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# Phase 2 of the Impact Assessment of Proposals for a Revised IPPC Directive

## Part 5: Wood-based panel Production Final report

June 2008



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government



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Published by the Department for Environment, Food and Rural Affairs  
Produced by Entec UK Ltd

# Executive Summary

## Introduction

The Commission published its proposal and an impact assessment for a Directive on industrial emissions (Industrial Emissions Integrated Pollution Prevention and Control, IE(IPPC)D<sup>1</sup>) on 21<sup>st</sup> December 2007. This consolidates seven existing Directives related to industrial emissions into “a single clear and coherent legislative instrument” and includes a number of changes related to new and existing activities. The main objective of this report is to assess, in outline, the likely impacts of the proposal in relation to wood panel industry within the UK.

## Proposed Changes

The EC has proposed the addition of text to include the following as a listed activity within Annex I the IPPC Directive:

### 6.1 Production in industrial-installations of:

(c) *‘wood-based panels, with the exception of plywood, with a production capacity exceeding 600m<sup>3</sup> per day’.*

The purpose of this inclusion is to cover the largest wood-based panel installations concerned causing the main environmental impacts: particleboard, medium-density fibreboard (MDF) and oriented strand board (OSB), whilst excluding the smaller installations (in particular the fibreboard and plywood sub-sectors, which have limited environmental impacts).

## Scope and Impact of the Proposed Changes

The IPPC Directive does not currently directly cover the wood-based panel industry, but it does regulate wood-based panel manufacturers which operate a large combustion plant (>50MWth) onsite. Furthermore, IPPC regulates the larger waste incinerators and plants performing surface treatments using solvents. BREFs have been established covering these activities but there are no specific BREFs available for the wood-panel industry.

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<sup>1</sup> “Proposal for a Directive of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) (recast)”. European Commission, Brussels, 21<sup>st</sup> December 2007. Available from: <http://ec.europa.eu/environment/ippc/proposal.htm>

The inclusion of the wood-based panel industry in the IPPC Directive will result in requirement for a BREF Note for the industry which may have far reaching implications for the industry.

## Number of Installations

There are eight wood-based panel manufacturing plants in the UK producing particleboard, MDF and OSB. Currently, installations report on actual annual throughput and not production capacity however using the assumption of 300 manufacturing days per annum, the daily production capacity of these plants varies between 333m<sup>3</sup> to 2400m<sup>3</sup>. Based on this calculation, the proposed changes would have the potential to affect 7 of the 8 plants in the UK.

In the UK an IPPC permit is required by wood-based panel installations under Schedule 1 of the Environmental Permitting (England and Wales) Regulations (EPR) 2007 Section 6.1 Part A(2) as follows;

*Manufacturing wood particleboard, oriented strand board, wood fibreboard, plywood, cement-bonded particle board or any other composite wood based board.*

Under the EPR Regulations, a threshold has not been introduced, but the whole wood-based panel sector is included. Therefore the scope of the England and Wales Regulations goes beyond what is been proposed for the sector under the IPPC Directive.

All 8 installations in the UK are already subject to IPPC as Part A activities. The UK has established specific sector guidance for the wood-based panel industry introducing specific emission limit requirements for the sector. The Secretary of State's Guidance (SG1) for A2 particleboard, Oriented Strand Board and Dry Process Fibreboard covers BAT for release to air, water and land. Currently all installations in the UK follow this sector guidance to implement BAT.

It is therefore concluded that there are unlikely to be any direct impacts on industry operating in the UK from the introduction of the proposed revisions to the IPPC Directive.

## Costs & Benefits

### Compliance Costs

It is not expected that there will be any additional costs to the industry the eight installations in the UK are already subject to IPPC and should already be applying BAT. From discussions with Local Authorities and the WPIF, all necessary measures are already in place to ensure

compliance with the proposed changes to the Directive and therefore no further changes are expected for the industry. However the introduction of a BREF may have future implications for the industry.

### Administrative Costs

As all sites are already Part A activities there are no anticipated additional administrative costs beyond Business As Usual.

