

THE ASHDOWN AGREEMENT

Ashdown Agreement

This is a voluntary commitment by the UK plasterboard manufacturers - British Gypsum, Knauf Drywall, and Lafarge Plasterboard – and the Gypsum Products Development Association (GPDA) to work together and with other stakeholders in order to achieve a reduction in plasterboard waste being disposed of to landfill. It has been developed in collaboration with WRAP (Waste & Resources Action Programme), the Market Transformation Programme (MTP) and Defra. WRAP will work with GPDA to provide an annual review of progress against the targets and objectives stated below. The agreement covers Great Britain.

Headline Targets and Objectives

(based on an estimated 3 million tonnes of plasterboard being manufactured in 2010)

By 2010:	
1.	To engage with all stakeholders to undertake activities which reduce the amount of new plasterboard waste to landfill and increase recovery of all plasterboard waste.
2.	To reduce the amount of waste being sent to landfill, both monocell and co-disposal, from GB plasterboard manufacturing operations to 10,000 tonnes.
3.	To increase the take back and recycling of plasterboard waste, for use in plasterboard manufacture, to 50% of new construction waste arisings by 2010.
4.	To work with all parties in the supply chain towards achieving the ultimate objective of zero plasterboard waste to landfill.

Notes on Targets and Objectives

1. This relates to plasterboard wastage factors on site and end of life recovery strategies and options where manufacturers have limited influence and interactions at present.
2. This target relates solely to waste plasterboard arising from original manufacture. It will be measured and reported upon by the GPDA.
3. This target relates to plasterboard waste collected from construction sites, which is then returned to manufacturers for recycling and re-incorporation into the manufacturing process. This amount **excludes** waste recovered for use in other applications – it will be measured and reported upon by the GPDA.

In order to achieve successful outcomes, the following actions will be undertaken:

Target 1

- The manufacturers will continue to work with WRAP and MTP to identify and implement solutions.
- The manufacturers will explore, with other stakeholders, opportunities to reduce waste and identify solutions for future plasterboard waste recyclable/recoverable from new construction, demolition and refurbishment activities where it is technically and economically feasible to do so.
- Alternative recovery routes to be developed for the demolition waste stream.
- While long-term the objective is to eliminate plasterboard waste from landfill, the process of transition will require sufficient landfill void to be available to accommodate the flows which will continue to exist in the short term as solutions become effective for progressively more difficult streams.

Target 2

- The manufacturers will continue efforts to reduce waste plasterboard arising from original manufacture.

Target 3

- The manufacturers will continue to develop and accelerate recycling into new board – e.g. extend to regional housebuilders, commercial contracts.
- The manufacturers will continue to work with all stakeholders to encourage the improved segregation of plasterboard waste on sites and the minimisation of volumes discarded.
- Subject to meeting the prioritisation and selection requirements from the joint WRAP/EA and industry project to develop Quality Protocols, a WRAP Quality Protocol will be developed for recovered gypsum by-product when it has been produced to a quality specification from the treatment of plasterboard waste, similar to the Quality Protocol for the Production of Aggregates.
- WRAP will support the development of alternative solutions for small and medium sized organisations (SMEs) (e.g. localised waste collection and logistic solutions).

Target 4

- The manufacturers will liaise and work with other parts of the supply chain to identify opportunities to reduce waste and landfill disposal.

The targets will be delivered taking account of the best environmental option. As such, revisions may be required over time as new evidence becomes available.

Performance against the objectives and targets will be monitored by the GPDA. Companies will report annual data to the GPDA for compilation into sub-sector totals and submitted to WRAP for annual review. The first review will be completed 12 months after signing this Agreement. This will help assess progress towards the ultimate aim of target (4), zero plasterboard waste to landfill.

