Road Haulage
of Round Timber

Code of Practice

Road haulage:
“a strength in the British timber supply chain.”
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General Information

This Code provides a general statement of the legal and technical issues relating to the haulage of round timber in the United Kingdom. The Code has no legal status. Whilst every care has been taken in the preparation of the code, the Code is not intended to be exhaustive, nor can it provide the detail necessary to give guidance to any specific problems.
This Code has been recognised and welcomed by the...

- Association of Chief Police Officers of England, Wales and Northern Ireland
- Association of Chief Police Officers of Scotland
- Vehicle Inspectorate
- Department for Transport
- Health and Safety Executive

The constituent bodies of the Roundwood Haulage Working Party;

- Forestry Contracting Association
- Forestry Commission
- Forestry & Timber Association
- United Kingdom Forest Products Association

This Code is primarily written for those directly involved, or who have an interest in the transportation of timber and management of timber haulage.
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8. **Bibliography**
The Code is not a ‘stand alone’ document. It does not cover basic aspects of Large Goods Vehicle (LGV) driving or Department for Transport standards (DfT), nor does it comprehensively cover health & safety within timber haulage. Therefore, co-reading is advised of the following publications:

- **Drivers’ Handbook** -
  Freight Transport Association (FTA) (www.fta.co.uk)
  Road Haulage Association (RHA) (www.rha.net)

- **Managing Health and Safety in Forestry**
  (www.open.gov.uk/hse/hsehome.htm)

- **Managing Public Safety on Harvesting Sites (FASTCo Booklet)**

- **Code of Practice - Safety of Loads on Vehicles (DfT)**

All sectors of the transport chain have individual responsibilities for ensuring that this Code of Practice is adhered to.
1 Introduction

1.1. Background

The safe and efficient transport of timber is crucial to sustaining and expanding Britain’s forest industry.

Road transport is the single most important mode of timber transport and over 90% of all timber arrives at processing plants by lorry. Timber transport costs represent a substantial part of industry's raw material costs and have a major influence on the sector's overall competitiveness. Developing an efficient timber transport system is therefore crucial to the future success of the forest industry.

Road haulage will remain the dominant mode of timber transportation. Even for rail and waterway modes the first leg of the journey out of the forest will normally need to be by lorry.

Developing the necessary infrastructure for timber transport in Great Britain represents a challenge. The volume of timber produced annually from British forests is forecast to rise from the current 9 million cubic metres to 15 million cubic metres by 2020. Specific issues to be addressed include:

- Ensuring safe and efficient timber transport
- Targeted upgrading of roads used for timber transport
- Minimising the impact of timber transport on local communities
- Investing more in facilities to allow increased use of rail and sea transport
- Minimising the effect on the overall competitiveness of the industry due to current vehicle regulations and taxation policy

The forest industry has risen to the challenge. In the past few years many actions have been undertaken to remove barriers in timber transport, and this work will continue over the coming years. One of the most significant achievements to date has been the establishment of basic standards for road
haulage. A Code of Practice was published in 1996 and revised 1998. We hope that this revised and developed Code will lead to further improvements in timber transport.

1.2. The Aim

The aim is a state where the efficiency, safety and environmental standards of timber transport are enhanced to increase the competitiveness of the industry.

The actions expected to lead to the preferred state are:

- Allocation of sufficient resources for haulage related health and safety to secure safe operations for the drivers as well as for other road users
- Significant Research and Development efforts to improve productivity and reduce costs for road haulage
- Lobbying to change existing regulations on vehicle size and use of fuel
- Introduction of logistic control systems for better navigation, improved communication and reduced empty driving. These systems also add value to the entire timber supply chain by facilitating better management
- Encouragement of schemes to reduce turnaround times at mills by avoiding queuing and by streamlining unloading activities
- Targeted infrastructure investments to improve haulage conditions at processing facilities, railheads and ports
- Co-operation with Regional and Local Authorities to direct timber traffic to the most appropriate roads
- Work with local communities to explore and resolve timber traffic problems
- Continuous improvement of the environmental standard of timber transport
## 2 Vehicle Specifications

### 2.1 Specifications for Timber Transport Vehicles

An overview of different vehicle types and their specifications is presented on page (4&5). This information is based on the Road Vehicle (Construction and Use) Regulations 1986 - SI 1986 No. 1078.