### Benefits

There are no expected emissions reductions associated with the inclusion of the sector under the IPPC Directive as the sector is already covered under IPPC and applying BAT. It is therefore concluded that there are no environmental benefits anticipated for the UK. Given the transportation costs, bulky nature of wood panel products and the implementation timescales, there are not anticipated to be any significant competitive advantages for UK industry.



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# 1. Introduction

## 1.1 This Report

The overall aim of this work package is to provide support to Defra in response to the publication of the European Commission's proposal for a new Directive on industrial emissions. This work will be undertaken under Entec's framework contract with Defra on "*The Preparation of Regulatory Environmental Impact Assessments in Relation to Proposals for Air Quality Legislation*" contract (RIA). The main objective of this report is to assess the likely impacts of the proposal in relation to **wood panel installations** within the UK, building and commenting on as well as extending the Commission's Impact Assessment (IA), where appropriate.

The project team has consulted with the following stakeholders to support the development of this report:

- Local Authorities in England and Wales regulating wood-based panel installations under Part A(2) of the IPPC (England and Wales) 2000 Regulations;
- Scottish Environmental Protection Agency (SEPA);
- Environment and Heritage Service (EHS) Northern Ireland;
- Environment Agency (EA) (England and Wales) Local Authority Unit;
- Wood Panel Industries Federation (WPIF);
- Timber Trade Federation (TTF); and
- Defra.

## 1.2 What Is The Issue?

### 1.2.1 Overview of Revised IPPC Directive

The Commission has published its proposal and an impact assessment for a Directive on industrial emissions (Industrial Emissions Integrated Pollution Prevention and Control,

henceforth cited as “IE(IPPC)D”<sup>2)</sup> on 21<sup>st</sup> December 2007, which consolidates seven existing Directives related to industrial emissions into a single clear and coherent legislative instrument. These existing Directives include titanium dioxide industry related directives (78/176/EEC, 82/883/EEC, 92/112/EEC), the IPPC Directive (96/61/EC), the Solvent Emission Directive (1999/13/EC), the Waste Incineration Directive (2000/76/EC) and the LCP Directive (2001/80/EC). The Commission’s IA<sup>3)</sup> identified a number of problems related “(1) to shortcomings in the current legislation that lead to unsatisfactory implementation and difficulties in Community enforcement actions and, thereby, to loss of health and environmental benefits and (2) to the complexity and lack of coherence of parts of the current legal framework.”

The Commission has provided an indicative timeline for discussion and implementation of the proposals. It is important to note that this is dependent on the length of time it takes to discuss and agree the proposed directive within the co-decision procedure. The initial timetable is set out below in Table 1.1

**Table 1.1 Key Dates for the Discussion and Implementation of the Proposed IE(IPPC)D**

Date	Description
12/2007	The Commission adopts its proposal for a Directive on industrial emissions as well as issuing its Communication ‘Towards an improved policy on industrial emissions’
01/2009	First reading in the European Parliament and political agreement in Council.
12/2010	Completion of the co-decision process and publication of the Directive on industrial emissions within the Official Journal.
07/2012	Member States fully transpose the new Directive (18 months after entry into force). The Directive applies to all new installations from this date onwards.
01/2014	All existing installations previously subject to IPPC, Waste Incineration, Solvent Emissions and Titanium Dioxide Directives must meet the requirements of the new

<sup>2)</sup> “Proposal for a Directive of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) (recast)”. European Commission, Brussels, 21<sup>st</sup> December 2007. Available from: <http://ec.europa.eu/environment/ippc/proposal.htm>

<sup>3)</sup> “Commission Staff Working Document: Accompanying document to the Proposal for a Directive of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) (recast). Impact Assessment.” European Commission, Brussels, 21<sup>st</sup> December 2007. Available from: <http://ec.europa.eu/environment/ippc/proposal.htm>

Directive. Large Combustion Plants do not yet need to meet the new Emission Limit Values (ELVs) prescribed within the Directive

07/2015 The newly prescribed activities such as additional poultry installations, smaller combustion units and wood preservation activities must meet the requirements of the new Directive.

