

## Process Guidance Note 6/02(12)

### Statutory guidance for the working of timber and manufacture of wood-based products

September 2012

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Llywodraeth Cymru  
Welsh Government



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**Process Guidance Note 6/02(12)**

**Statutory guidance for the working of timber and  
manufacture of wood-based products**

## Revision of the guidance

The electronic version of this publication is updated from time to time with new or amended guidance. **Table 0.1** is an index to the latest changes (minor amendments are generally not listed).

Table 0.1 - Revision of the guidance		

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# 1. Introduction

## Legal basis

- 1.1 This note applies to the whole of the UK. It is issued by the Secretary of State, the Welsh Assembly Government, the Scottish Government and the Department of the Environment in Northern Ireland (DoENI) to give guidance on the conditions appropriate for the control of emissions into the air from the working of timber and manufacture of wood-based products. It is published only in electronic form and can be found on the Defra website. It supersedes PG6/02(04) and NIPG6/02(05).
- 1.2 This guidance document is compliant with the [Code of Practice on Guidance on Regulation](#) page 6 of which contains the "golden rules of good guidance". If you feel this guidance breaches the code or you notice any inaccuracies within the guidance, please [contact us](#).
- 1.3 This is one of a series of statutory notes<sup>1</sup> giving guidance on the Best Available Techniques (BAT)<sup>2</sup>. The notes are all aimed at providing a strong framework for consistent and transparent regulation of installations regulated under the statutory Local Air Pollution Prevention and Control (LAPPC) regime in [England and Wales](#), [Scotland](#) and [Northern Ireland](#). The note will be treated as one of the material considerations when determining any appeals against a decision made under this legislation.
- 1.4 In general terms, what is BAT for one installation in a sector is likely to be BAT for a comparable installation. Consistency is important where circumstances are the same. However, in each case it is, in practice, for regulators (subject to appeal) to decide what is BAT for each individual installation, taking into account variable factors such as the configuration, size and other individual characteristics of the installation, as well as the locality (e.g. proximity to particularly sensitive receptors).
- 1.5 The note also, where appropriate, gives details of any mandatory requirements affecting air emissions which are in force at the time of publication, such as those contained in Regulations or in Directions from the Government. In the case of this note, at the time of publication there were no such mandatory requirements.

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<sup>1</sup> this and other notes in the series are issued as statutory guidance in England and Wales under regulation 64(2) of the Environmental Permitting Regulations. The notes are also issued as guidance in Scotland and statutory guidance in Northern Ireland.

<sup>2</sup> further guidance on the meaning of BAT can be found for [England and Wales](#), [Scotland](#), and [Northern Ireland](#).

## **Simplified or standard permits**

- 1.6 The activities covered by this note will have essentially the same characteristics and it is expected that the application form and model permit in **Appendices 1 and 2** will normally be used in order to simplify for business the process of applying for a permit and to simplify for regulators the process of issuing a permit. (See also the relevant LAPPC charging scheme for reduced application and subsistence charges for simplified permits).

If there are good reasons to consider diverging from normal use of the model permit, the starting point for drafting any additional conditions should be the arrowed bullets in the main body of this note.

Sites with more than one Part B activity (Part C in Northern Ireland) which, in accordance with the relevant charging scheme are to be treated as a single activity, will require a full permit not a simplified permit, therefore the whole installation comprising both activities should be subject to a full permit.

## **Who is the guidance for?**

- 1.7 This guidance is for:

### **Regulators**

- local authorities in England and Wales, who must have regard to the guidance when determining applications for permits and reviewing extant permits;
- the Scottish Environment Protection Agency (SEPA) in Scotland and district councils or the Northern Ireland Environment Agency (NIEA) in Northern Ireland;

**Operators** who are best advised also to have regard to it when making applications and in the subsequent operation of their installation.

**Members of the public** who may be interested to know what the Government considers, in accordance with the legislation, amounts to appropriate conditions for controlling air emissions for the generality of installations in this particular industry sector.

## **Updating the guidance**

- 1.8 The guidance is based on the state of knowledge and understanding, at the time of writing, of what constitutes BAT for this sector. The note may be amended from time to time to keep up with developments in BAT, including improvements in techniques, changes to the economic parameters, and new understanding of environmental impacts and risks. The updated version will replace the previous version on the [Defra](#) website and will include an index to the amendments.

- 1.9 Reasonable steps will be taken to keep the guidance up-to-date to ensure that those who need to know about changes to the guidance are informed of any published revisions. However, because there can be rapid changes to matters referred to in the guidance – for example to legislation – it should not be assumed that the most recent version of this note reflects the very latest legal requirements; these requirements apply.

### **Consultation**

- 1.10 This note has been produced in consultation with relevant trade bodies, representatives of regulators including members of the Industrial Pollution Liaison Committee and other potentially interested organisations.

### **Policy and procedures**

- 1.11 General guidance explaining LAPPC and setting out the policy and procedures is contained in separate documents for [England and Wales](#), [Scotland](#) and [Northern Ireland](#).
- 1.12 Separate notes are also available which refer to the manufacture of particleboard and fibreboard ([A2 SG1 manufacture of wood particleboard, oriented strand board and wood fibreboard / dry process fibreboard](#)).

## 2. Timetable for compliance and reviews

### Existing processes or activities

- 2.1 This note contains all the provisions from previous editions which have not been amended or removed. For installations in operation at the date this note is published, the regulator should have already issued or varied the permit having regard to the previous editions. If they have not done so, this should now be done.
- 2.2 In **Northern Ireland** only - the previous guidance (NIPG6/02(05) advised that upgrading should usually be completed by 1 January 2006 and for replacement of cyclones where necessary by 1 January 2010 for processes where the total exhaust volume air flow exceeds 300m<sup>3</sup>/min and by 1 January 2013 in all other cases. Requirements still outstanding from any existing upgrading programme should be completed to the timescale of that programme.
- 2.3 The new provisions of this note and the dates by which compliance with these provisions is expected are listed in **Table 2.1**, together with the paragraph number where the provision is to be found. Compliance with the new provisions should normally be achieved by the dates shown. Permits should be varied as necessary, having regard to the changes and the timetable.

**Table 2.1 - Compliance timetable**

Guidance	Relevant paragraph/row in this note	Compliance date
There are no new provisions in this note likely of themselves to result in a need to vary existing permit conditions. For a full list of changes made by this note, excluding very minor ones, see <b>Table 6.1</b> .		

- 2.4 Replacement plant should normally be designed to meet the appropriate standards specified for new installations/activities.
- 2.5 Where provisions in the preceding guidance note have been deleted or relaxed, permits should be varied as necessary as soon as reasonably practicable. It is expected that local authorities will aim to vary existing permits so as to convert them into the model permit format in **Appendix 2** within 12 months of the publication of this note.
- 2.6 For new activities, the permit should have regard to the full standards of this guidance from the first day of operation.

- 2.7 For substantially changed activities, the permit should normally have regard to the full standards of this guidance with respect to the parts of the activity that have been substantially changed and any part of the activity affected by the change, from the first day of operation.

### **Permit Reviews**

- 2.8 Under LAPPC, the legislation requires permits to be reviewed periodically but does not specify a frequency. It is considered for this sector that a frequency of once every eight years ought normally to be sufficient for the purposes of the appropriate Regulations<sup>3</sup>. Further guidance on permit reviews is contained in the appropriate Guidance Manual for [England and Wales](#), [Scotland](#) and [Northern Ireland](#). Regulators should use any opportunities to determine the variations to permits necessitated by **paragraph 2.2** above in conjunction with these reviews.
- 2.9 Conditions should also be reviewed where complaint is attributable to the operation of the process and is, in the opinion of the regulator, justified.