**Explanation:**

**A** = Distance between the rear axle of the lorry and the front axle of the trailer is not less than 3m.

**B** = 2 axle tractor unit and 2 axle trailer, the tractor unit does not exceed 18,000kg, the trailer axle weights do not exceed 20,000kg in total and the drive axle is fitted with twin tyres and road friendly suspension.

**C** = Axle weight of each drive axle does not exceed 10,500kg, each trailer axle has road friendly suspension, each vehicle in the combination has at least 3 axles and EITHER each drive axle is fitted with twin tyres and road friendly suspension OR each drive axle which is not a steering axle is fitted with twin tyres and the axle weight does not exceed 8,500kg.

**D** = Complies with (c) and the tractor unit is fitted with a Euro II or Euro III emission standard low pollution engine.

### MAXIMUM WEIGHTS FOR ARTICS AND DRAWBAR COMBINATIONS

<table>
<thead>
<tr>
<th>VEHICLE TYPE</th>
<th>NUMBER OF AXLES</th>
<th>MAXIMUM WEIGHT (KG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulated vehicle</td>
<td>3</td>
<td>26,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer</td>
<td>3</td>
<td>22,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer A</td>
<td>3</td>
<td>26,000</td>
</tr>
<tr>
<td>Articulated vehicle</td>
<td>4</td>
<td>36,000</td>
</tr>
<tr>
<td>Articulated vehicle B</td>
<td>4</td>
<td>38,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer</td>
<td>4</td>
<td>30,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer A</td>
<td>4</td>
<td>36,000</td>
</tr>
<tr>
<td>Articulated vehicle</td>
<td>5 or more</td>
<td>40,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer</td>
<td>5 or more</td>
<td>34,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer A</td>
<td>5 or more</td>
<td>40,000</td>
</tr>
<tr>
<td>Articulated vehicle C</td>
<td>6 or more</td>
<td>41,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer A/C</td>
<td>6 or more</td>
<td>41,000</td>
</tr>
<tr>
<td>Articulated vehicle D</td>
<td>6 or more</td>
<td>44,000</td>
</tr>
<tr>
<td>Rigid lorry + trailer A/D</td>
<td>6 or more</td>
<td>44,000</td>
</tr>
</tbody>
</table>
### Maximum Weights for Rigid Vans

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Number of Axles</th>
<th>Maximum Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid motor vehicle</td>
<td>2</td>
<td>18,000</td>
</tr>
<tr>
<td>Drawbar trailer (excluding centre axle trailer)</td>
<td>2</td>
<td>18,000</td>
</tr>
<tr>
<td>Drawbar trailer (excluding centre axle trailer)</td>
<td>3 or more</td>
<td>24,000</td>
</tr>
<tr>
<td>Rigid motor vehicle A</td>
<td>3</td>
<td>25,000</td>
</tr>
<tr>
<td>Rigid motor vehicle A</td>
<td>4 or more</td>
<td>30,000</td>
</tr>
<tr>
<td>Rigid motor vehicle A</td>
<td>4 or more</td>
<td>32,000</td>
</tr>
</tbody>
</table>

### Maximum Lengths for Artics

- **A** 15.5m
- **B** 16.5m if kingpin to rear of trailer does not exceed 12m and no part of the trailer is outside 2.04m radius in front of the kingpin.

### Maximum Length for Drawbar Combinations

18m OR 18.75m if:

- **A** maximum total load deck length is 15.65m,
- **B** the distance from the front of the motor vehicle’s loadspace to the rear of the trailer does not exceed 16.4m.
### OVERHANGING LOAD RESTRICTIONS

<table>
<thead>
<tr>
<th>PROJECTION</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 m</td>
<td>No marking.</td>
</tr>
<tr>
<td>&gt; 1m but not exceeding 2m</td>
<td>Clearly marked with piece of rag for example.</td>
</tr>
<tr>
<td>&gt; 2m but not exceeding 3.05m</td>
<td>Approved end marker board indirectly illuminated at night.</td>
</tr>
<tr>
<td>&gt; 3.05m</td>
<td>Approved side and end marker boards indirectly illuminated at night, police notification and attendant carried in lorry.</td>
</tr>
</tbody>
</table>
It is the responsibility of the landowner and forestry works manager, together with the vehicle operator, to agree the vehicle configuration, design and specification suitable for the work.