**Table 1.1 (continued) Key Dates For the Discussion and Implementation of the Proposed IE(IPPC)D**

Date	Description
01/2016	Large Combustion Plants must meet the requirements set out in Chapter 2 of the new Directive, as well as the ELVs set out in Annex V

### 1.2.2 Proposed Changes:

The EC has proposed the addition of the following as a listed activity within the IPPC Directive:

6.1 (c) 'Production in industrial installations of wood-based panels, with the exception of plywood, with a production capacity exceeding 600m<sup>3</sup> per day'.

The purpose of this inclusion is to cover the largest wood-based panel installations concerned causing the main environmental impacts: particleboard, medium-density fibreboard (MDF) and Oriented Strand Board (OSB), whilst excluding the smaller installations (in particular the fibreboard and plywood sub-sectors which have limited environmental impacts).

### 1.3 What Are The Objectives And Intended Effects?

The main drivers for the revision of industrial emissions legislation are described in the IA undertaken by the Commission:

- The Lisbon Strategy and the EU Sustainable Development Strategy; this strategy stresses the role of environmental technologies in having "*significant economic, environmental and employment potential*";
- the different Thematic Strategies (Air Pollution, Soil Protection etc.) set objectives to protect human health and the environment from key air pollutants. Industrial emissions regulation has a major role in meeting these objectives;

- the need for “Better Regulation” and designing laws and legislation in a more coherent way and with minimum administrative burden; and
- experience in the implementation of the IPPC Directive in the last 10 years and ways to improve the legal framework to ensure that its objectives are met.

The Commission’s proposals aim to address the issues identified via a number of amendments to the existing legislation including the following:

- Clarification and strengthening of the concept of BAT;
- revision of the minimum ELVs for some sectors (for example, large combustion plants) to bring them into line with BAT standards;
- introduction of provisions on inspection and environmental improvements;
- stimulating innovation and the development and deployment of new techniques;
- simplifying and clarifying certain provisions on issuing permits, monitoring and reporting to cut unnecessary administrative burdens; and
- extending and clarifying the scope and provisions of the legislation to better contribute to the objectives of the Thematic Strategies.

For this particular amendment, the main objectives are to establish a BAT-based permitting regime for this sector across all Member States. The implementation of BAT should provide positive environmental and social impacts.

## 2. Policy Options

This section presents the policy options considered in this report for the proposed addition of wood-based panel installations, as a listed activity. This was discussed and agreed with Defra at the inception meeting (08<sup>th</sup> April 2008).

### 2.1 Wood Panel Installations

The following two options have been considered for wood-based panel installations:

1. No change.
2. As proposed in the IE(IPPC)D.



### **3. Who Is Affected?**

This section presents a list of those stakeholders likely to be affected by the proposed changes for inclusion wood panel installations:

- Operators of wood-based panel installations currently falling outside of the scope of the IPPC Directive with a production capacity of >600m<sup>3</sup> per day;
- Competent Authorities e.g. Local Authorities in England and Wales, Scottish Environment Protection Agency (SEPA), Environment and Heritage Service (EHS) Northern Ireland, Defra; and
- Trade Associations i.e. Wood Panel Industries Federation (WPIF), Timber Trade Federation (TTF).





## 4. Baseline Definition

### 4.1 Approach

This section outlines the approach that has been taken to define the baseline for the relevant installations and/or activities and their associated emissions that may be affected by the proposed changes to the Directive.

#### 4.1.1 Wood-Based Panel Installations

##### Number of Installations

There are eight wood-based panel manufacturing plants in the UK producing particleboard, MDF and OSB. The number of enterprises manufacturing particleboard, MDF and OSB in the UK are illustrated in Table 4.1, together with production figures and current regulation.