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<sup>3</sup> For details see [England and Wales, General Guidance Manual](#) chapter 26, [Scotland, Practical guide](#) section 10, [Northern Ireland](#) GGM chapter 17.

### 3. Activity description

#### Regulations

- 3.1 This note applies to LAPPC installations for the working of timber and the manufacture of timber and wood-based products. The activities for regulation are listed in **Table 3.1**.

<b>Table 3.1 - Regulations listing activities</b>				
<b>LAPPC</b>	<b>Activity</b>	<b>England and Wales</b>	<b>Scotland</b>	<b>Northern Ireland</b>
		<b>EPR Schedule 1 reference</b>	<b>PPC Schedule 1 reference</b>	<b>PPC Schedule 1 reference</b>
Part B		<a href="#">Section 6.6 Part B</a>	<a href="#">Section 6.6 Part B</a>	n/a
Part C		n/a	n/a	<a href="#">Section 6.6 Part C</a>

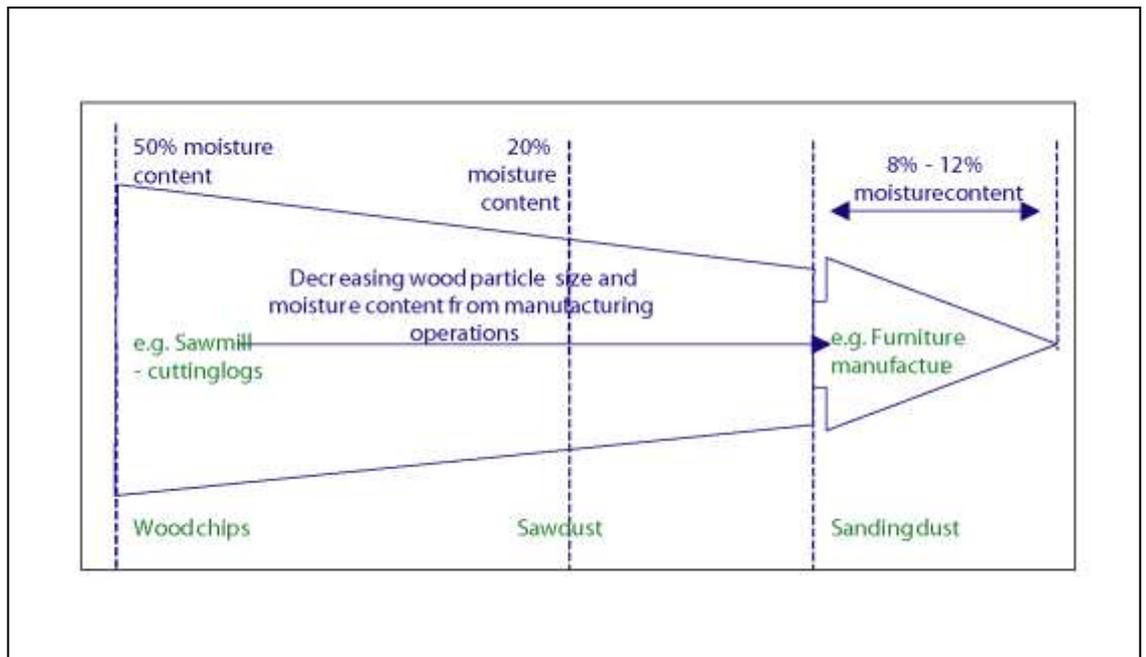
The links are to the original version of the regulations. A consolidated version is not available on <http://www.legislation.gov.uk/>

- 3.2 This note refers to the manufacture of products wholly or mainly of wood at any works if the process involves the sawing, drilling, sanding, shaping, planing, turning of wood and the throughput of the works in any 12-month period is likely to exceed -
- i) 10,000 cubic metres, in the case of works at which wood is sawn, but at which wood is not subjected to any other relevant process, or is subjected only to relevant processes which are exempt processes; **or**
  - ii) 1,000 cubic metres in any other case.
- 3.3 Reference to wood particles in this PG note includes wood shavings, wood powder, wood dust, wood chips and sawdust. Composite material such as chipboard and MDF (medium density fibreboard) which comprise mainly of wood are included in this note.
- 3.4 The processes covered by this PG note range from sawmills cutting sawn logs to the manufacture of furniture where, for example, MDF is worked.

- 3.5 The size range and moisture content of wood particles consequently varies widely between operators who are covered by this PG note.

**Figure 3.1** illustrates moisture content and particle size variation. It should NOT be taken that sawmills produce only large particles and furniture manufacturers produce only fine particles.

*Figure 3.1: Moisture content and particle size variation*



3.6 Examples of equipment used within the industry sector are given below.

**a. Mechanised sawmills - typical machine types**

Primary conversion (softwood logs to sawn timber)

- de-barking machines
- chipper canters
- reducer bandsaws
- band mills (bandsaws)
- double slabbers
- edgers
- resaws
- cross-cut saws

Secondary processing

- kilns
- planer/moulders
- treatment plants

**b. Sawmills which process hardwood logs**

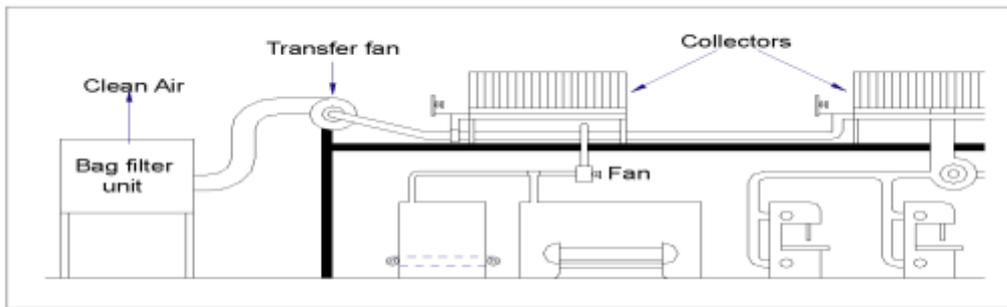
These sawmills are less complex and in general utilise far fewer machine types. Machine types found in UK hardwood sawmills typically include:

- bandsaws
- re-saws
- sanding machines
- edgers
- cross-cut saws
- Particles produced during this type of hardwood conversion are sawdust, rather than large wood chips.

3.7 **Figure 3.2** below illustrates a typical dust extraction system within the timber industry.

Note – the bag filter unit may be located inside the process building and may vent internally into the workspace or discharge to the external atmosphere. Alternatively, the unit may be located externally and discharge directly to atmosphere.

*Figure 3.2: Typical dust extraction system (reproduced with permission of HSE)*



- 3.8 The following parts of the process may give rise to particulate matter in the form of dust:
- Machining operations, for example, sawing, drilling, sanding, shaping, turning and planing;
  - Transfer of wood particles created by sawing/machining operations, for example, into holding areas or vehicles;
  - Size reduction operations, for example, granulation of wood offcuts;
  - Stockpiles, for example, woodchips;
  - Arrestment plant outlets, for example, cyclones and bag filtration units;
  - Bagging of sawdust/wood chips from arrestment plant outlets;
  - Skips or containers where sawdust/wood chips are stored on site, for example, prior to removal from site.