2.2 Load Weighing Devices

The legal requirement for vehicle and axle weights to be restricted is absolute, in that there is no doubt when an offence has occurred. The method of assessing vehicle and axle weight by the Traffic inspectors and Police is generally to use weighbridges. The law allows a defence against penalty for a weight offence on the grounds that the vehicle was proceeding to the nearest available weighbridge. Owing to the dispersed nature of the forestry industry in the UK, travelling to the 'nearest available weighbridge' is not always practicable and, if during that travelling the vehicle is overweight, damage is taking place to both forest and public roads.

All road vehicles used in the transportation of roundwood on forest and public roads within the United Kingdom must have available a weighing device which, from the point of loading within the forest, indicates Gross Vehicle Weight or load weight. This can be on the vehicle or on the machine loading the vehicle. A document recording this information must be provided. Operators will provide this record on reasonable request to the Landowner, Police, Department for Transport, Health and Safety Executive and mill personnel. Hauliers will not be engaged unless they have access to this equipment.

A number of manufacturers provide load cells for haulage vehicles or devices for fitting to loaders, which can provide an approximate record of the vehicle, gross weight or load, and some also provide an axle weight record. There are also available mobile weighbridges of varying types that provide similar information.
2.3 Overloading (Vehicles)

Overloaded vehicles can impact on road safety and can cause road damage.

- All parties responsible within the supply chain have a duty to monitor compliance with Gross Vehicle Weights
- Hauliers must be notified when prescribed weight limits have been exceeded
- Payment for any load should be restricted to the legal capacity of the vehicle
- A penalty system should be decided for non-compliance

In order to monitor a Haulier’s compliance with Gross Vehicle Weights a sample of weight tickets is recommended. This is in recognition of the limitations of weighing devices.

Remember:
1. Use the correct vehicle configuration for the forest road
2. Overloading damages roads
3. Continually monitor GVWs
3 Roads Network

3.1 Forest Roads

Forest roads are normally single track with passing places. They are also normally waterbound roads, i.e. they do not have a bituminous surfacing. Because of this construction, forest roads are more susceptible to surface effects (e.g. potholing, corrugations etc.) than bituminous roads. They are also inherently susceptible to frost heave and therefore prone to serious damage if used when the frost is coming out.

The Landowner is responsible for:

- Providing a safe means of site access and egress.
- Providing a forest access road capable of safely carrying vehicles of a configuration agreed before haulage contracts commence.
- Providing a map, either directly, or through the Forestry Work Manager to the Haulier detailing any hazards and restrictions which could affect haulage.

The Landowner should:

- Ensure the forest road has an adequate running width, passing places and is well maintained.
- Providing a map, either directly, or through the Forestry Work Manager to the Haulier detailing limitations of the site recommended routes for Large Goods Vehicles.

New forest roads should be designed to take account of a presumed loading and other factors based upon vehicle specifications. A reasonable design specification would take into account:

1. **Loading**  Based on the current Construction & Use Regulations covering maximum normal size of vehicle

2. **Width**  Based on single track of about 3200 - 3500mm, but with extra width where required to account for harvesting facilities
3. Gradient    Generally limited to 10% except in particular circumstances for limited lengths

4. Bends      Minimum bend radius with appropriate bend widening, and perhaps restricted gradients

A major factor will always be the material to be used for the construction of the road. Any deficiencies in the material can usually be allowed for in the design.

It is well known that roads are weak when wet. This is particularly true of waterbound roads in comparison with roads that are surfaced with a bituminous material. All users of forest roads have an interest in making sure that water is able to get away from the road structure. This is best achieved by ensuring that:

- Drains remain free flowing
- Culverts are not blocked
- Harvesting operations do not bring mud and detritus onto the road allowing water to pond and seep into the road structure
- Harvesting machines do not damage the road surface allowing a route for water ingress
- The use of traction aids is limited on forest roads
- Rutting is dealt with at a stage before it seriously contributes to water retention
Some of this is very difficult at any time of the year, but particularly so in winter. All parties have an interest in the road sustaining the load. Operations that incur damage should be treated as an abuse of the road.