**Table 4.1 Overview of Production Installations of Particleboard, MDF and OSB in the UK, Production Capacity and Current Regulation (1, 2)**

Installation	Production Capacity m <sup>3</sup> /day <sup>4</sup>			Current Regulation
	Particleboard	MDF	OSB	
Norbord (Inverness)			1067	IPPC Part A
Norbord (Cowie)	1100	1133		IPPC Part A
Egger (UK) Ltd. (Barony)	1433			LA-IPPC Part A IPPC Part A(1)

<sup>4</sup> Assumption is that plants are operating 300 days/year, which is based on communication with installation operators.

**Table 4.1(continued) Overview of Production Installations of Particleboard, MDF and OSB in the UK, Production Capacity and Current Regulation (1, 2)**

Installation	Production Capacity m <sup>3</sup> /day (assuming site operating 300/year)			Current Regulation
	Particleboard	MDF	OSB	
Egger (UK) Ltd. (Hexham)	1933			LA-IPPC Part A
Sonae UK Ltd. (Knowsley)	1667			LA-IPPC Part A
Kronospan Ltd. (Wrexham)	2400	1667		LA-IPPC Part A IPPC Part A(1)
Norbord Ltd. (South Molton)	667			LA-IPPC Part A
Spanboard Products Ltd. (NI)	333			IPPC Part A
<b>Total production capacity m<sup>3</sup>/day</b>	<b>7373</b>	<b>2800</b>	<b>1067</b>	

Of the eight installations, seven have a production capacity above the proposed threshold of 600m<sup>3</sup>/day. The average production per site for these installations amounts approximately to 1000 – 2500m<sup>3</sup>/day for the production of particleboard, MDF and OSB. Currently installations report on actual annual throughput and not production capacity.

## 4.2 Results

The main environmental issues related to the production of wood-based panels are emissions to air (dust, combustion gases and VOCs) and the generation of wood residue. Energy consumption is invariably linked to the use of production machinery and drying operations. Discharges to water, contamination of soil and noise nuisance may also occur, but to a much smaller extent or only associated with specific production processes. The type and quantity of the environmental impact depend very much on the type of processes that are applied. The UK is one of a small number of Member States that have already introduced a BAT-based permitting regime for the industry (4).



**Table 4.2 Summary of Direct Releases Taken from SG1(5)**

Source	De-Barking	Recovered Wood handling	Chip Washing	Wood Chipping	(Prepared) Wood Particle Storage	Drying	Mixing of Resins/Additives	Mat Forming	Sanding & Finishing	Cooling Operations	Laminating Line	Effluent Plant	Boilers	WESP
Oxides of Sulphur						A								A
Oxides of nitrogen and carbon						A								A
Particulate/Total suspended solids	A	W	A	A	A	A		A	A		A	W	A	A
Formaldehyde								A	A			W		A
Isocyanates								A	A					
VOC						A		A	A					A
Total aldehydes						A		A	A					A
Solid waste or sludge			W					W				W	W	W
Phenol								A	A		A			
Ammonia												W		
Noise	***	*		***		**								*
KEY	A – Release to Air, W – Release to Water, L – Release to Land, *** - High, ** - Medium, * - Low # from fans													
Substances include their compounds, except where separate reference to the compound is made. Releases to air may also be released to land or water, depending upon the abatement technology employed, e.g. via collected dusts, sludges or liquors. N.B. It should be noted that this is not necessarily an exhaustive list. Equally not all installations will necessarily have all these releases.														



## Emissions to Air

Table 4.3 gives an overview of the relevant air pollutants for individual process steps.

**Table 4.3 Overview of Relevant Air Pollutants for Individual Production Steps In the Wood-Based Panel Industry (4)**

Process	Relevant Pollutants
Transport and storage	dust, wood dust
Mechanical operations	wood dust
Chipping, chip grading, cutting, sanding of pressed board, ...	
Formaldehyde- and adhesive (glue) production	HCHO, VOC
Particleboard and MDF production	
Direct heated dryers incl. energy supply	dust, NO <sub>x</sub> , NH <sub>3</sub> , SO <sub>2</sub> , CO, VOC, HCHO, org. acids, HCl, phenol, PCDD/F
Indirect heated dryers	dust, SO <sub>2</sub> <sup>1)</sup> , VOC, HCHO, organic acids, HCl <sup>1)</sup> , phenol
Press	dust, VOC, HCHO, organic acids, phenol, SO <sub>2</sub> <sup>1)</sup>
Fibreboard production	
Wet process	VOC, organic acids, phenol, HCHO
Combustion	dust, heavy metal dusts, NO <sub>x</sub> , SO <sub>2</sub> , NH <sub>3</sub> , VOC, HCl, HF, HCHO, CO, PCDD/F