## 4. Emission limits, monitoring and other provisions

4.1 Emissions of the substances listed **Table 4.1** below should be controlled.

4.2 The emission limit values and provisions described in this section are achievable using the best available techniques described in **Section 5**. Monitoring of emissions should be carried out according to the method specified in this section or by an equivalent method agreed by the regulator. Where reference is made to a British, European, or International standard (BS, CEN or ISO) in this section, the standards referred to are correct at the date of publication. (Users of this note should bear in mind that the standards are periodically amended, updated or replaced.) The latest information regarding the monitoring standards applicable can be found at the [Source Testing Association](#) website. Further information on monitoring can be found in Environment Agency publications [\(M1\)](#) and [\(M2\)](#).

4.3 All activities should comply with the emission limits and provisions with regard to releases in **Table 4.1**.

The reference conditions for limits in **Section 4** are 273.1K, 101.3kPa, without correction for water vapour content, unless stated otherwise.

4.4 When calculating the exhaust volume of airflow, any part which is re-circulated into the workplace should be excluded. i.e. these controls are only concerned with emissions to external atmosphere.

In some cases re-circulation may be undertaken only for part of the year and regulators may want to take this into account.

N.B. Where air is re-circulated, this should be taken account of in the assessment and maintenance etc requirements of the Control of Substances Hazardous to Health (COSHH) Regulations.

**Table 4.1 - Emission limits, monitoring and other provisions**

Row	Substance	Source	Emission limits/provisions	Type of monitoring	Monitoring frequency
1	Particulate matter	Whole Site	No visible emission	Visual observations Particular attention should be paid to areas where vehicles are filled with wood waste and wood dust	On start-up and on at least two more occasions during the working day
2	Particulate matter	Arrestment plant (not cyclones) designed with exhaust flow rate >300m <sup>3</sup> /min	No visible emission	Visual observations	On start-up and on at least two more occasions during the working day
3	Particulate matter	Arrestment plant (not cyclones) designed with exhaust flow rate <300m <sup>3</sup> /min	No visible emission	Visual observations	At least daily
4	Particulate Matter	Cyclones	No visible emissions	Continuous indicative monitoring devices with visual and audible alarms which activate on cyclone malfunction and which indicate e.g. blockages (data logging should not normally be necessary).	Continuous to show arrestment equipment is functioning correctly
5	Particulate Matter	Combustion processes (see Note 1)	No visible smoke and must not exceed Ringelmann Shade 1 as described in British Standard BS 2742	Visual observations	On start-up and on at least two more occasions during the working day
6	Droplets, persistent mist and fume	All emissions to air (other than steam or condensed water vapour)	No droplets No persistent mist No persistent fume	Visual observations	On start-up and on at least two more occasions during the working day

Note 1 – Row 5 does not apply to any combustion process using fuel manufactured from waste in appliances with a net rated thermal input greater than 0.4MW – the provisions of PG Note 1/12 applies.

## Monitoring, investigating and reporting

- 4.5 The operator should monitor emissions, make tests and inspections of the activity. The need for and scope of testing, (including the frequency and time of sampling), will depend on local circumstances.
- The operator should keep records of inspections, tests and monitoring, including all non-continuous monitoring, inspections and visual assessments. Records should be:
    - kept on site;
    - kept by the operator for at least two years; **and**
    - made available for the regulator to examine.
  - If any records are kept off-site they should be made available for inspection within one working week of any request by the regulator.

## Information required by the regulator

- 4.6 The regulator needs to be informed of monitoring to be carried out and the results. The results should include process conditions at the time of monitoring.
- The operator should notify the regulator at least 7 days before any periodic monitoring exercise to determine compliance with emission limit values. The operator should state the provisional time and date of monitoring, pollutants to be tested and the methods to be used.
  - The results of non-continuous emission testing should be forwarded to the regulator within 8 weeks of completion of the sampling.
  - Adverse results from **any** monitoring activity (both continuous and non-continuous) should be investigated by the operator as soon as the monitoring data has been obtained. The operator should:
    - identify the cause and take corrective action;
    - clearly record as much detail as possible regarding the cause and extent of the problem, and the remedial action taken;
    - re-test to demonstrate compliance as soon as possible; **and** inform the regulator of the steps taken and the re-test results.

## Visible Emissions

- 4.7 The aim should be to prevent any visible airborne emission from any part of the process. This aim includes all sites regardless of location. Monitoring to identify the origin of a visible emission should be undertaken and a variety of indicative techniques are available.
- Where ambient monitoring is carried out it may also be appropriate for the regulator to specify recording of wind direction and strength.
  - Where combustion units are in use for dryers then the combustion process should be controlled and equipment maintained as appropriate.

- 4.8 Emissions from combustion processes should in normal operation be free from visible smoke. During start up and shut down the emissions should not exceed the equivalent of Ringelmann Shade 1 as described in British Standard BS 2742.
- All other releases to air, other than condensed water vapour, should be free from persistent visible emissions.
  - All emissions to air should be free from droplets.

Where there are problems that, in the opinion of the regulator, may be attributable to the installation, such as local complaints of visual emissions or where dust from the installation is being detected beyond the site boundary, the operator should investigate in order to find out which part of their operation(s) is the cause.

- If this inspection does not lead to correction of the problem then the operator should inform the regulator in order to determine whether ambient air monitoring is necessary. Ambient monitoring may either be by a British Standard method or by a method agreed with the regulator.

Whilst problems are ongoing, a visual check should also be made at least once per day/shift, by the operator, when an installation is being operated. The time, location and result of these checks, along with weather conditions such as indicative wind direction and strength, should be recorded. Once the source of the emission is known, corrective action should be taken without delay and where appropriate the regulator may want to vary the permit in order to add a condition requiring the particular measure(s) to be undertaken.

## Abnormal Events

- 4.9 The operator should respond to problems which may have an adverse effect on emissions to air.
- In the case of abnormal emissions, malfunction or breakdown leading to abnormal emissions the operator should:
    - investigate and undertake remedial action **immediately**;
    - adjust the process or activity to minimise those emissions; **and**
    - promptly record the events and actions taken.
  - The regulator should be informed without delay, whether or not there is related monitoring showing an adverse result:
    - if there is an emission that is likely to have an effect on the local community; **or**
    - in the event of the failure of key arrestment plant, for example, bag filtration plant or cyclones.
  - The operator should provide a list of key arrestment plant and should have a written procedure for dealing with its failure, in order to minimise any adverse effects.

## Start up and shutdown

- 4.10 Higher emissions may occur during start-up and shutdown of a process (e.g. combustion process). These emissions can be reduced, by minimising, where possible, the number of start-ups and shutdowns and having adequate procedures in place for start-up, shutdown and emergency shutdowns.
- The number of start-ups and shutdowns should be kept to the minimum that is reasonable practicable.
  - All appropriate precautions must be taken to minimise emissions during start-up and shutdown.

## Continuous Monitoring

- 4.11 Continuous monitoring can be either “quantitative” or “indicative”. With quantitative monitoring the discharge of the pollutant(s) of concern is measured and recorded numerically. For pollution control this measurement is normally expressed in milligrams per cubic metre of air ( $\text{mg}/\text{m}^3$ ). Where discharge of the pollutant concerned is controlled by measuring an alternative parameter (the “surrogate” measurement), this surrogate is also expressed numerically.