3.2 Overloading (Road Damage)

A particular aspect of abuse of any road is overloading. The table and graph below are indicative of the increased damage due to overloading of a 3+3 combination that can legally operate at 44 tonnes GVW.

<table>
<thead>
<tr>
<th>Gross Vehicle Weight (Tonnes)</th>
<th>Damaging effect increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>46</td>
<td>22</td>
</tr>
<tr>
<td>48</td>
<td>47</td>
</tr>
<tr>
<td>50</td>
<td>76</td>
</tr>
<tr>
<td>54</td>
<td>149</td>
</tr>
</tbody>
</table>

Any increase in loading above that which has been accounted for in the road design can thus have a very significant effect. A particular instance of this is the practice of lifting axles to increase the traction of the drive axle(s). Not only can this lead to significant overloading of the other axles, perhaps outwith the vehicle design limits, but it can also lead to damage increases well above the
figures quoted above. It is in the interest of all parties to work together to make sure that there is no need for the Driver to even consider lifting an axle.

### 3.3 Roadside Facilities

Although the main function of a forest road is to allow passage, it also acts as an interface with the timber extraction and stacking operation. Timber has to be brought to the roadside for loading onto vehicles. Due to the width and structure of a normal forest road, this will usually require the provision of some roadside facilities. The provision and number of these will depend on the rate and method of extraction. This should be agreed so that any construction work is done before felling and extraction starts. Roadside facilities can help towards safe extraction, stacking and loading of timber while protecting the road structure and could include:

- Additional tracks to keep harvesting machines off the road if possible
- Ramps to allow safe access to felling site
- Stacking/loading places on clear, flat ground
- Trailer parking bays
- Skyline bases
- Silt traps and other environmental controls to avoid damage/pollution
- Adequate turning area(s) for lorries
- A one-way system to minimise reversing (if possible)
- Passing Places
- Parking places for site personnel
Proper consideration of roadside facilities can ease the safe and efficient loading of stacked timber.

Timber should be stacked at a safe distance from the road, but still easily accessible for the lorry.

The height of the stack should be determined by the Site Risk Assessment, taking into account the length and size of produce, terrain and other factors.

Stacks should be on even ground where possible, or on bearers if soft ground could cause stack collapse.

Stacks should not restrict the drainage of surface water.

Stacks should be free of stones, branches and any rubbish.
3.4 Road Defect Reporting

As forest roads are subject to heavier use than was the case in the past, the issue of road defects assumes a higher profile. However, there should be some understanding about what constitutes a (defect). Waterbound roads, by the nature of their construction, are subject to potholing, rutting and corrugations, as well as accumulations of loose material. This is neither unusual nor a defect as such, but a normal occurrence. However, as the nature of these occurrences worsens, they will become, at the very least, a hindrance to the operations taking place and to other road users. In the circumstances, agreed intervention limits may well be appropriate. Other defects / damage should be considered on their merits.

It is the responsibility of all users to report defects early, i.e. before the defect has become sufficiently serious to render further use of the road unsafe.

The main participants in a harvesting operation should consider instituting a road defect reporting system when the contract is being drawn up. The procedure must make clear:

- To whom/where a report must be lodged
- The information required
- The response mechanism
- The various responsibilities, i.e. of Landowner, Forestry Work Manager, Contractor and Subcontractor

It is important to note that the above does not mean that a road will receive an immediate repair, but does implement a system whereby the road repair can be assessed and promptly effected. In some instances the Landowner may reserve the right to close the road, or provide an alternative route. See appendix 2
3.5 Agreed Routes

The provision and upkeep of an adequate rural road infrastructure is the responsibility of Local Authorities.

The condition and strength of public roads in rural areas is variable. The forest industry has liaised with various Local Authorities to discuss which roads to use for the transport of timber from the forests to the main public roads. This has led to a system of agreed routes being set up in many areas. The purpose behind this process is to address road and environmental damage, community and safety issues, and to enable Local Authorities to target their resources.

The lack of an existing scheme in the area to be harvested should not preclude communication between interested parties to obtain consensus on an agreed or preferred route for the proposed contract.