One of the main sources of emissions to air is the dryers and presses and the associated abatement techniques employed for these emissions. Specifically in the UK wet electrostatic precipitators (WESPs) have been widely used to abate gaseous releases and is considered BAT for these processes. In certain drying processes high efficiency cyclones are used to separate the fibre after drying.

In Table 4.4 the concentration limits for emissions to air are presented. They are only applicable for contained emissions exhausted to external atmosphere.

**Table 4.4 Contained Emissions to Air Associated with the Use of BAT mg/m3 (5)**

<b>Determinand</b>	<b>Limits</b>
Particulate Matter wood dryer	20 (17% O <sub>2</sub> )
Particulate Matter other (grinding)	50 20 (MDF production)
VOC Dryer	130 (condensable VOC)
Formaldehyde wood dryer	5 20
Total Aldehyde (wood dryer)	20 (as C)
Phenol (presses and dryers)	5
Isocyanates (presses and dryers)	0.1 (as NCO group)
Odour	No offensive odour beyond site boundary

The emission limits for discharges to water are specified in individual cases taking into account the receiving environment. Wastewater treatment systems can maximise the removal of pollutants using precipitation, sedimentation and possibly filtration. It is also practicable in many cases to reuse treated water.

Table 4.5 provides information regarding achievable levels associated with the use of wastewater treatment systems for discharges to surface water

**Table 4.5 Emissions to Water Associated With the Use of BAT (5)**

<b>Determinand</b>	<b>Benchmark Release Concentration mg/Litre</b>
BOD	100
COD	130 (trade effluent) or 30 (controlled waters)
Total suspended solids	20



**Table 4.5 (continued) Emissions to Water Associated With the Use of BAT (5)**

<b>Determinand</b>	<b>Benchmark Release Concentration mg/Litre</b>
Ammoniacal nitrogen expressed as N	15
Formaldehyde	10

#### 4.2.1 Current Industry Performance against Regulatory Requirements

Emission data from two installations was obtained to provide a representation of the overall performance of the industry in comparison to its regulatory requirements under IPPC (6, 7). Based on this data, both sites comply with the emission limits set out above Table 4.4 and 4.5. According to some Local Authorities, the majority of installations have a good compliance history under the IPPC regime and regulation under IPPC has resulted in reduction of emissions to air e.g. dust, and an overall improvement in performance of the sites.

### 4.3 Overview of Current Legislation

#### 4.3.1 IPPC Requirements for Wood-Based Panel Installations

The IPPC Directive does not currently directly cover the wood-based panel industry, but it does regulate wood-based panel manufacturers which operate a large combustion plant (>50MWth) onsite. Furthermore, IPPC regulates the larger waste incinerators and plants performing surface treatments using solvents. BREFs have been established covering these activities but there are no specific BREFs available for the wood-panel industry.

In the UK an IPPC permit is required by wood-based panel installations under Schedule 1 of the Environmental Permitting (England and Wales) Regulations (EPR) 2007 Section 6.1 Part A(2) as follows;

*Manufacturing wood particleboard, oriented strand board, wood fibreboard, plywood, cement-bonded particle board or any other composite wood based board.*

Under the EPR Regulations, a threshold has not been introduced, but the whole wood-based panel sector is included. Therefore the scope of the England and Wales Regulations goes beyond what is been proposed for the sector under the IPPC Directive.