Continuous indicative monitoring is where a permanent device is fitted, for example, to detect leaks in a bag filter, but the output, whether expressed numerical or not, does not show the true value of the discharge. When connected to a continuous recorder it will show that emissions are gradually (or rapidly) increasing, and therefore maintenance is required. Alternatively it can trigger an alarm when there is a sudden increase in emissions, such as when arrestment plant has failed.

- 4.12 Where continuous indicative monitoring has been specified, the information provided should be used as a management tool. Where used, the monitor should be set up to provide a baseline output when the plant is known to be operating under the best possible conditions and emissions are complying with the requirements of the permit. Where used to trigger alarms, the instrument manufacturer should be able to set an output level which corresponds to around 75% of the emission limit. Thus the alarms are activated in response to this significant increase in pollutant loading above the baseline, so that warning of the changed state is given before an unacceptable emission occurs. The regulator may wish to agree the alarm trigger level.
- 4.13 Where continuous monitoring is required, it should be carried out as follows:
- All continuous monitoring readings should be on display to appropriately trained operating staff.
  - Instruments should be fitted with audible and visual alarms, situated appropriately to warn the operator of arrestment plant failure or malfunction.
  - The activation of alarms should be automatically recorded.
  - All continuous monitors should be operated, maintained and calibrated (or referenced, in the case of indicative monitors) in accordance with the manufacturers' instructions, which should be made available for inspection by the regulator. The relevant maintenance and calibration (or referencing, in the case of indicative monitors) should be recorded.
  - Emission concentrations may be reported as zero when the plant is off and there is no flow from the stack. If required a competent person should confirm that zero is more appropriate than the measured stack concentration if there is no flow.
  - Any CEM used should provide reliable data >95% of the operating time, (i.e. availability >95%). A manual or automatic procedure should be in place to detect instrument malfunction and to monitor instrument availability.

## Arrestment Plant Maintenance

4.14 Regular maintenance is essential to ensuring continued satisfactory operation of arrestment plant and to ensure that there are no visible emissions from the process. A filter maintenance programme **OR** the use of automatic data logging from continuous monitoring of the arrestment plant emissions, should be undertaken. Suitable continuous monitoring devices may include optical instruments, which should be attached to data logging equipment.

➤ Maintenance should ensure that all filter media are inspected in accordance with the manufacturers' recommendations for defects or blinding; **and**

➤ EITHER

- all filter media are replaced **at least** every 4 years

OR

- all filter media are replaced at a frequency agreed by the regulator. This frequency should be either supported by results of continuous monitoring devices, or accord with the manufacturer's approved filter maintenance programme.

➤ Details of filter media replacement should be recorded.

## Cyclones

4.15 The use of cyclones should only be permitted in accordance with **paragraph 5.3** and Row 4 of **Table 4.1**.

## 5. Control techniques

### Summary of best available techniques

- 5.1 **Table 5.1** provides a summary of the best available techniques that can be used to control the process in order to meet the emission limits and provisions in **Section 4**. Provided that it is demonstrated to the satisfaction of the regulator that an equivalent level of control will be achieved, then other techniques may be used.

<b>Table 5.1 - Summary of control techniques</b>		
<b>Substance</b>	<b>Release sources</b>	<b>Control techniques</b>
Particulate matter	Whole train of process equipment	Containment policy i.e. containment at source
	Transfer and handling of wood dust and wood particles	Containment: <ul style="list-style-type: none"> <li>• pneumatic or enclosed handling systems</li> <li>• enclosed containers</li> <li>• enclosed transfer points ducted to arrestment plant</li> </ul>
	Machining operations i.e. sawing, drilling, sanding, shaping, turning	Containment: Arrestment plant: <ul style="list-style-type: none"> <li>• bag filters (usually preferred - refer <b>paragraph 5.3</b>)</li> <li>• cyclones</li> </ul>
	Trailers and other transport	Containment: <ul style="list-style-type: none"> <li>• enclosed trailers</li> <li>• correct management of vehicle filling operations</li> <li>• minimise vehicle movement where possible</li> </ul>
	External operations, e.g. <ul style="list-style-type: none"> <li>• debarking</li> <li>• arrestment outlets</li> <li>• conveyors</li> <li>• loading and unloading operations</li> <li>• conveyor drop points</li> </ul>	Appropriate siting and site layout: <ul style="list-style-type: none"> <li>• away from residential areas - away from other sensitive locations</li> <li>• reduce drop heights to a minimum</li> <li>• screened storage areas</li> </ul>

## Techniques to control emissions from contained sources

- 5.2 Particulate matter i.e. wood dust and wood particles that may become wind-entrained should be collected and ducted to suitable arrestment plant. All arrestment plant should be designed to prevent visible emissions (see **Table 4.1**).

### Arrestment plant

- 5.3 Two types of arrestment plant commonly used in the timber / wood processing industry are:

- fabric filters
- cyclones

In most circumstances fabric filters of an appropriate specification or a combination of cyclones in line with fabric filters (cyclo-filters) should be fitted in preference to cyclones alone, as they are significantly more efficient for the control of emissions of wood particles.

As moisture content of the material processed increases however, fabric filters will begin to clog, reducing both their efficiency and their lifespan thus requiring additional maintenance.

Cyclones may remain acceptable in the following scenarios:

- a) in circumstances when wood is processed for which the water content is above 20% of the solid content by weight, the particulate matter produced tends to be large wood particles and the high water content may damage filter fabric. In these circumstances cyclones are likely to remain acceptable, provided that no other timber is worked, or provided that only very minor amounts of such timber be worked on an occasional basis;
- b) in cases where arrestment plant only serves operations which produce emissions mainly comprising large particles; **and**
- c) in cases where a process is undertaken at a location well away from housing or other populated areas.

Automatic shut down of arrestment plant in the event of malfunction/blockage should be considered.

5.4 Exceptionally, where an operator has a record of poor maintenance of fabric filters, past failures of arrestment plant or particular sensitivities to catastrophic failures within the surrounding environment, regulators may, on a site-specific basis, want to consider whether BAT amounts to more stringent control techniques such as:

a) the fitting of continuous indicative monitoring devices with visual and audible alarms which activate on malfunction of the arrestment plant and which indicate blockages; data logging should also be considered.

b) in addition to the above, the requirement for arrestment plant to be retrofitted with sufficient ductwork to allow manual extractive monitoring to take place to meet the provisions in **Table 5.2. Paragraphs 5.5 – 5.9** apply in these cases.

<b>Table 5.2 - Additional controls for particulate matter</b>			
<b>Source</b>	<b>Emission limit/provisions</b>	<b>Type of monitoring</b>	<b>Monitoring frequency</b>
Arrestment plant (not cyclones)	5 mg/Nm <sup>3</sup>	Manufacturers' guarantee or if no guarantee is available, manual extractive testing	Annual

5.5 Paragraphs 5.6 – 5.9 apply only in the exceptional cases described in paragraph 5.4.

5.6 Regulators should be provided with a guarantee from the fabric filter manufacturer that a newly installed set of fabric filters will meet this emission concentration limit, and the guarantee should be supported by emission test data for the fabric filter type that the guarantee relates to.

5.7 Where existing fabric filter arrestment plant is upgraded to achieve the above emission concentration limit in respect of particulate matter, a guarantee should be obtained either from the fabric filter manufacturer or the company which carries out the upgrading, that the upgraded plant will meet the emission concentration limit. The guarantee should be supported by emission test data for the abatement plant type fitted with the filter media, to which the guarantee relates.