Hauliers should be made aware of the existence of Agreed Routes and should use them wherever they exist.
3.6 Extraction & Stockpiling of Timber

Hazards to timber haulage should be taken into consideration in the harvesting site plan, and controls stated in the risk assessment procedure. Key extraction points onto the forest road should be located to reduce risks to both extraction and haulage. The identified hazards must be clearly described in the site plan and site safety rules delivered to the Haulier and Drivers.

Extracted timber must be stacked into safe stacks to ease the process of loading to the lorry. The following guidelines should be used:

- The timber should be stacked at a safe distance from the road, but still easily accessible for the lorry
- The height of the stack should not exceed 2.0 metres from the road surface, unless specifically covered by risk assessment
- Designated passing points and turning places should not be obstructed by timber, vehicles or equipment
- The stack face on to the road edge should be flush, the profile line should not have steep slopes.
- Ideally, the stacks should be placed on even ground and not between growing trees, stones etc.
- If the ground is not hard and there is a risk of the stack collapsing, bearers should be used under the pile.
- The stacks should be free from branches, stones and other material.
- Stacks should not restrict the movement of drainage water.
- Stacks on an incline should be positioned to facilitate loading with the lorry facing downhill.
- Stacks should be sited so as not to obstruct sightlines around corners in the road.

**Remember:**
1. Use agreed routes
2. Avoid road abuse
3. Report road defects
4. Plan your loading site
5. Stack timber safely
6. Issue site safety rules to drivers
4  Loading Timber

4.1 Safety

4.1.1 The Safety of Members of the Public
To ensure the safety of the public, signage and, where necessary, barriers may be appropriate. See Appendix 1 for an extract from the FASTCo Booklet. A reversing warning signal should also be considered, for example when vehicles have to reverse in areas of high recreational use.

4.1.2 The Safety of Drivers
Drivers should comply with the site safety rules, which should specify appropriate Personal Protective Equipment to be worn. A procedure for lone-working should be in operation. If independent loading is taking place the site safety rules should specify where the vehicle driver should be while loading timber.

4.1.3 Safety During Vehicle Recovery
There have been a number of accidents during the recovery of lorries that have become bogged down or left the road. Recovery operations are high risk. There must be a specific risk assessment and everyone involved in vehicle recovery must be trained and have the correct equipment.
4.1.4 Load Shedding and Overturning

The Haulier must ensure that the timber has been properly loaded and that adequate load restraint equipment is used. Maintaining speeds appropriate to the road conditions will reduce the likelihood of shedding a load.

The Haulier should:

- Drive appropriately for weather and road conditions
- Avoid uneven loading of the vehicle
- Observe Gross Vehicle Weights

4.1.5 Collision

Several actions will contribute to minimizing the risk of collisions. The Landowner and Forestry Work Manager should:

- Make the Haulier aware of other road users expected during the period the lorry will be in the forest
- Where possible, select routes to minimise the risk of collision with other road users. For example, use of one-way systems
- Ensure adequate operational signage is in place
- Ensure, where practicable, good visibility and sightlines around corners in the road etc.
- Ensure stacks of timber are positioned so as not to compromise sightlines
- Ensure that an adequate number of passing places are available

The Haulier should:

- Adhere to speed limits set by the Landowner
- Park vehicles so they do not hinder site activities and the use of the road
- Drive according to the prevailing conditions
- Be aware of other road users

4.1.6 Adverse Weather

Bad weather conditions can be a contributing factor to traffic accidents. The Landowner and Forestry Work Manager are responsible for deciding whether the roads should be closed due to extremes of weather. To limit the likelihood of needing to close roads, where practicable work should be scheduled for the
seasons with ‘better’ weather. The roads can be treated with grit or sand if necessary, but not salt. However, the final decision on whether the road is safe to use or not rests with the Driver.

4.2 Safe Loading

It is important that vehicles are loaded safely to avoid injury to the operator, a member of the public or other third party.