All 8 installations in the UK are already subject to IPPC as Part A activities. The UK has established specific sector guidance for the wood-based panel industry introducing specific emission limit requirements for the sector. The Secretary of State's Guidance (SG1) for A2 particleboard, Oriented Strand Board and Dry Process Fibreboard covers BAT for release to air, water and land. Currently all installations in the UK follow this sector guidance to implement BAT.

Because the installations are already subject to regulation as Part A activities, no significant measures should be required by the industry to comply with the proposed changes to the IPPC Directive as the necessary measures have already been implemented under the relevant Regulations(1).

The inclusion of the wood-based panel industry in the IPPC Directive will result in requirement for a BREF Note for the industry which may have far reaching implications for the industry (1).

The Secretary of State's Guidance for the Manufacture of Timber and Wood-Based Products, PG 6/2, applies to the manufacture of products wholly or mainly of wood at any works if the process involves the sawing, drilling, sanding, shaping, turning of wood and the throughput of the works in any 12 month period is likely to exceed 10,000m<sup>3</sup> in the case of works at which wood is mainly sawn but not subjected to any other relevant process or 1000m<sup>3</sup> in any other case. The emission limit values and provisions are achievable using the best available techniques described in PG 6/2 (8).

#### 4.3.2 Waste Incineration Directive (WID)

The 'thermal treatment' which includes combustion, gasification and pyrolysis of solids or liquids that can be defined as waste ('which the holder discards or intends or is required to discard') is governed by the Waste Incineration Directive (WID) 2000/76/EC. The Waste Incineration Directive was implemented in the UK by separate Regulations for England and Wales, Scotland and Northern Ireland, in conjunction with the pollution prevention and control regime. These Regulations introduced strict regulatory controls and minimum technical standards for waste incinerators and co-incinerators. Other legal requirements may also apply for the burning of waste (10).

Waste wood must be burned in compliance with the WID unless the plant falls within the definition of 'excluded plant' in the WID. The incineration of wood waste which has been treated with wood preservatives or coatings containing halogenated compounds or heavy metals is most likely to be covered by WID. In addition, timber from construction and demolition sites is

also assumed to be covered by WID unless it can be shown to be otherwise. The WID imposes requirements on the types of waste permitted at a given plant, delivery and reception of the waste, the thermal conversion equipment used and the operating conditions required, abatement plant, emissions monitoring requirements and emission limit values to air and water.

Currently no installations in the UK are regulated under WID. From discussions with some competent authorities, there are increasing difficulties in regulating what is actually being burnt by wood-based panel installations and ensuring that the waste wood being used as fuel has not been contaminated with halogenated organic compounds or heavy metals. This is a significant issue for the industry as, according to some competent authorities, certain wood-based panel installations should already be covered by WID (3, 12). From discussions with the Wood Panel Industries Federation (WPIF), the issue for the industry is in controlling the raw material coming on-site to ensure that it is not contaminated. They believe that any technical response to WID requirements could not be afforded by the industry. To fully comply with WID, the WPIF believes the industry would have to stop using recycled material. However 1/3 of the raw material used by the industry is recycled material and the industry could not afford this option. The European Panel Federation (EPF) has introduced wood control limits for incoming wood raw materials which the wood-based panel installations in the UK look to comply with. Where individual metal limits are exceeded, the total contamination (heavy metals and halogenated organic compounds) in the incoming recycled wood as a result of treatment shall not exceed 0.4% (by mass of total material) at the weighbridge. Other wood control measures have been introduced by the WPIF to prevent any harm to human health or the environment (13). Currently, some installations undertake spray testing to determine levels of heavy metals in the incoming raw materials. Suppliers are also audited in some cases to screen out contaminated wood (12).

#### 4.3.3 Landfill Regulations and Landfill Tax

As of October 2007, all non-hazardous waste must be pre-treated where it is destined for disposal to landfill. This prior treatment includes any process including sorting (e.g. by extracting recyclables) which alters the characteristics of the waste such as by reducing its volume. It is hoped that this requirement in conjunction with other measures adopted under the Waste Strategy for England 2007 will help facilitate greater separation of wood from the residual waste stream. It has been estimated that the wood-based panel industry produces 1,107 tonnes of waste per year in the UK, being the highest industrial producer of wood waste.