5.8 Arrestment plant should be serviced and maintained in accordance with the manufacturers' recommendations so as to maintain the validity of the guarantee of emission concentration limit.

5.9 Where no such guarantee is obtainable, either for new arrestment plant fitted with fabric filters or for existing plant which has been upgraded, emission testing from that plant should be required, to demonstrate compliance with the emission concentration limit for particulate matter.

## Techniques to control fugitive emissions

### Materials handling

- 5.10 Effective containment at source will minimise fugitive emissions. A policy of containment at source should be used (subject to consideration of dust explosion risk as advised by the guidance of the Health and Safety Executive) to prevent particulate matter emissions from the buildings or site.
- The transportation and handling of wood dust and wood particles should be carried out using pneumatic or enclosed handling systems. Such systems should be visually inspected regularly to identify damaged or worn ductwork and any build up of wood dust or wood particles around ducting, for example, on the floor, in gutters or on other equipment should be removed and the source of the fugitive emission repaired.
  - Displaced and transport air from automated handling systems should be vented to suitable arrestment plant.
  - Transfer points should be enclosed and ducted to suitable arrestment plant.
  - When wood dust is moved using site transport, it should be held in enclosed containers.
  - Silos for wood dust which are charged pneumatically should be vented to air through suitable arrestment plant, for example a fabric filter.
  - Storage silos and fixed containers should be equipped with audible or visual high-level alarms to warn of over filling. The correct operation and use of alarms should be checked at least once a week.
  - Wood dust should be stored in silos or other enclosed containers.
  - Loading of wood dust and wood particles onto vehicles prior to removal from site should be done in such a way as to minimise the escape to air of particulate matter.
  - Waste should be removed from site in totally enclosed containers to minimise the escape to air of particulate matter. Where vehicles are filled directly from the arrestment plant, the extraction system should be turned off or a discharge pipe should be fitted with a two-way valve so that vehicles can be changed over without emissions occurring. Either vehicles should be fitted with side windows or, where these are not fitted, rotary or optical drop out sensors equipped with alarms to warn of over-filling should be used.

### **Spillage control**

- 5.11 Adequate provision to contain spillage is needed. Closed containers can prevent wind whipping of dusty, dry material such as that collected from arrestment plant. A key aspect of this sector is the potential for emission from the storage of wood dust and wood particles prior to removal from the site. Wood dust and wood particles are usually stored in silos or in moveable containers, for example, trailer vehicles.
- All spillages should be cleared as soon as possible by vacuum cleaning, wet methods, or other appropriate techniques. Dry sweeping of dusty spillages should not be permitted.
  - A high standard of housekeeping should be maintained.

### **Air Quality**

#### **Dispersion & Dilution**

- 5.12 Pollutants that are emitted via a stack require sufficient dispersion and dilution in the atmosphere to ensure that they ground at concentrations that are deemed harmless. This is the basis upon which stack heights are calculated using HMIP Technical Guidance Note (Dispersion) D1. The stack height so obtained is adjusted to take into account local meteorological data, local topography, nearby emissions and the influence of plant structure.

The calculation procedure of D1 is usually used to calculate the required stack height but alternative dispersion models may be used in agreement with the regulator. An operator may choose to meet tighter emission limits in order to reduce the required stack height.

- 5.13 Where an emission consists purely of air and particulate matter, (i.e. no products of combustion or any other gaseous pollutants are emitted) the above provisions relating to stack height calculation for the purpose of dispersion and dilution should not normally be applied. Revised stack height calculations should not be required as a result of publication of this revision of the PG note, unless it is considered necessary because of a breach or serious risk of breach of an EC Directive limit value or because it is clear from the detailed review and assessment work that the permitted process itself is a significant contributor to the problem.

#### **Ambient air quality management**

- 5.14 In areas where air quality standards or objectives are being breached or are in serious risk of breach and it is clear from the detailed review and assessment work under Local Air Quality Management that the permitted process itself is a significant contributor to the problem, it may be necessary to impose tighter emission limits.

If the standard that is in danger of being exceeded is not an EC Directive requirement, then industry is not expected to go beyond BAT to meet it. Decisions should be taken in the context of a local authority's Local Air Quality Management action plan. For example, where a permitted process is only responsible to a very small extent for an air quality problem, the authority should not unduly penalise the operator of the process by requiring disproportionate emissions reductions. Paragraph 59 of the [Air Quality Strategy 2007](#) [Volume 1] gives the following advice:

“...In drawing up action plans, local authority environmental health/pollution teams are expected to engage local authority officers across different departments, particularly, land-use and transport planners to ensure the actions are supported by all parts of the authority. In addition, engagement with the wider panorama of relevant stakeholders, including the public, is required to ensure action plans are fit-for-purpose in addressing air quality issues. It is vital that all those organisations, groups and individuals that have an impact upon local air quality, buy-in and work towards objectives of an adopted action plan.”

### **Stacks, vents and process exhausts**

- 5.15 Liquid condensation on internal surfaces of stacks and exhaust ducts might lead to corrosion and ductwork failure or to droplet emission. Adequate insulation will minimise the cooling of waste gases and prevent liquid condensation by keeping the temperature of the exhaust gases above the dewpoint. A leak in a stack/vent and the associated ductwork, or a build up of material on the internal surfaces may affect dispersion:
- Flues and ductwork should be cleaned to prevent accumulation of materials, as part of the routine maintenance programme.
- 5.16 When dispersion of pollutants discharged from the stack (or vent) is necessary, the target exit velocity should be 15m/sec under normal operating conditions, however, lower velocities than 15m/s are acceptable provided adequate dispersion and dilution is achieved (see also the paragraph below regarding wet plumes). In order to ensure dispersion is not impaired by either low exit velocity at the point of discharge, or deflection of the discharge, a cap, or other restriction, should not be used at the stack exit. However, a cone may sometimes be useful to increase the exit velocity to achieve greater dispersion.
- 5.17 An exception to the above is where wet arrestment is used as the abatement. Unacceptable emissions of droplets could occur from such plant where the linear velocity in the stack exceeds 9 m/sec. To reduce the potential of droplet emissions a mist eliminator should be used. Where a linear velocity of 9m/sec is exceeded in existing plant consideration should be given to reducing this velocity as far as practicable to ensure such droplet entrainment and fall out does not happen.

## Management

### Management techniques

- 5.18 Important elements for effective control of emissions include:
- proper management, supervision and training for process operations;
  - proper use of equipment;
  - effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air; **and**
  - ensuring that spares and consumables - in particular, those subject to continual wear – are held on site, or available at short notice from guaranteed local suppliers, so that plant breakdowns can be rectified rapidly. This is important with respect to arrestment plant and other necessary environmental controls. It is useful to have an audited list of essential items.

### Appropriate management systems

- 5.19 Effective management is central to environmental performance; it is an important component of BAT and of achieving compliance with permit conditions. It requires a commitment to establishing objectives, setting targets, measuring progress and revising the objectives according to results. This includes managing risks under normal operating conditions and in accidents and emergencies. It is therefore desirable that installations put in place some form of structured environmental management approach, whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme [EMAS]) or by setting up an environmental management system (EMS) tailored to the nature and size of the particular process. Operators may also find that an EMS will help identify business savings.
- 5.20 Regulators should use their discretion, in consultation with individual operators, in agreeing the appropriate level of environmental management. Simple systems which ensure that LAPPC considerations are taken account of in the day-to-day running of a process may well suffice, especially for small and medium-sized enterprises. Regulators are urged to encourage operators to have an EMS for all their activities, but it is outside the legal scope of an LAPPC permit to require an EMS for purposes other than LAPPC compliance. For further information/advice on EMS refer to the appropriate chapter of the appropriate Guidance Manual for [England and Wales](#), [Scotland](#) and [Northern Ireland](#).

