encouraging efforts by ports to reduce local pollution'. Ports produce and concentrate air pollution emissions due to activities involving

ships, lorries, locomotives and static equipment. EU legislation sets air quality limit values and the statutory system of Local Air Quality Management requires action to be taken where pollutant concentration limits will be exceeded. UK ports have been in the vanguard of participating in ECOPORTS, a research and development project co-funded by the European Commission, together with twelve ports and port organizations. Its aim is to address local environmental issues with cost-effective response options. The Government welcomes this action by the ports and will work with them to ensure that local environment impacts are reduced where possible.

4.73. The EcoPorts Foundation www.ecoport.com have a project to develop a Port Environmental Management System.

4.74. The Department for Transport published a consultation paper in April 2008 containing draft guidance on the preparation of port master plans <http://www.dft.gov.uk/consultations/closed/portmasterplans/main?page=4#a1020>. It states in paragraphs 79 and 80:

A master plan should describe how, up to the planning horizon, the port intends to contribute to efforts to tackle airborne emissions hazardous to human and other forms of life. These include sulphur and nitrogen oxides (SO_x and NO_x), carbon monoxide (CO), methane (CH₄) and other hydrocarbons, and generalised particulates (PM₁₀ and PM_{2.5}). It should describe any currently applicable air quality management area (AQMA) monitoring arrangements, and any locations on or near the port where limit values are exceeded at present, or are liable to be if developments proceed. The master plan may well be an appropriate juncture at which to examine the merits of requiring use of low sulphur fuels for powering auxiliary generators.

4.75. It is proposed to keep the need for inclusion of other dusty cargo handling operations within PPC in the light of these activities, any future evidence from local air quality review and assessment work, and any developments in national policy regarding particulate matter.

Group 6 - others

4.76. This is a miscellaneous group of sectors.

Table 7.6: sectors in the 'others' group

sector description	guidance note	no. of installations		
		England and Wales	Scotland	GB
Glass polishing, etching using HF acid	PG 3-06	6	1	7
Asbestos activities	PG 3-13	3	0	3
Surface treatment of metals	PG 4-01	42	0	42
Manufacture of fibre reinforced plastics	PG 4-02	41	1	42
Asphalt processes	PG 6-42a	4	0	4
Manufacture of coating powder	PG 6-09	13	8	21
Di-isocyanate(s)	PG 6-29	110	9	119

Chemical Storage	IPR4-17	9	0	9
	Totals:	228	19	247

- 4.77. Because of the differences between the sectors covered in this group, the sectors are addressed below either singly or in groups.
- 4.78. Glass polishing and etching. The main pollutant of concern is hydrogen fluoride. Chapter 5 provides summary background on the health impacts. The sector has a risk rating of 3 (high). The comments of British Glass in relation to glassworks generally are recorded above. While the emissions of hydrogen fluoride from this sector are small having regard to the UK national emissions, HF can have significant localised effects. It is therefore proposed that this sector should remain under PPC, but it is a likely candidate for simplified permitting.
- 4.79. Asbestos activities. There is just one installation listed as operating a Part B asbestos activity. It has a high risk category. Directive 87/217/EEC on the prevention and reduction of environmental pollution by asbestos does not require prior permitting, but specifies the use of best available techniques and compliance with emission limits. It is proposed that asbestos activities should remain under PPC because of the health risks from asbestos emissions. Developing a simplified permit for just one installation would not be viable.
- 4.80. Surface treatment of metals. The main pollutant of concern from this sector is nitrogen oxides. Because of these emissions, it is considered that this sector should be treated the same as with combustion installations, and that PPC should remain the regulatory tool, although with the possibility of simplified permitting.
- 4.81. Manufacture of fibre –reinforced plastics. These installations are classified as having a high relative offensiveness of odour and Defra is aware of cases where local residents have complained strenuously notwithstanding PPC regulation. These installations also emit VOCs and to a small extent benzene. For these reasons, it is not considered that any of the alternative regulatory options would be appropriate. Because of the complexity of managing the odour releases, the variety of types of manufacturer undertaking this process, and the likelihood that measures will be dependent on location, it is unlikely that this sector will be amenable to simplified permitting.
- 4.82. Manufacture of coating powder. This activity has a medium risk rating and has the potential for emissions of coarse particulates and small amounts of lead chromate and triglycidyl isocyanurate. There are no odour issues. The British Coatings Federation argue that pollution emission levels are trivial and have no discernable impact on air quality or human health, particularly as the usage of hazardous substances has