- Drivers must comply with the site safety rules
- Personal Protective Equipment must be used as defined in the site safety rules
- Training / instruction and monitoring of the driver must be carried out to ensure safe practice during loading operations
- Adequate signage should be in place during the loading operation to warn others of the hazards
- Compliance with the site safety rules should be monitored
- The loader and associated equipment must comply with and be maintained to minimise the possibility of failure (see Lifting Operations and Lifting Equipment Regulations (LOLER) & Provision and Use of Work Equipment Regulations (PUWER) Legislation)
- Leave stacks safe after loading has taken place
- Remove branches and other detritus from the load prior to moving
- The haulier must ensure all operators are aware of the maximum loads of each piece of equipment.
- Where trailers are left in the forest for subsequent loading the landing legs on the trailer should be positioned on a suitable bearer.
- Stacks must be left safe after loading
Several factors may present hazards during loading operations and driving within the forest. These include the following:

4.2.1 Power Lines

These are a particular hazard for vehicles when moving, but especially during loading due to the associated elevation of the loader arm potentially presenting a point for electricity to (earth). Site planning by the Landowner and Forestry Work Manager is particularly important in this respect to ensure areas designated for loading are a safe distance from power lines. The Landowner must ensure signage is in place indicating the position of power lines, and the maximum height of equipment that can pass safely under lines must be clearly marked. Goalposts are used where a power line is located within the harvesting site (see FASTCo Booklet: ‘Electricity at Work - Forestry and Arboriculture’ and FASTCo Guide No. 804). Signage and goalposts must be maintained throughout the period of operations. Where civil engineering works alter road levels, ensure that safe clearances are maintained.

Drivers must not move off unless the lorry loader is properly parked.

4.2.2 Road Failure

Road inspection and defect reporting are the first steps in minimizing failure. These can be seen as the responsibility of all parties. During the loading operation several factors for which the Haulier is directly responsible need to be considered:

- Correct loading of the vehicle. Uneven loading of the Large Goods Vehicle will increase the ground pressure of certain axles and increase the load on specific points rather than equalize the load over all axles
- Where required, load-spreaders should be used under outriggers to reduce damage
- The position of the vehicle on the road. Where practicable, the vehicle should be positioned away from the edges of the road, as on waterbound forest roads the edges of the road are not mechanically restrained to the same extent as in bituminous roads and are therefore more likely to fail.
4.3 Security of Loads

The legal requirements for load restraint are contained in the Road Vehicles (Construction and Use) Regulations and the Road Traffic Acts.

The Department for Transport (DfT) issues advice in a Code of Practice (October 2002) on the Safe Loading of Vehicles and the relevant advice includes the following points;

4.3.1 Headboards

- Where headboards are fitted as part of load restraint systems these should be properly maintained
- The height of the headboard should be sufficient to obstruct forward movement of the load
- Where headboards are not fitted there is a need for positive restraints to prevent forward movement of the full load

4.3.2 Straps & Anchorage Points

- The load restraint system must be sufficient to withstand a force not less than the total weight forwards, so as to prevent the load moving under severe braking and half of the weight backwards and sideways
- It is essential that timber is not loaded to a height, or in such a way, as to result in the likelihood of either the vehicle or load becoming unstable
- Whenever possible the load should be placed against the headboard or similar fixed restraint
- The use of chains or webbing lashings (load straps) is recommended (i.e. not rope)
In calculating the number of load straps required for a particular application, although the load strap may be rated at 5 tonnes breaking strain, it will have a Rated Assembly Strength (RAS) of 2.5 tonnes. This RAS should be used in calculations.

Load and load straps must be checked before passing from forest road to public road, and during the journey if necessary.

4.3.3 Transverse Loading

Industry research and the incidence of shed loads have clearly shown that the practice of transverse (cross) loading is potentially hazardous.

Timber stacked transversely across a flat bed vehicle cannot be adequately secured by conventional restraint methods. If timber is carried transversely then suitable side gates must be used. The load should not be higher than the side gates.

Passing straps or chains from the front of the vehicle across the top of the timber to the rear with cross straps is not considered to be an acceptable load securing method.
4.3.4 Longitudinal Loading

- Each outer log must be restrained by at least two upright supports. Logs shorter than the distance between two uprights should be placed in the interior of the load.

- The upright supports should be of sufficient strength to prevent the load spreading them apart.

- Where logs are supported by only two uprights the ends of the outer logs should extend at least 300mm (12 inches) beyond the uprights.

- Logs should preferably be laid top to tail alternately so as to ensure an even balance of the load.

- For debarked roundwood and for any timber judged to be slippery, at least two load straps per bay are required.

- Load straps must be secured to the vehicle frame and tensioned by a suitable device.

