



## Safe Methods of Clamping and Moving Baled Recovered Paper – 6<sup>th</sup> December 2010

### 1. Introduction

This guidance represents what is considered to be good industrial practice, and provides advice on handling and moving baled paper products **ONLY**, using various types of mobile equipment and lifting attachments. **Note:** The guidance may not be suitable for other products or processes.

It was written by members of the CPI Recovered Paper Sector Health and Safety Advisory Committee, and contains information on good practice, that are not compulsory, but which you may find helpful in considering what you do next.

It is aimed at all those involved in the storage and movement of baled recovered paper – employers, managers, employees and contractors. It will help you to reduce the risk of serious injury caused by the movement of baled material, secure a safe workplace, and ensure operators of mobile equipment play their part in workplace safety; helping minimise specific risks from unstable loads.

### 2. Background

The Health and Safety Executive (HSE) have identified areas of concern in how site operations and the transport of products have given rise to accidents and near misses in recent years. There have been cases of fatal and major injuries resulting from the displacement of unsecured loads.

A particular issue has been raised with carrying rider bales. A ‘rider’ is a term used in the paper industry to refer to the placement of an unsecured bale of paper on top of one or more bales that have been clamped.

Published HSE guidance HSG 76 ‘Warehousing and Storage’ paragraph 395 states that *"attachments should be suitable for the task, e.g. unclamped loads should **NOT** be carried resting under **GRAVITY** on a clamped*

*load item below: this practice has led to fatal accidents."*

It is essential that all items being carried must be secured. Published guidance includes;

- Paragraph 760 of HSG 136 (Workplace Transport Safety) states that *"Operators must make sure that they have the correct securing equipment for the types of load to be carried"*.

### 3. Transporting baled recovered fibre around a site

The primary mover of baled recovered fibre is a Fork Lift Truck (FLT) fitted with a clamp, and in the majority of locations, this material is moved 2 bales at a time with each movement.

There are currently, various methods of transporting baled products around a site, and against each method there are site specific factors that must be taken into consideration (see Appendix 1). Companies will therefore need to decide, having undertaken a suitable and sufficient risk assessment and considered local circumstances, which method is the most suitable to be applied.

The risk assessment should consider the site; people; safe working load of the FLT; and the impact any attachments used for moving bales would have on this.

The purpose of this guidance is to provide companies with an assortment of preventative and protective measures to consider in your risk assessments and safe systems of work when transporting materials.

They are by no means compulsory; they are however set out in a summary of the preferred hierarchy of risk control principles, as outlined in HSG(65) *Successful health and safety management*, these are to:

- a) **Eliminate risk:** if possible avoid a risk altogether;
- b) **Combat risks:** at source by engineering controls;
- c) **Minimise residual risks:** by designing suitable systems of working, or by providing personal protective equipment (PPE).

Note: PPE should only be used as a last resort

The hierarchy reflects the fact that eliminating and controlling risks by using physical engineering controls and safeguards is more reliable than relying solely on people.

#### 4. Control Methods – Advantages and Disadvantages

The movement of bales can only be described in two dimensions, fixed and variable.

- **Fixed:** this is governed by the width of the bale chamber and the ejection chute of the baler.

- **Variable:** this is purely the length of the bale ejected by the baler and could conceivably be of any length.

These bales can be moved in one of three ways, or a combination of two.


- Single bale
- Bales transported side by side (single height)
- Bales stacked (double height), transported and secured using an extended clamp arm



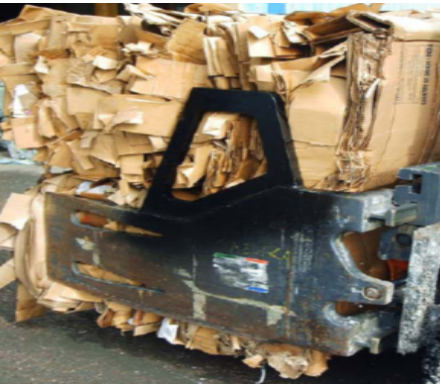
With any bale movement there are advantages and disadvantages which need to be considered and implemented on your site.


What fits one site does not mean it will safely operate in another, so these tasks need to be risk assessed and the most appropriate method of control needs to be chosen for the operation.

Appendix 1. Below, is a table of bale movements, listing some advantages & disadvantages involved in each operation. Please study these, and think about how you are operating and implement your operating procedures around the identified risk.