fallen significantly in recent years. The BCF says there have been no equipment failures resulting in a particulate emission incident in the past 15 years. The BCF offers to work with Defra to produce a best practical guide on the operation of coating powder manufacturing installations. On the basis that such a code, or alternative voluntary agreement can be reached (having regard to the current requirements of PG6/09), and that operators in the sector will commit to compliance with the guidance as a test of meeting what would constitute best practicable means under statutory nuisance, it is proposed to take powder coating manufacture out of PPC.

- 4.83. Di-isocyanates. Installations using more than specified amounts of certain di-isocyanates are in the high risk category 3. According to the National Institute for Occupational Safety and Health, isocyanates are powerful irritants to the mucous membranes of the eyes and gastrointestinal and respiratory tracts. Direct skin contact can also cause marked inflammation. Isocyanates can also sensitize workers, making them subject to severe asthma attacks if they are exposed again. Death from severe asthma in some sensitized subjects has been reported. Di-isocyanate activities also emit VOCs. Because of the toxicity of di-isocyanates and the need to control VOC emissions, it is not proposed to take these installations out of PPC. Variability of activities within the sector make it unlikely that simplified permits will be possible, but they will be explored.
- 4.84. Bitumen and tar. The key emissions from these processes are bitumen fume, tar fume, odour (medium offensiveness), polycyclic-aromatic hydrocarbons (PAH), hydrogen sulphide, volatile organic compounds and particulate matter (in the form of tar fume). Chapter 5 explains that some PAHs are implicated in lung, skin and possibly other cancers, although the carcinogenic potency of some PAHs is unknown or uncertain. In view of this, and the emissions of a range of pollutants and the medium odour rating, it is proposed that bitumen and tar installations should remain under PPC. The complexity of the process is unlikely to make it amendable to simplified permitting.
- 4.85. Bulk chemical storage. This sector is unusual in that it relies on Environment Agency guidance produced for similar bulk storage at Part A chemical installations. Most chemicals will be stored as the end-product of a manufacturing process (in which case the installation is likely to be regulated as a Part A by the Environment Agency, or prior to use. While many of these sites may be covered by the Control of Major Accident Hazards Regulations, the primary concern under this health and safety legislation will be in accidents rather than possible routine venting. Since these are all highly toxic chemicals, as well as having the potential for odorous releases, it is proposed that there should be no change in the present level of regulation.

- 4.86. Appendix I shows generally that certain social groups can be more susceptible to air pollution impacts than others. However, there is nothing which suggests that additional or different weight should be given in reaching decisions on this contained particulates group.
- 4.87. Standard cost model. No financial information was provided in response to the 2007 questionnaire. Simplified permitting would bring the benefits of reducing Information Obligations set out in Appendix H (Part A).
- 4.88. Additional sectors. The following out of the short-listed sectors fall in this group: treatment of textiles involving the application for heat, use of stentering in the textile sector, and manufacture of porcelain sanitaryware.
- 4.89. Information available to the Government suggests that the two textile operations are generally undertaken at a small scale, and that quality is important to the operator and therefore there are business reasons for keeping emissions to a minimum. To consider this proposal further, the Government would need more concrete evidence of environmental harm occurring from these installations, any failure of the existing regulatory systems to tackle such incidents, and the likely measures that PPC would enable being introduced.
- 4.90. Manufacture of porcelain sanitaryware was a suggestion of SEPA, based on a single plant in Scotland. The Government is unaware of any other plant which are giving rise to concerns in the UK and SEPA has since advised that emissions from the Scottish plant are now under control using the regulations that currently apply to it.