- The centre of either top outside log must be no higher than the outside logs to crown the load and enable it to be properly tensioned by the load straps.
4.3.5 General Advice:

- Load the vehicle so as to ease unloading at the delivery point, e.g. correct clearance between pins, bays not interlocking etc.

- Check the height of the loaded vehicle to make sure that it will pass under any obstruction likely to be met en route

- Headboards (where fitted), bolsters and uprights must be securely fixed to the vehicle frame

- Pins and bolsters should be fit for the purpose, and should not spread beyond the width of the trailer when loaded

- Loose bolsters must not be used

- Inspect and maintain all load securing equipment

- The vehicle operator is responsible for providing suitable load securing equipment for each load carried and for ensuring that Drivers / Loading staff are competent and trained in its use

- The Driver is responsible at all times for checking that the load is secure
4.4 Prevention of Water and Ground Pollution

The influence of transport on the environment is well documented and the forest industry is striving to reduce the environmental impact of the transport chain. Drivers must be made aware of the consequences of fuel or oil spillage, and who to contact in the event of a pollution incident. All vehicles should have a pollution control kit.

The Forestry Commission 'Forests and Water Guidelines' is the accepted standard for all work in the forest which could affect water quality. The recommendations in the document are used in risk assessment and are referred to in many contracts. Drivers should be aware of them and be in no doubt as to the action that they will take if there is any accidental breach of the Guidelines and there is a danger of pollution of watercourses. The penalties that can be imposed by the Environment Agency (for England and Wales), and the Scottish Environmental Protection Agency are severe. Adhering to the Water Guidelines is a good defence in the event of an incident.

The loading site should be cleaned immediately after the operations are finished. No rubbish should be left at the work site.

Remember:
1. Secure your load
2. Carry a pollution control kit and know how to use it
3. Be aware of hazards
5 Transporting Timber

5.1 Route Planning

5.1.1 General Principles

The following principles are expected to be taken into consideration by Hauliers and Drivers, as well as those who engage hauliers and logistics managers:

The best route should be selected with regard to length, time, safety, community issues and road restrictions. Route planning to minimise empty driving, e.g. back-loading. Overlapping transport operations are reduced by co-operation. This can be achieved through open dialogue between all parties involved.

Road Limitations and Restrictions

Road specifications and maintenance requirements may lead to restrictions in Gross Vehicle Weights. However, other road limitations exist and these relate to how easily the road can be driven, such as gradients, bends, narrow sections, bridges, culverts etc. These all have a direct impact on speed, therefore this information must be made available to the Haulier and Driver.

It is recommended that the expected ‘performance’ of the road be discussed prior to use and agreed contractual arrangements put in place to pre-empt damage occurring, e.g. use of agreed routes.
5.2 Driving Issues

5.2.1 Safe Driving

The Haulier is responsible for providing Drivers with adequate information, instruction and training and for monitoring Driver behaviour, as well as ensuring, along with the Driver, the safe condition and road worthiness of the vehicle.

A comprehensive collection of the information relating to safe driving can be found in the Freight Transport Association or Road Haulage Association ‘Drivers’ Handbook’ (www.fta.co.uk).

The Well Driven Scheme and Good Lorry Code are examples of the haulage industryís schemes to demonstrate good practice.

Fuel-efficient driving is an economic and environmental issue closely related to safe and courteous driving. There are a variety of sources available for training and information about economical driving.

Remember:

1. Plan your route
2. Drive carefully ñ be safe, economical and courteous
3. Respect the Community
6 Unloading Timber

The requirements for unloading timber depend on unloading method and site arrangements at processing plants, ports or railheads. The following general requirements will be complemented by site-specific instructions.

The unloading site should have visible rules and/or a copy of the rules should be obtained by hauliers, before their Drivers proceed to the unloading site. Usually the site rules specify:

- Use of Personal Protective Equipment
- Safety distances and risk factors
- Stacking instructions
- Restrictions on staying in the cab during unloading and policy on passengers and pets
- Speed limits and other restrictions on vehicle movements
- Smoking policy
- Responsibilities

The site access, internal layout and exit should be well designed and easy for the Driver to follow, including for instance:

- Clear signage
- A site plan (sign and/or map) with marked access to assistance, risk zones, first aid points, fire-fighting equipment etc.
- A clear driving route and unloading area with limited risk of conflicting operations
The Driver and other persons involved in the unloading operation should wear high visibility clothing, hard hat and protective boots. Other Personal Protective Equipment should be used as defined in the site-specific rules.