ANNEX

1. Why is there a need for an industry agreement in the UK for the diversion of waste plasterboard from landfill?

1.1 Stakeholder expectations

Several major reviews of national strategy are being carried out during 2006/7, for example: Waste, Energy, Climate Change and the DTI's Sustainable Construction Strategy. Sustainability is increasingly being made explicit in the formation of Government and industry policy and procurement requirements. At the more local level, it is becoming the norm that householders recognise the need to segregate and recycle waste from their own homes. Increasingly householders also expect that the products which they buy are manufactured according to the principles of 'sustainability'.

Economic growth, while benefiting many, has the potential to have a directly proportional effect on the environment unless preventative measures are adopted.

Work sponsored by Government under the Business Resource Efficiency and Waste (BREW) programme – namely the Waste & Resources Action Programme (WRAP) and the Market Transformation Programme (MTP) – has clearly demonstrated the need for positive and recognisable action specifically in respect of waste plasterboard from construction and demolition.

1.2 Plasterboard - the construction material

While gypsum-based plasters and related building materials have been an important and valued part of good quality building systems and finishes for literally thousands of years, plasterboard itself only came into use in the last century. Plasterboard is the key component of lightweight fast-track building systems, which can be specified to perform a variety of functions which enhance the built environment. Such systems meet demanding standards for thermal and acoustic insulation, structural performance and surface finishes in almost all types of buildings.

The low cost but high performance of plasterboard has been the driver for increasing use of the material in all modern economies. In the UK in particular it is well established that the demand for and use of plasterboard is growing faster than the construction sector as a whole and that this has been the case for many years.

One of the attractions of plasterboard over traditional building finishes is that in effect it is a way of pre-fabricating part of a wall, or ceiling, reducing the need for labour and drying-time on site, which in turn both reduces the total cost of the building and enables the building to be put into use more rapidly. However the down-side of these substantial benefits is that a certain amount of waste plasterboard is generated at the building site when cutting the sheet material exactly to size to suit room dimensions and openings such as doors and windows.

Waste plasterboard from demolition is far greater in magnitude than construction waste plasterboard; it is also growing in tonnage at a rate similar to that of construction waste.

While the industry and its partners have in place successful and growing business operations to take back construction waste, manufacturers recognise that the activity must continue to accelerate. Manufacturers also recognise that additional end uses of plasterboard waste need to be established in order to deal with certain waste streams not suitable for remanufacture.

2. Underlying principles and long term objectives

Current work on defining what ‘sustainable construction’ should consist of has already been referred to. The three pillars of sustainability have been widely accepted as providing a context for decision making in matters of public policy and increasingly have been adopted in industry, namely:

- Social (people)
- Environmental
- Economic

The success of plasterboard-based building systems has been due to their ability to meet needs in each of these three categories, while their tendency to generate waste at construction and end-of-life now needs to be addressed with greater rigour in order to preserve the existing benefits for sustainability.

With this in mind the following principles and objectives would seem to be important as a foundation for continuing action to reduce waste plasterboard being sent to landfill:

- Maximise the net positive environmental impact over the life-cycle of the product
- Minimise pollution risks (air, land, water)
- Minimise waste in accordance with the waste hierarchy (reduce, re-use, recycle, recover, dispose)
- A long-term objective of zero-waste plasterboard being sent to landfill
- Maximise the use of voluntary action
- Continue to meet the needs of customers and building occupiers, with affordable high quality, high-performance, light-weight building systems and linings.

3. Agreement structure

3.1 What kind of Agreement?

At its heart this Agreement consists of a short list of targets and objectives. It will be reviewed annually so that it can be refined and improved when appropriate. It includes short term and long-term objectives.

3.2 Signatories

The Plasterboard Manufacturers Agreement draws in the three UK manufacturers - British Gypsum, Knauf Drywall, Lafarge Plasterboard – their trade association, the Gypsum Producers Development Association (GPDA) and WRAP. It has been developed in collaboration with WRAP, MTP and Defra.