## Training

- 5.21 Staff at all levels need the necessary training and instruction in their duties relating to control of the process and emissions to air. In order to minimise risk of emissions, particular emphasis should be given to control procedures during start-up, shut down and abnormal conditions. Training may often sensibly be addressed in the EMS referred to above.
- All staff whose functions could impact on air emissions from the activity should receive appropriate training on those functions. This should include:
    - awareness of their responsibilities under the permit (for example, notification to the regulator in accordance with paragraph 4.9, bag filter breakage, arrestment plant failure, bag inspection procedures);
    - steps that are necessary to minimise emissions during start-up and shutdown;
    - actions to take when there are abnormal conditions, or accidents or spillages that could, if not controlled, result in emissions.
  - The operator should maintain a statement of training requirements for each post with the above-mentioned functions and keep a record of the training received by each person. These documents should be made available to the regulator on request.

## Maintenance

- 5.22 Effective preventative maintenance plays a key part in achieving compliance with emission limits and other provisions. All aspects of the process including all plant, buildings and the equipment concerned with the control of emissions to air should be properly maintained. In particular:
- The operator should have the following available for inspection by the regulator:
    - a written maintenance programme for all pollution control equipment;  
**and**
    - a record of maintenance that has been undertaken.

## 6. Summary of changes

The main changes to this note, with the reasons for the change, are summarised in **Table 6.1**. Minor changes that will not impact on the permit conditions e.g. slight alterations to the Process Description have not been recorded.

<b>Table 6.1 - Summary of changes</b>			
<b>Section/ paragraph/ row</b>	<b>Change</b>	<b>Reason</b>	<b>Comment</b>
New title			
Title Page	New title reads "Working of Timber and Manufacture of Wood-based Products"	Clarification of activity covered by PG note	
1. Introduction			
	Simplification of text	Make note clearer	
	Addition of links	Change to electronic format	Removes need for extensive footnotes/references
4. Emission limits, monitoring and other provisions			
	Used to be Section 5 in previous note	Section 4 in previous note deleted	
Para 4.7 Visible Emissions	Revised text describing approach to take to visible emissions.	Allows more flexibility in managing visible emissions	
Para 4.14	Revised text describing approach relating to arrestment plant maintenance	Allows more flexibility in managing arrestment plant	
5. Control techniques			
	Used to be Section 6 in previous note	Section 4 in previous note deleted leading to re-numbering of sections	
Para 5.4 & Table 5	Addition of new text and table showing ELV for particulate matter to allow regulators to impose more stringent conditions where there is persistent non-compliance	Guidance for regulators where more stringent permit conditions are needed	

Para 5.5 – 5.9	Inclusion of text relating to suppliers' guarantee for fabric filters to meet emission limit values or provision for manual extractive monitoring		
Air Quality	Clarification of exhaust velocity requirements	Make note clearer	
Appendix 1	Inclusion of a new Appendix detailing a model application form for a simplified permit	Simplification of permitting process.	
Appendix 2	Inclusion of a new Appendix detailing a model simplified permit		

## 7. Further information

### **Sustainable consumption and production (SCP)**

Both business and the environment can benefit from adopting sustainable consumption and production practices.

Estimates of potential business savings include:

- £6.4 billion a year UK business savings from resource efficiency measures that cost little or nothing;
- 2% of annual profit lost through inefficient management of energy, water and waste;
- 4% of turnover is spent on waste.

When making arrangement to comply with permit conditions, operators are strongly advised to use the opportunity to look into what other steps they may be able to take. Regulators may be willing to provide assistance and ideas, although cannot be expected to act as unpaid consultants.

### **Health and safety**

Operators of processes and installations must protect people at work as well as the environment:

- requirements of a permit should not put at risk the health, safety or welfare of people at work
- equally, the permit must not contain conditions whose only purpose is to secure the health of people at work. That is the job of the health and safety enforcing authorities

Where emission limits quoted in this guidance conflict with health and safety limits, the tighter limit should prevail because:

- emission limits under the relevant environmental legislation relate to the concentration of pollutant released into the air from prescribed activities
- exposure limits under health and safety legislation relate to the concentration of pollutant in the air breathed by workers
- these limits may differ since they are set according to different criteria. It will normally be quite appropriate to have different standards for the same pollutant, but in some cases they may be in conflict (for example, where air discharged from a process is breathed by workers). In such cases, the tighter limit should be applied to prevent a relaxation of control.

## **Further advice on responding to incidents**

The UK Environment Agencies have published [guidance](#) on producing an incident response plan to deal with environmental incidents. Only those aspects relating to air emissions can be subject to regulation via a Part B (Part C in NI) permit, but regulators may nonetheless wish to informally draw the attention of all appropriate operators to the guidance.

It is not envisaged that regulators will often want to include conditions, in addition to those advised in this PG note, specifying particular incident response arrangements aimed at minimising air emissions. Regulators should decide this on a case-by-case basis. In accordance with BAT, any such conditions should be proportionate to the risk, including the potential for harm from air emissions if an incident were to occur. Account should therefore be taken of matters such as the amount and type of materials held on site which might be affected by an incident, the likelihood of an incident occurring, the sensitivity of the location of the installation, and the cost of producing any plans and taking any additional measures

# Appendix 1 - Application form

**Application for a permit for a timber and manufacture of wood-based products installation.**

Local Authority Pollution Prevention and Control  
Pollution Prevention and Control Act, 1999  
Environmental Permitting (England and Wales) Regulations 2010

## Introduction

### When to use this form

Use this form if you are applying for a permit to a Local Authority to operate a timber and manufacture of wood-based products installation as defined in Schedule 1 to the Environmental Permitting Regulations.

The appropriate fee must be enclosed with the application to enable it to be processed further. When complete, send the form and the fee and any additional information to:

*\*Insert local authority address\**

### If you need help and advice

We have made the application form as straightforward as possible, but please get in touch with us at the local authority address given above if you need any advice on how to set out the information we need.

For the purposes of Section H of the form, a relevant offence is any conviction for an offence relating to the environment or environmental regulation.

### LAPPC application form: to be completed by the operator

For Local Authority use		
Application reference	Officer reference	Date received

**A**     **The basics**

**A1**    **Name and address of the installation (not required for mobile plant)**

Postcode	Telephone

**A2**    **Details of any existing environmental permit or consent** *(for waste operations, include planning permission for the site, plus established use certificates, a certificate of lawful existing use, or evidence why the General Permitted Development Order applies.)*

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**A3**    **Operator details** *(The ‘operator’ = the person who it is proposed will have control over the installation in accordance with the permit (if granted).)*

Name:
Trading name, if different:
Registered office address:
Principal office address, if different:
Company registration number:

**A4 Any holding company?**

Is the operator a subsidiary of a holding company within the meaning of section 1159 of the Companies Act 2006? If “yes” please fill in details of the ultimate holding company.