Landfill costs are a significant economic driver for the sector to look to recycling and energy recover/incineration of waste wood rather than disposal to landfill. Landfill tax has increased

significantly in recent years (£24 per tonne in 2007/08) and will increase at £8 per tonne from 2008/09 to 2010/11. Furthermore there is a scarcity of landfill in some parts of the UK which means that landfill gate fees are also increasing. Recovery and disposal routes other than landfill are likely to become more attractive where the costs are lower than landfill. The route taken will be strongly influenced by the grade of waste wood. High grades of waste are currently sought after because there is a high demand for clean wood from the panel board industry.

The capacity for processing waste wood is very much dependant on industries like the wood panel industry. The quality of raw material is critical, with the majority of waste wood being too contaminated for recycling applications. Demand for energy recovery from fossil fuels is likely to increase in the future, as set out by the Government Energy Review. Biomass fuel is expected to play an important role in this regard, as we seek to significantly expand renewable energy generation in the context of the EU 20% renewable energy target (14).

#### 4.3.4 Waste Management Licensing Regulations

As of April 2008, any installation holding a Waste Management Licence (WML) will automatically have this transferred to an Environmental Permit. It is thought that there are no WMLs held by any wood panel installations in the UK (9).

#### 4.3.5 Producer Responsibility Obligations (Packaging Waste) Regulations

Any business that handles more than 50t/year of packaging and has a turnover of more than £2million/year is obligated. The regulations set targets for recovery and recycling of packaging waste.

#### 4.3.6 Solvent Emissions Directive (SED)

Council Directive 1999/13/EC focuses on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations. The Directive establishes emission limit values for VOCs in waste gases and maximum levels for fugitive emissions (expressed as percentage of solvent input) for solvent using operators. The Directive applies to the following activities (threshold values) in the woodworking industry:

- Coating of wooden surfaces (solvent consumption of 15t/year or more);
- impregnation of wood (solvent consumption of 25t/year or more);

- wood lamination (solvent consumption of 5t/year or more); and
- adhesive coating (solvent consumption of 5t/year or more).

Notice that the SED VOCs taking part in the chemical process of hardening of paints and lacquers (and likewise adhesives) are excluded from the definition of a solvent. This is important for the formaldehyde or other compounds used as adhesive compounds for the production of wood-based panels. Most of the adhesives used in the wood-based panel industry include VOC that take part in the bonding reaction, consequently these are not subject to the SED (4). From discussions with the WPIF, none of the installations in the UK are currently covered by the SED (1).

#### 4.3.7 Climate Change Agreement and EU ETS

The wood panel industry has entered into a Climate Change Agreement (CCA) with Defra. The industry is energy intensive and a target of 7.34% reduction of primary energy consumption has been set for 1999 to 2010 (kW/M<sup>3</sup>). Two installations trade on the EU ETS, and it is expected that in the future all installations will have to trade carbon (1).

BAT for energy efficiency applies basic, low cost, energy standards for the industry whether or not the CCA is in force or the operator has EU ETS commitments for the installation.

#### 4.3.8 European Pollutant Release and Transfer Register (E-PRTR) Regulations

The E-PRTR replaces the European Pollutant Emissions Register (EPER). Under the E-PRTR Regulation, wood-based panel operators regulated under the IPPC Regulations will be required to report their emissions and transfers to the European Commission on an annual basis<sup>5</sup>.

#### 4.3.9 Further Requirements

The sector's performance is also influenced by other horizontal requirements, affecting the forest based industries as a whole. For wood, the most important are;

- Forest resources and raw materials: Forest Stewardship Council Approval; FLEGT, Strategy on Bio-diversity, Natura 2000;
- renewable energy: UK Biomass Strategy and the EU Bio-fuels Strategy; land use planning;

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<sup>5</sup> Environment Agency website

- production processes: recycling; sustainable use of resources, waste issues, dangerous substances; landfill tax costs; and
- products and use: Eco-labels, Integrated Product Policy, Packaging waste and Producer Responsibility Obligations.