3.3 A shared approach

The recent forums organised by WRAP and MTP have demonstrated how numerous are the factors, and hence the organisations, which will influence success. In time, all of these stakeholders should be given the opportunity to make a public commitment to the proposed improvements in the plasterboard sector.

Defra has indicated that it may welcome the development of a Sector Level Agreement in future. It is envisaged that this would provide the overarching objectives and targets for the plasterboard sector. Different parts of the supply chain would be encouraged to sign up to the Sector Agreement, and develop their own voluntary agreements outlining how they intend to contribute to meeting the overall aims. This could potentially include:

- House builders
- Commercial sector contractors
- Builders merchants
- Architects and specifiers
- Demolition contractors
- Dry-lining contractors
- Waste management companies
- Recycling and recovery businesses (e.g. land treatment, recycling facilities)
- Other stakeholders

The Ashdown Agreement would represent the first of such supply chain agreements.

4. **Current position and influences**

4.1 Volume flows and trends

Plasterboard essentially comprises of a gypsum core sandwiched between two layers of paper. The paper liner comprises of 90-100% recycled fibre. In the UK, all of the by-product gypsum from power stations meeting the necessary specification is used in the manufacture of plasterboard. From the beginning, therefore, the use of virgin natural resources is minimised. Under certain conditions the gypsum core of the finished product can be salvaged and reprocessed into new plasterboard meeting the required quality control requirements.

The following data summarises the main influences on volumes sent to landfill:

- Approximately 2 to 2.5 million tonnes of plasterboard is manufactured and sold in the UK annually.
- Historically, most plasterboard waste from manufacturing in the UK was landfilled, but typically 70 to 80% of this is now recycled – a major improvement which has been achieved in the past 5 years or so.
- Approximately 300,000 tonnes of plasterboard waste arises annually from new construction during the installation phase.
- The long-term growth trend for demand for plasterboard is of the order of 4 to 5% annually.
- Demolition-phase plasterboard waste currently accounts for approximately 1 million tonnes annually, but broadly speaking this can be expected to grow at roughly the same rate as demand for plasterboard itself and associated ‘new’ construction-phase waste. The fact that demolition waste is currently roughly half of present demand for new product simply reflects the level of use of the material say 30 to 40 years ago.
- Most plasterboard waste from construction and demolition is landfilled.
- In recent years the Manufacturers have invested heavily and, in partnership with others, have developed successful recycling schemes. Such operations have made a substantial contribution to diversion of construction waste plasterboard from landfill. It is estimated that in the year 2006 at least 50,000 tonnes of plasterboard waste will have been reprocessed into new plasterboard. This activity is growing annually at a rate which far outstrips the growth rate of demand for plasterboard itself.
- Manufacturers currently landfill in the order of 20,000 tonnes of plasterboard process waste annually, down from 63,600 tonnes in 2000.

4.2 Constraints

Plasterboard is a low-cost material compared to alternative building lining solutions. The logistics and costs of collection, transport, sorting, decontamination (where technically possible), and reprocessing of discarded material are not negligible. The simple economic driver of cost of recycling (or recovery) in comparison with the cost of alternatives such as landfill inevitably is the single biggest constraint. The manufacturers have therefore initially concentrated on those areas with the most favourable chance of success such as clean plasterboard waste arising from larger, well-managed construction sites.

The main influences on cost and viability of recycling and recovery operations are:

- Size of the construction development generating waste
- Distance from waste management and recycling facilities
- Presence of contamination with a potential effect on product quality and performance (product stewardship)
- Presence of contamination affecting the manufacture of new plasterboard (e.g. the presence of non-ferrous and plastic materials in even small

quantities can undermine the economics of the plasterboard manufacturing process)

- Energy (kWh/tonne), and associated carbon emissions required for recycling activities including energy for both process and transport
- the relative financial and environmental cost of alternatives such as depositing in local landfills or recovery of waste for alternative uses

When assessing the optimum means of dealing with plasterboard waste the manufacturers support the use of the ‘sustainability’ test – namely the identification of the best overall solution having regard to environmental, social and economic criteria.