No  Yes

Name: Trading name, if different:
Registered office address;  Principal office address, if different:
Company registration number:

**A5 Who can we contact about your application?** *It will help to have someone who we can contact directly with any questions about your application. The person you name should have the authority to act on behalf of the operator - This can be an agent or consultant.*

Name and position: _____
Telephone: _____
Email: _____

**B**     **The installation**

**B1**     **What activities are, or will be, carried on at the installation? Please include “directly associated activities” (this term is explained in Annex III in Part B of the [general guidance manual](#)).**

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**B2**     **Do you operate a timber process and/or manufacture wood-based products?**

Yes  No

**B3**     **Do you have a combustion process burning waste wood in an appliance greater than 0.4MW?**

Yes  No

**B4**     **Why is the application being made?**

new installation

change to existing installation means it now needs a permit

**B5**     **Site maps – please provide:**

- **A location map with a red line round the boundary of the installation**

Document reference: \_\_\_\_\_

- **A site plan or plans showing where all the relevant activities are on site:**

a) where the processing plant will be installed

b) the areas and buildings/structures designated for materials/ waste storage and the type of storage

c) the conveyors and transfer points

d) any directly associated activities or waste operations.

To save applying for permit variations, you can also show where on site you might want to use for storage etc in the future.

Document reference: \_\_\_\_\_

**B6**     **Are there any sites of special scientific interest (SSSIs) or European protected sites nearer than any of the following distances to the proposed installation?**

- 2km where the installation includes Part B combustion

Yes  No

- ½ km - in all other cases?

Yes  No

If 'yes', is the installation likely to have a significant effect on these sites and, if so, please write on a separate sheet or enclose a relevant document explaining what the implications are for the purposes of the Conservation (Natural Habitats etc) Regulations 1994 (see appendix 2 of Annex XVII of the [general guidance manual](#))

**B7 Will emissions from the activity potentially have significant environmental effects (including nuisance)?**

Yes  No

**If 'yes': list the potential significant local environmental effects (including nuisance) of the foreseeable emissions**

Document Reference: \_\_\_\_\_

- please enclose a copy of any environmental impact assessment which has been carried out for the installation under planning legislation or for any other purpose.

Document Reference: \_\_\_\_\_



**C8 In which of the following will wood dust be stored?**

*(tick all that apply)*

*[informs conditions 4 & 8]*

- a) silo
- b) bulk storage tank
- c) in fully-enclosed containers
- d) other - *please specify*: \_\_\_\_\_

**C9 How do you transfer wood dust around the site?**

*(tick all that apply)*

*[informs conditions 10, 11 & 12]*

- a) using pneumatic transfer
- b) belt conveyors
- c) fully-enclosed transport
- d) sheeted transport
- e) bagged
- f) other – *please specify* \_\_\_\_\_

**If you use pneumatic transfer, will displaced air be:**

*(tick all that apply)*

*[informs condition 7]*

- a) vented to arrestment plant
- b) back-vented to the delivery tanker
- c) other - *please specify* \_\_\_\_\_

**C10 Which of the following methods will be used to minimise emissions at transfer points, including free fall of material?**

*(tick all that apply)*

*[informs condition 9]*

- a) enclosed
- b) enclosed and ducted to arrestment equipment
- c) fitted with a chute
- d) other - *please specify* \_\_\_\_\_

*Note: dusty material should be taken to be any material which can be wind-entrained. It excludes for example >3mm particles*

**C11 Does loading/unloading of dusty materials:**

*[informs condition 5 & 6]*

- a) automatically stop for over-filling  Yes  No
- b) automatically stop for over-pressurisation  Yes  No
- c) have alarms to warn of over-filling  Yes  No
- d) have alarms to warn of over-pressurisation  Yes  No

**C12 How will potentially dusty materials (including any raw materials, finished products and waste), arrive at or leave the site?**

*(tick all that apply)*

*[informs condition 12]*

	Raw Materials	Finished Products	Waste
Road			
Rail			
Other			

**C13 When wood dust is moved offsite, do you fill vehicles directly from the arrestment plant?**

*[informs condition 5 & 12]*

Yes  No

**If yes go to C14, if No go to C15**

**C14 Do vehicles have** *(tick all that apply)*

a) side windows

b) overfilling alarms

**C15 Do you have environmental management procedures and policy?**

*[informs condition 3, 15 & 16]*

Yes  No

## **D Anything else**

Please tell us anything else you would like us to take account of.

Document Reference \_\_\_\_\_

## **E Application fee**

You must enclose the [relevant fee](#) with your application.

If your application is successful you will also have to pay an annual subsistence charge, so please say who you want invoices to be sent to.

## **F**     **Protection of information**

### **F1**     **Any confidential or national security info in your application?**

If there is any information in your application you think should be kept off the public register for confidentiality or national security reasons, please say what and why. [General guidance manual](#) chapter 8 advises on what may be excluded. *(Do not include any national security information in your application. Send it, plus the omitted information, to the Secretary of State or Welsh Ministers who will decide what, if anything, can be made public.)*

Document Reference \_\_\_\_\_

### **F2**     **Please note: data protection**

The information you give will be used by the Council to process your application. It will be placed on the relevant public register and used to monitor compliance with the permit conditions. We may also use and or disclose any of the information you give us in order to:

- consult with the public, public bodies and other organisations,
- carry out statistical analysis, research and development on environmental issues,
- provide public register information to enquirers,
- make sure you keep to the conditions of your permit and deal with any matters relating to your permit
- investigate possible breaches of environmental law and take any resulting action,
- prevent breaches of environmental law,
- offer you documents or services relating to environmental matters,
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows)
- assess customer service satisfaction and improve our service.

We may pass on the information to agents/representatives who we ask to do any of these things on our behalf.

### **F3**     **Please note: it is an offence to provide false etc information**

It is an offence under regulation 38 of the EP Regulations, for the purpose of obtaining a permit (for yourself or anyone else), to:

- make a false statement which you know to be false or misleading in a material particular,
- recklessly make a statement which is false or misleading in a material particular
- intentionally to make a false entry in any record required to be kept under any environmental permit condition
- with intent to deceive, to forge or use a document issued or required for any purpose under any environmental permit condition.

If you make a false statement

- we may prosecute you, and
- if you are convicted, you are liable to a fine or imprisonment (or both).

## H Declarations A and B for signing, please

*These declarations should be signed by the person listed in answer to question A3. Where more than one person is identified as the operator, all should sign. Where a company or other body corporate is the operator, an authorised person should sign and provide evidence of authority from the board.*

**Declaration A:** I/We certify

**EITHER** – As evidence of my/our competence to operate this installation in accordance with the EP Regulations, no offences have been committed in the previous five years relating to the environment or environmental regulation.

**OR-** The following offences have been committed in the previous five years which may be relevant to my/our competence to operating this installation in accordance with the regulations:

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Signature: \_\_\_\_\_ Name: \_\_\_\_\_

Position: \_\_\_\_\_ Date: \_\_\_\_\_

**Declaration B:** I/We certify that the information in this application is correct. I/We apply for a permit in respect of the particulars described in this application (including the listed supporting documentation) I/we have supplied. *(Please note that each individual operator must sign the declaration themselves, even if an agent is acting on their behalf.)*

Signature: \_\_\_\_\_ Name: \_\_\_\_\_

Position: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Name: \_\_\_\_\_

Position: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix 2 - Model Permit

This appendix contains a model permit for [ ] installations – see [relevant para in intro] of this note and para 3.6 of the [General Guidance Manual on Policy and Procedures](#) .