Appendix 1:

Activity	Potential Advantages	Potential Disadvantages
<p data-bbox="245 1218 558 1252">Movement of single bales</p> 	<ul style="list-style-type: none"> <li>• Bale secured within the clamp.</li> <li>• Increased visibility.</li> <li>• Clamp truck travels forward.</li> <li>• The driver has a direct view in the line of travel.</li> <li>• No additional cost for clamp modification</li> <li>• Bale can be secured and carried in either the fixed or variable dimension.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased clamp truck movements.</li> <li>• Slower loading/stacking times.</li> <li>• May cause operators to speed.</li> <li>• Knock-on affect to other aspects of the business, notably increased driver waiting times.</li> </ul>

<p>Movement of multiple bales in the fixed dimension (single height)</p> 	<ul style="list-style-type: none"> <li>• Bales secure in the clamp.</li> <li>• Maintain visibility with direct view in the line of travel.</li> <li>• Clamp truck travels forward.</li> <li>• Reduced clamp truck movements</li> <li>• Single height bales can be moved two at a time.</li> <li>• Bales of different length can be carried side by side.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased width of clamp truck.</li> <li>• Requires use of wider traffic routes.</li> <li>• Bales need to be turned prior to loading curtain sided trailers.</li> <li>• Additional cost for clamp modification.</li> </ul>
<p>Modify and retro-fit attachments to existing clamp arms</p>   	<ul style="list-style-type: none"> <li>• Bales secure in the clamp.</li> <li>• Bales stacked 2 high can be secured and carried one on top of the other.</li> <li>• Reduced clamp truck movements.</li> <li>• Can be used on a small site, with limited space for traffic routes.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in weight to arms will decrease the capacity of the truck.</li> <li>• Clamp truck travels in reverse.</li> <li>• Reduction in the 'Safe Working Load' (SWL)</li> <li>• Addition cost to modify fleet</li> <li>• Not all trucks maybe suitable for clamp modification</li> <li>• Bales need to be turned prior to loading curtain sided trailers.</li> <li>• Bales have to be carried in the fixed dimension, otherwise carried at a single height.</li> </ul>

		
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**Note:** If there is any doubt about the load stability or safety, including the driver’s ability to see where they are going, then carry only **one** bale at a time.

**5. Engineering Controls Examples**

- The risk of loads falling from a truck may be reduced by the use of a suitable attachment, e.g. fork extensions or barrel clamps. In all cases, it is recommended that you consult the manufacturer or authorised dealer of the truck about the suitability of the attachments for a particular truck.
- Finding a suitable attachment that can be adapted to suit the needs of all materials maybe difficult, however technology is forever advancing and companies should continue to work with their manufacturers and suppliers to find a suitable solution.
- Fitting an attachment, such as a clamp and including a side shift will affect the capacity of the truck. Reducing the truck capacity is called de-rating. De-rating should be carried out by the truck manufacturer or an authorised dealer. The truck, when fitted with an attachment, must have a rating plate specifying the capacity of the truck when fitted with the attachment. Note the capacity marked on the attachment is not always the same as the combined capacity of the truck and the attachment.
- In all circumstances where additional loads or attachments are fitted to a FLT, de-rating of the overall Safe Working Load of the truck should be made by a competent person (under LOLER 1998). All attachments are considered lifting accessories and

should be thoroughly examined every 6 months or at lesser intervals determined by the Competent Person.

**6. General Controls**

- Everyone involved in the task must be trained and competent in order to understand clearly how it must be done safely. The person or company in control of the task must ensure that safe systems of work are adopted and procedures followed at all times.
- Vehicle movement in the workplace requires careful and constant management to control and reduce the likelihood of accidents. You will need to ensure that the site, the vehicles being used, and the people working with you and around mobile equipment are all effectively managed to control transport risks.

**8. Monitoring and Auditing**

Periodic auditing of this guidance should be carried out to monitor compliance.

**For further information on workplace transport visit the HSE website**

<http://www.hse.gov.uk/workplacetransport/index.htm>

Other sources of reference material –

Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998  
<http://www.hse.gov.uk/pubns/priced/l22.pdf>

Safe use of lifting equipment. Lifting  
Operations and Lifting Equipment Regulations  
1998.

<http://www.hse.gov.uk/pubns/priced/loler.pdf>

Workplace health, safety and welfare.  
Workplace (Health, Safety and Welfare)  
Regulations 1992.

<http://www.hse.gov.uk/pubns/priced/l24.pdf>

Warehouse and storage HSG 76 –

<http://www.hse.gov.uk/pubns/priced/hsg76.pdf>

Safety in working with lift trucks HSG 6 – free  
download

<http://www.hse.gov.uk/pubns/priced/hsg6.pdf>

Rider-operated lift trucks: Operator training

<http://www.hse.gov.uk/pubns/priced/l117.pdf>

Five steps to risk assessment

<http://www.hse.gov.uk/pubns/indg163.pdf>