#### 4.3.10 Priorities for the Industry

The priority for the industry is to remain competitive in an environment where energy and raw material costs are rising. Wood costs are being heavily influenced by the impact of subsidized energy generators, some of whom are competing for the same wood raw material. Resin costs are influenced by oil costs and also by exports of urea from China which has just cut exports by 20%. At this time, the opportunity to invest in measures other than in response to regulation is limited. In addition, high energy costs will influence boiler choices in the future (1).

#### 4.4 Summary

All 8 wood-based panel installations in the UK are above the proposed capacity threshold of 600m<sup>3</sup>/day. All of these installations are already subject to IPPC by the relevant Regulations. According to the WPIF and some Local Authorities spoken to in the course of this assessment, the industry will not be required to take any measures, in addition to what they are already doing, to meet the requirements of the IPPC Directive(1).

## 5. Costs

### 5.1 Approach

#### 5.1.1 Compliance Costs

It is not expected that there will be any additional costs to the industry the eight installations in the UK are already subject to IPPC and should already be applying BAT. From discussions with Local Authorities and the WPIF, all necessary measures are already in place to ensure compliance with the proposed changes to the Directive and therefore no further changes are expected for the industry. However the introduction of a BREF may have future implications for the industry.

### 5.2 Administrative Costs

#### 5.2.1 Operators

As all sites are already Part A activities there should be no additional administrative costs beyond BAU.

#### 5.2.2 Regulators

Regulators should already recover their regulatory costs through subsistence permit charges upon operators of Part A activities. However, the charges differ according to whether the regulator is the Environment Agency, a local authority, the Scottish Environment Protection Agency of the Northern Ireland Environment and Heritage Service.

### 5.3 Results

Wood-based panel installations are already subject to the above subsistence costs and therefore no additional costs are expected as a result of inclusion of the sector under the IPPC Directive under current regulatory arrangements.





## **6. Benefits**

### **6.1 Approach**

#### **6.1.1 Emission Reductions**

There are no expected emissions reductions associated with the inclusion of the sector under the IPPC Directive as the sector is already covered under IPPC and applying BAT. It is expected that there will be no additional costs or benefits for the industry.



## 7. Competition Assessment

The competition guidelines (August 2007)<sup>6</sup> set out four main questions, which requires asking whether the proposed revisions in the IPPC Directive would affect the market by:

1. Directly limiting the number or range of suppliers?
2. Indirectly limiting the number or range of suppliers?
3. Limiting the ability of suppliers to compete?
4. Reducing suppliers' incentives to compete vigorously?

A brief summary of the four questions are presented below in Table 7.1 and for those where the answer to one of the questions is "Yes", then an explanation is provided in the following sections.

The results should be included in the "Evidence Base" within the Impact Assessment template.

**Table 7.1 Summary of the Competition Test**

Question	Wood-based panel installations
Q1. Directly limit the number or range of suppliers?	No
Q2. Indirectly limit the range of suppliers?	No
Q3. Limit the ability of suppliers to compete?	No
Q4. Reduce suppliers' incentives to compete vigorously?	No

Given wood-based panel installations are already covered under IPPC and applying BAT, it is expected that there will be no additional costs for the industry and therefore it is unlikely that there will be any competition effects to note. Those installations below the production capacity

<sup>6</sup> [http://www.offt.gov.uk/shared\\_offt/reports/comp\\_policy/oft876.pdf](http://www.offt.gov.uk/shared_offt/reports/comp_policy/oft876.pdf)

threshold 600m<sup>3</sup> per day are also following BAT so there is unlikely to be any competitive advantages directly associated with the threshold.

## **8. Distribution of Costs**

Given wood-based panel installations are already covered under IPPC and applying BAT, it is expected that there will be no additional costs for the industry. Therefore it is unlikely that there will be any significant burden to any single installation in the industry.



## 9. References

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