All of these factors and risks are present in varying amounts according to the market sector. Therefore the relevant sectors, in approximate order of viability and attractiveness for recycling and recovery are:

- National house builders with larger building developments
- Large commercial sector contracts (hospitals, schools, public sector developments, major private sector projects)
- Regional house builders
- mid-size commercial sector contracts
- smaller house building and smaller commercial contracts
- the ‘Repair, Maintenance and Improvement’ (RMI) sector
- demolition waste (this in turn could probably also be further sub-divided in a similar manner to construction waste – larger contracts through to local, small scale operations)

In general recycling and recovery schemes managed directly by manufacturers will be most suitable for new construction waste generated at larger sites managed by major contractors. Manufacturers are nevertheless willing to work with other stakeholders such as waste management companies and local authorities in order to progressively divert waste generated in the more difficult sectors from landfill.

4.3 Other solutions

Deploying the waste hierarchy, the reduction of waste at source – e.g. by matching board size as manufactured more closely to the size when installed – does present some opportunities. However, this will only deal with the smaller waste stream of construction waste where solutions are already at least technically available for diversion from landfill. Optimising board size – or ceiling height – will have no effect on the more important, more difficult to deal with, demolition stream.

Manufacturers already offer a very wide range of board size and type - a full range is in the order of several hundred board types - but manufacturers are of course always prepared to consider customer demand for new board types and sizes.

Given that demolition waste is the major challenge, and that this material is also inherently more problematical to recycle or recover, there is potentially more scope to attack this aspect of the problem in the long term by identifying best practice in building design and construction techniques which permit easier dismantling and segregation of waste streams.

4.4 Other issues - Commercial and legal context

The manufacturers have participated willingly in all public discussions and stakeholder forums on plasterboard waste. Through the GPDA they have also held shared discussions with WRAP, MTP and BRE. It must be made explicit however that they are commercial competitors not only in the UK but worldwide. This means first that they are constrained by UK and European Union competition law, and by the normal rules and realities of business life, in what data and other information can be shared. Similarly they are also constrained in terms of the capacity to legally work on developing joint initiatives and business enterprise. Nevertheless, wherever possible they are of course prepared to work with stakeholders to address the shared problem of plasterboard waste. This Agreement is evidence of this.

5. **Key objectives and targets**

5.1 Targets and Objectives

Bearing in mind the growth in the use of plasterboard systems and the benefits they bring to sustainability, the tendency for both construction and demolition waste to grow if left unchecked, and that the factors which influence the viability of deploying aspects to 'eliminate and reduce' are at the top of the waste hierarchy in the various market sectors; recommendations can be made as to what is immediately possible and what might later be achievable provided the whole supply chain works towards it.

The short to medium term objective must be to stabilise the growth in waste board sent to landfill despite growth in demand for new plasterboard and growth in demolition arisings. Longer term the objective must be to achieve absolute reductions in waste being sent to landfill and then to work towards a zero waste result.

Therefore the manufacturers propose to work with other stakeholders to achieve the following challenging but realistic targets and objectives:

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1.	To engage with all stakeholders to undertake activities which reduce the amount of new plasterboard waste to landfill and increase recovery of all plasterboard waste.
2.	To reduce the amount of waste being sent to landfill, both monocell and co-disposal, from GB plasterboard manufacturing operations to 10,000 tonnes.

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5.2 Additional information relating to targets

- 5.2.1 It is recognized that target 1 does not set a target. Although the manufacturers are not the critical factor in waste reduction, they have a role to play in helping to identify opportunities to reduce waste. It is anticipated that once the recycling targets gain publicity, and real efforts are seen to be made, joint activity with other stakeholders will enable greater progress to be made.

To "reduce" is at the top of the waste hierarchy. In a growing market like plasterboard, a reduced waste % is required just to stand still in terms of tonnes. We don't currently have an accurate % waste figure to cover all market segments, so this will be useful to determine.