Climate change implications

- 4.91. Emissions of carbon dioxide (CO₂) have been included in the environmental impact assessment. Emission limits for CO₂ are not currently included in the Part B guidance but are within scope of PPC by virtue of the definition of "emission" in regulation 2 of the EP Regulations and the reference to oxides of carbon in Part 1 of Schedule 1 to the Regulations. This will be reviewed as part of the forthcoming 6-year review of all the Part B guidance notes. Currently CO₂ emissions from Part B installations are not directly regulated via limits, but are controlled, where applicable, through indirect means such as improvements in fuel efficiency.
- 4.92. The spreadsheets in Appendix G identify:
- a) 24 sectors where CO₂ is not emitted directly by the activity, nor is there an indirect emission from associated abatement plant. (There may be minor ancillary emissions from offices etc.);
 - b) 22 sectors where CO₂ is emitted directly as part of the activity; and

- c) 12 sectors where abatement plant such as thermal oxidation is fitted, which in itself also contributes to CO₂ emissions (although this is dependent on whether additional fuel is required).

In the case of 5 sectors both b) and c) apply.

4.93. The situation for activities in category a) will not change whichever regulatory option applies. CO₂ emissions from activities in the second category are inherent to the activity and therefore will be emitted irrespective of the regime applied. Reductions in emissions will most probably be driven by fuel costs, though regulation under LAPPC normally requires improvements in both energy and raw materials use. Alternative regulatory options lack this positive driver. In the case of category c) activities, any relaxation of pollution controls by changing the regulatory regime could result in a CO₂ saving because abatement plant is not used, or used less efficiently; although this is not clear-cut since (especially in the case of abatement for VOCs) the pollutants which would be emitted in increased quantities themselves have a global warming potential which might exceed that of any additional fuel that might be needed -

[http://www.airquality.co.uk/archive/reports/cat07/0710011214_ED48749_VOC_Incineration - CC Report v3.pdf](http://www.airquality.co.uk/archive/reports/cat07/0710011214_ED48749_VOC_Incineration_-_CC_Report_v3.pdf).

Summary proposal

4.94. Table 7.7 below summarises the above assessment. Regulatory option 6 – simplified permitting – has been subdivided according to an initial assessment of the likelihood of a sector being amendable to this approach. The breakdown is used to inform the costings contained in this Impact Assessment; it will not prejudice the discussions with individual sectors on the feasibility of simplified permitting, which will take place as part of the 6-year review of the PG notes.

Table 7.7 – summary of proposed decisions

- option 1 = no change
- option 2 = Clean Air Act
- option 3 = waste
- option 4 = stat nuisance
- option 5 = triviality
- option 6a = simplified permitting likely
- option 6b = simplified permitting possible
- option 6c = consider simplified permitting, but least likely
- option 7 = self-regulation

sector	note	proposed decision
Chemical treatment of timber, <25te consumption	PG 6-03	1 + 6c
Coil coating, <25te consumption	PG 6-13	1 + 6c
Printworks (non-SED technique) > 5te consumption	PG 6-16	1 + 6c