### Notes:

- text in the model permit written in *italics* is advice to regulators.
- text in the model permit in square brackets offers choice to regulators or indicates where information needs to be inserted from the application.
- text bracketed with asterisks (eg \*Alarms shall be tested at least once a week\*.) may be omitted by a regulator where the past performance of the plant gives the local authority sufficient reassurance about operator compliance – “earned recognition” .
- the model permit has been drafted for local authorities in England and Wales. Regulators in Scotland and Northern Ireland will need to amend the legal heading and, where appropriate, references to ‘Council’
- references to ‘installation’ will need to be substituted with ‘mobile plant’ in relevant cases, and other amendments made accordingly
- the purpose of the activity description is to set down the main characteristics of the activity, including any directly associated activities, so it is clear to all concerned what is being authorised by the permit and therefore what changes would need further approval. Regulators are advised to include a description of any key items of arrestment and monitoring equipment the operator intends to use or is using.
- it should normally be sufficient for records relating to simplified permits to be kept for no more than 18 months. Where, however, as a result of a ‘low risk’ rating, inspections are undertaken less often, regulators may want to specify a period which ensures the records are available at the next inspection.

[ ] COUNCIL  
POLLUTION PREVENTION AND CONTROL ACT 1999  
Environmental Permitting Regulations 2010 (as amended)

Permit ref. no:

Name and address of person (A) authorised to operate the installation ('the operator')

Registered number and office of company (if appropriate)

Address of permitted installation (B)

The installation boundary and key items of equipment mentioned in permit conditions are shown in the plan attached to this permit.

**Activity description**

The operator (A) is authorised to operate the activity<sup>4</sup> at the installation (B) subject to the following conditions.

**Conditions**

Emissions and monitoring

1. No visible particulate matter shall be emitted beyond the installation boundary.
2. The emission requirements and methods and frequency of monitoring set out in Table 1 shall be complied with. Sampling shall be representative.

Any monitoring display required for compliance with the permit shall be visible to operating staff at all times. Corrective action shall be taken immediately if any periodic monitoring result exceeds a limit in Table 1, or if there is a malfunction or breakdown of any equipment which might increase emissions. Monitoring shall be undertaken or repeated as soon as possible thereafter and a brief record shall be kept of the main actions taken.

3. All plant and equipment capable of causing, or preventing, emissions and all monitoring devices shall be calibrated and maintained in accordance with the manufacturer's instructions.  
\*Records shall be kept of such maintenance.\*

<sup>4</sup> listed in [ ] in Part 2 of Schedule 1 to the Environmental Permitting Regulations  
PG6/02 Publication version 40

#### Silos where used

4. Wood dust shall only be stored within the wood dust silos.
5. Dust emissions from loading or unloading vehicles shall be minimised by [venting to specify type arrestment plant] [backventing to a delivery vehicle fitted with an on-board, truck-mounted relief valve and filtration system] and by connecting transfer lines first to the delivery inlet point and then to the discharge point, and by ensuring delivery is at a rate which does not pressurise the silo.
6. Silos and bulk containers of dusty materials shall not be overfilled and there shall be an overfilling alarm.
7. Displaced air from pneumatic transfer shall pass through abatement plant prior to emission to air.

#### Storage of materials

8. Dusty materials (including dusty wastes) shall only be stored in [specify storage location] as detailed on the plan attached to this permit and shall be subject to suppression and management techniques to minimise dust emissions.

#### Belt conveying where used

9. All dusty materials, including wastes, shall be conveyed using [specify conveyor, level of enclosure and enclosure type]. All transfer points shall be fitted with [specify dust control technique].

#### Loading, unloading and transport

10. *Where pneumatic or enclosed handling systems are required, depends on particle size, moisture content etc.* The transportation and handling of wood dust and wood particles shall be carried out using pneumatic or enclosed handling systems
11. When wood dust is moved using site transport, it shall be held in enclosed containers.
12. No potentially dusty materials (including wastes) shall leave the site other than by use of [specify transport type and dust control technique].

#### Arrestment Equipment

13. Replace all filter media [every 4 years] [at a frequency agreed with the regulator].

#### Techniques to control fugitive emissions

14. *Select according to visible dust potential of each process building.* The fabric of process buildings shall be maintained so as to minimise visible dust emissions.

### Records and training

15. Written or computer records of all tests and monitoring shall be kept by the operator for at least [ ] months. They [and a copy of all manufacturer's instructions referred to in this permit] shall be made available for examination by the Council. \*Records shall be kept of operator inspections, including those for visible and odorous emissions.\*
16. Staff at all levels shall receive the necessary training and instruction to enable them to comply with the conditions of this permit. Records shall be kept of relevant training undertaken.

*The following two conditions are not needed for PPC permits which transferred automatically into the environmental permitting regime by virtue of regulation 69(6) of the 2007 Regulations and regulation 108(4) of the 2010 Regulations. Where permits are issued on or after 6 April 2008 the next two conditions will not automatically apply and need specific inclusion in the permit where required.*

### Best available techniques

17. The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation which is not regulated by any other condition of this permit.
18. If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change in operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

**Table 1 - Emission limits, monitoring and other provisions**

Row	Substance	Source (see also Note e)	Emission limits/provisions	Type of monitoring	Monitoring frequency
1	Particulate matter	Whole Site	No visible emission	Visual observations Particular attention should be paid to areas where vehicles are filled with wood waste and wood dust	On start-up and on at least two more occasions during the working day
2	Particulate matter	Arrestment plant (not cyclones) designed with exhaust flow rate >300m <sup>3</sup> /min	No visible emission	Visual observations	On start-up and on at least two more occasions during the working day
3	Particulate matter	Arrestment plant (not cyclones) designed with exhaust flow rate <300m <sup>3</sup> /min	No visible emission	Visual observations	At least daily
4	Particulate matter	Cyclones	No visible emissions	Continuous indicative monitoring devices with visual and audible alarms which activate on cyclone malfunction and which indicate e.g. blockages (data logging should not normally be necessary).	Continuous to show arrestment equipment is functioning correctly
5	Particulate matter	Combustion processes (see also Note d)	No visible smoke and must not exceed Ringelmann Shade 1 as described in British Standard BS 2742.	Visual observations	On start-up and on at least two more occasions during the working day

6	Droplets, persistent mist and fume	All emissions to air (other than steam or condensed water vapour)	No droplets No persistent mist No persistent fume	Visual observations	On start-up and on at least two more occasions during the working day
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Notes:

\*All periodic monitoring results shall be checked by the operator on receipt and sent to the Council within 8 weeks of the monitoring being undertaken.\*

- a) All periodic monitoring shall be over a period that shall be representative and shall use standard methods.
- b) The emission limits do not apply during start-up and shut down. All emissions shall be kept to a minimum during these periods.
- c) Row 5 does not apply to any combustion process using fuel manufactured from waste in appliances with a net rated thermal input greater than 0.4MW – the provisions of PG Note 1/12 applies.
- d) Where the plant is discharging to the external atmosphere.

## **Right to Appeal**

You have the right of appeal against this permit within 6 months of the date of the decision. The Council can tell you how to appeal [*or supply details with the permit*]. You will normally be expected to pay your own expenses during an appeal.

You will be liable for prosecution if you fail to comply with the conditions of this permit. If found guilty, the maximum penalty for each offence if prosecuted in a Magistrates Court is £50,000 and/or 6 months imprisonment. In a Crown Court it is an unlimited fine and/or 5 years imprisonment.

Our enforcement of your permit will be in accordance with the [Regulators' Compliance Code](#).