- 5.2.2 The tonnage in target 2 represents a significant reduction on volumes landfilled as recently as 2000. It is less than 0.5% of current total production.
- 5.2.3 Target 3 is challenging at 50% of new construction waste arisings. The manufacturers can process this level, the challenge will be in getting it back to their plant. In terms of infrastructure this is going to take significant effort, bearing in mind this is beyond the "quick wins" and requires working with other stakeholders to achieve collection from the more difficult repair, maintenance and improvement sector.

There are a lot of challenges with demolition waste due to its potentially contaminated nature. A target on this material needs to feature, as demolition waste is the larger fraction of total plasterboard waste. It will only be feasible with co-operation amongst stakeholders.

5.2.4 Target 4 is a meaningful statement as effort will be needed to reduce waste towards zero; annual reviews would make any failure very public if the trend was revealed to be upwards. However it is an objective that we are committed to work towards.

6. Implementation of the Agreement

In order to achieve successful outcomes, the following actions will be undertaken:

Target 1

- The manufacturers will continue to work with WRAP and MTP to identify and implement solutions.
- The manufacturers will explore, with other stakeholders, opportunities to reduce waste and identify solutions for future plasterboard waste recyclable/ recoverable from new construction, demolition and refurbishment activities where it is technically and economically feasible to do so.
- Alternative recovery routes to be developed for the demolition waste stream.
- While long-term the objective is to eliminate waste plasterboard waste from landfill, the process of transition will require sufficient landfill void to be available to accommodate the flows which will continue to exist in the short term as solutions become effective for progressively more difficult streams.

Target 2

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Target 3

- The manufacturers will continue to develop and accelerate recycling into new board – e.g. extend to regional housebuilders, commercial contracts.
- The manufacturers will continue to work with all stakeholders to encourage the improved segregation of plasterboard waste on sites and the minimisation of volumes discarded.
- Subject to meeting the prioritisation and selection requirements from the joint WRAP/EA and industry project to develop Quality Protocols, a WRAP Quality Protocol will be developed for recovered gypsum by-product when it has been produced to a quality specification from the treatment of plasterboard waste, similar to the Quality Protocol for the Production of Aggregates.
- WRAP will support the development of alternative solutions for small and medium sized organisations (SMEs) (e.g. localised waste collection and logistic solutions).

Target 4

- The manufacturers will liaise and work with other parts of the supply chain to identify opportunities to reduce waste and landfill disposal.

The targets will be delivered taking account of the best environmental option. As such, revisions may be required over time as new evidence becomes available.

Performance against the objectives and targets will be monitored by the GPDA. Companies will report annual data to the GPDA for compilation into sub-sector totals and submitted to WRAP for annual review. The first review will be completed 12 months after signing this Agreement. This will help assess progress towards the ultimate aim of target (4), zero plasterboard waste to landfill.

The agreement covers Great Britain.

7. Monitoring and Review

The success of the agreement will rely on confidence in the measurement of performance against targets.

The manufacturers, in dialogue with GPDA, will monitor their progress on an ongoing basis throughout the year in order to facilitate progress towards targets. They will maintain records of waste into and out of their sites, and waste recycled into the manufacturing system, so that an audit trail is kept in support of data.

A management procedure will be drawn up by each company, detailing procedures and responsibilities to ensure consistency.

The manufacturers will report data in confidence to the GPDA to combine into annual totals. This will help ensure confidentiality of individual company data.

The targets will be subject to annual review along with any other supply chain agreements, to ensure that these, and any future sectoral targets, remain challenging.

An annual report on progress to Defra will be produced by WRAP using information provided by GPDA, to include summary data, a synopsis of performance against targets, and the rationale for any proposed amendment to the targets or objectives. Key developments and suggestions (where not commercially confidential) that might assist with further improvements, will also be outlined in the report.