Printing of flexible packaging, installation > 5te, coating activity <5te	PG 6-17	1 + 6c
Vegetable oil extraction, fat and oil refining – heat refining processes	PG 6-25	1 + 6c
Rubber activities, using carbon black and <15te consumption	PG 6-28	1 + 6c
Wood coating, consumption 5-15 te	PG 6-33	1 + 6c
Pharmaceutical formulation, consumption 5- 50 te	PG 6-43	1 + 6c
Recovery of non-ferrous metal from scrap	PG 2-01	1 + 6c
Hot dip galvanising	PG 2-02	1 + 6c
Electrical + rotary furnaces, crucible gas, gas/electric fed	PG 2-03a	1 + 6c
Electrical and rotary furnaces, others	PG 2-03b	1 + 6c
Hot + cold blast cupolas	PG 2-05	1 + 6c
Aluminium and aluminium alloy processes	PG 2-06a	1 + 6c
Magnesium and magnesium alloy processes	PG 2-06b	1 + 6c
Zinc and zinc alloy processes	PG 2-07	1 + 6c
Copper and copper alloy processes	PG 2-08	1 + 6c
Lead glass manufacturing	PG 3-04	1 + 6c
Thermal spraying processes	PG 6-35	1 + 6c
Boilers + furnaces 20 - 50 MW, gas fired	PG 1-03a	1 + 6b
Boilers + furnaces 20 - 50 MW, other fuel fired	PG 1-03b	1 + 6b
Gas turbines 20 - 50 MW	PG 1-04	1 + 6b
Reheat furnaces	PG 1-11	1 + 6b
Combustion of solid fuel, non-WID feedstocks	PG 1-12	1 + 6b
Plaster production processes	PG 3-12	1 + 6c
Roadstone coating	PG 3-15a	1 + 6b
Mineral drying	PG 3-15b	1 + 6b
Cement batching plants – blending, packing, loading and use of bulk cement	PG 3-01	1 + 6a
Manufacture of heavy clay and refractory goods	PG 3-02	1 + 6b
Coal, coke etc processes, bagging plant	PG 3-05a	1 + 6b
Coal, coke etc processes, processes (not bagging plant)	PG 3-05b	1 + 6b
Production of vermiculite, perlite etc	PG 3-07	1 + 6b
Lime production	PG 3-14	1 + 6b
China, ball clay + spray drying processes	PG 3-17	1 + 6b
Manufacture of timber based products	PG 6-02	1 + 6b
Powder coating	PG 6-31	1 + 6c
Odourising natural gas – liquefied petroleum gas	PG 1-15	4 + 7
Quarry processes	PG 3-08	1 + 6b
Mobile crushers	PG 3-16	1 + 6b
Maggot breeding	PG 6-05	1 + 6b
Manufacture of sausage casings	PG 6-12	1 + 6b
Fish meal production	PG 6-19	1 + 6b
Wet pet food manufacture - no cooking involved	PG 6-24aa	1 + 6b
Wet pet food manufacture - cooking involved	PG 6-24ab	1 + 6b
Dry pet food manufacture	PG 6-24b	1 + 6b
Animal feed compounding	PG 6-26	1 + 6b

Vegetable matter drying	PG 6-27	4 + 7
Mushroom compost production	PG 6-30	1
Tobacco processing	PG 6-36	1 + 6b
Asphalt processes	PG 6-42a	1 + 6b
Glass polishing, etching using HF acid	PG 3-06	1 + 6a
Asbestos activities	PG 3-13	1 + 6c
Surface treatment of metals	PG 4-01	1 + 6c
Manufacture of fibre reinforced plastics	PG 4-02	1 + 6c
Manufacture of coating powder	PG 6-09	4 + 7
Di-isocyanate(s)	PG 6-29	1 + 6c
Bitumen and tar – non-asphalt activities	PG 6-42b	1 + 6c
Chemical storage	IPR4-17	1

4.95. The annual savings would therefore be as follows:

a) 159 installations in England, Wales and Scotland taken out of Part B. The total saved pa based on the following assumptions is £18,389.

- 1 low risk application pa: 29hrs @ £17.80 = £516
- 3 hrs per installation pa record keeping = £8,491
- 3 hrs per installation pa inspection = £8,491
- 2 hrs pa for 10% of installations for notices = £570
- 2 hrs pa for 2% of installations for permit surrender = £36
- 2 hrs pa for 5% of installations for permit transfers = £285
- no complaints or other activities

In addition, avoidance of Part B charges would save £63,159 (1 application @ £1514; 26 England and Wales standard subsistence charges and 8 Scottish standard subsistence [6 for medium risk @ £1065, 2 medium risk @ £1182, 10 for low risk @ £711k 6 low risk @ £331; 110 odorising subsistence charges @ £353 and 15 odorising subsistence charges @ £331¹²).

The additional costs arising from the application of statutory nuisance, assuming two installations a year are subject to complaint requiring inspection (but no notices, appeals, or decision complaints) is £356.

The net savings at 2008 prices would therefore be **£81,548**

¹² subsistence charges for quoted 2008/9. Different charges are given for England and Wales and for Scotland, the latter appearing second in the list. The England and Wales charges are minus the figure added for one year only to cover the transition to the Environmental Permitting Regulations

b) assuming that, as a result of the 6-year review of the PG notes, the number of installation transferred to simplified permitting in England, Wales and Scotland is as follows:

- both sectors classified as 6a (simplified permitting likely) transfer [1542 installations]
- 60% of sectors classified as 6b (simplified permitting possible) transfer [2972 x 60% = 1732 installations], and
- 20% of sectors classified as 6c (consider simplified permitting, but least likely) transfer [1320 x 20% = 264 installations]¹³.

This would amount to a total of 3538 out of the 6013 installations covered by the review (3180 in England and Wales, and 368 in Scotland) - 59% of the 6013 total.

The savings per installation is assumed to be $\frac{£633,803}{£1,017,945}$ ie 30% .

The total annual saving at 2008 prices would therefore be

59% of £1,017,945 = £600,588

30% of £600,588 = **£180,176**.

c) there will additionally be a saving in charges paid by those installations converting to simplified permits. For the purposes of this calculation, the following assumptions are made:

England and Wales

- the standard application fee is at 2008/9 level of £1514 (no risk banding) and the annual number of applications will be 40 (59% of the 65 England and Wales total estimated in Appendix H) = £60,560
- the application fee for simplified permits is as for vehicle refinishing installations: £332 x 40 applications = £13,280
- for the purposes of subsistence charges, the 3180 installations are classified as either low risk (65%) or medium risk (35%) – ie there are no high risk installations in the categories under consideration: 2067 charges at £711¹⁴ + 1113 charges @ £1065 = £2,654,982

¹³ it has been assumed that 4 of the 44 asphalt/tar/bitumen installations will be in 6c and the remainder in 6b

¹⁴ the figures £711, £1065 and £335 are the subsistence charges for 2008/9 minus the added element, for one year only, to cover the transition to the EP Regulations regime

- the subsistence charge for simplified permits is as for vehicle refinishing installations: £335 x 3180 = £1,065,300

Scotland

- the standard application fee is at 2008/9 level of £2354 and the annual number of applications will be 18 (59% of the 30 Scottish total estimated in Appendix H) = £42,372
- the application fee for simplified permits is £396: £396 x 18 applications = £7,128
- for the purposes of subsistence charges, the 368 installations are classified as either low risk (65%) or medium risk (35%): 239 charges at £331 + 129 charges @ £1182 = £231,587
- the subsistence charge for simplified permits is £331: £331 x 368 = £121,808

These assumptions, which have a medium/high sensitivity, reflect the likelihood that the current application fee and subsistence charges for petrol stations, dry cleaners etc under simplified permitting in England and Wales [£142 and £161] would be insufficient in relation to any new sectors transferring to simplified permitting, as was found when they were at first applied to the vehicle refinishing sector.

The above figures show a potential saving on expenditure on fees and charges of **£1,781,985** as set out in table 7.8.

Table 7.8 – calculation of charging savings

	charges: standard (£)	charges: simplified (£)
application (E+W)	60,560	13,280
application (Scotland)	42,372	7,128
subsistence (E+W)	2,654,982	1,065,300
subsistence (Scotland)	231,587	121,808
Total	2,989,501	1,207,516
Total saving	£1,781,985	

- d) It has not proved possible to quantify the impact of the proposed changes on the environmental industry sector. It can, however, be concluded that the requirements of Best Available Techniques (ie the policy obligations) will not change by the mere fact of transferring any sector to simplified permitting. Furthermore, standards of inspection and enforcement ought to be no different, although inspection frequencies may reduce for low risk facilities.

For the 3 sectors proposed to remove from LAPPC, it is nonetheless envisaged that the same pollution control practices will continue in force, not least because of a perceived business need either to continue to operate as a good neighbour or to minimise materials losses through emissions. The Government will look to all three sectors to provide reassurance that pollution control standards will not be allowed to slip.

The environmental industry sector will be invited, as previously, to engage in the review of all the Process Guidance notes with a view to advising on policy issues concerning techniques available to reduce and monitor emission.