- Drivers must comply with the individual mill rules and work to the Site Operator’s instructions at all times.
- Compliance with rules and instructions should be monitored and penalties enforced.
- Both Site Operator and Haulier are responsible for having an accident or damage reporting procedure.
- The loader should be positioned for safe and efficient unloading.
- Stabilisers must always be used when unloading with a vehicle-mounted loader.
- Repositioning of the loader and stowage of pins and bolsters should be done carefully and all fixings should be checked before leaving.
- The vehicle should be swept clean of all debris, in the designated area.
- Drivers unloading their own vehicles must leave stacks as instructed.
- Mill operatives must be properly trained to unload vehicles safely and avoid damage.
Unloading requires verifiable load documents. There must be a system in place which provides the Drivers with a Delivery Advice Note before leaving the forest. The Drivers should have a record available to indicate the loaded weight at any point of the journey. When unloaded, he should receive a weigh ticket or receipt that displays the load weight.

Remember:
1. Comply with site rules
2. Unload safely
3. Have the correct paperwork
7 Improving Roundwood Haulage

7.1 Continuous Improvement and Co-operation

The Timber Transport Forum should provide the necessary co-operation across the industry for continuous improvement and co-operation. The Roundwood Haulage Working Party is the appropriate body to advise the TTF on the technical issues involved in continuous improvement and co-operation within timber haulage.

The cornerstone of a Haulier-employer relationship is regular development discussions. These can include agreement and follow up of measures and targets.

7.2 Research & Development Activities

Co-ordination of R&D activities on haulage of roundwood are mainly be the responsibility of the Timber Transport Forum. Active bodies in research and development of roundwood transport include (alphabetically):

- Forestry Civil Engineering
- Forestry Commission
- United Kingdom Forest Products Association
- Forestry Contracting Association
- Forestry and Timber Association
- Health and Safety Executive
- Individual companies and partnerships involved in timber haulage
- Scottish Forest Industries Cluster
- Transport Research Laboratory
- Universities, especially Birmingham and Nottingham
7.3 Training

A wide body of organisations carries out the training of drivers for Large Goods Vehicle licences across the private sector. There is little organised training for loader operation in the movement of round timber, but generic loader operation is covered by the Construction Industry Training Board (CITB).

Training for vehicle operation and in particular loader handling is becoming essential in roundwood haulage. The active co-operation of Government and the Development Agencies in partnership with the industry is essential.

The involvement of the industry training body, The Timber Industry and Trees Industry Sector Group within Lantra, and the certification organisation, National Proficiency Tests Council (NPTC), along with the existing expertise of the CITB will provide a platform for development of standards.

7.4 Information

There is a need for a more co-ordinated approach in information dissemination. The Timber Transport Forum will be the co-ordinating body. (www.forestryscotland.com/timber-transport)
Appendix 1

Do not climb on timber stacks

Warning Forest Operations

Please obey all signs & directions

No unauthorised persons allowed beyond this point

Forest Work Manager’s responsibility

Land owner’s responsibility

Haulier’s responsibility

Diversion Signs

Parking available

No Parking

Main road

forestry road

informal path

haulage route

new route

lay-by

flash tape

timber stack

physical barrier
# Example Road Defect Report

**Notification/Requirements**

| Forest | ......................... |

**Tel:**

**Fax:**

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**Detail of requirement/repair**

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**Urgency**

Enter ‘IMM’ if part of contracted commitment or shared access, if not enter H/M/L

**Preferred date for completion**

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## BIBLIOGRAPHY & Useful websites

<table>
<thead>
<tr>
<th>Resource</th>
<th>Website/Association</th>
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<tbody>
<tr>
<td>Drivers Handbook</td>
<td>Freight Transport Association <a href="http://www.fta.co.uk">www.fta.co.uk</a></td>
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<tr>
<td></td>
<td>Road Haulage Association <a href="http://www.rha.net">www.rha.net</a></td>
</tr>
<tr>
<td>Managing Health &amp; Safety in Forestry</td>
<td><a href="http://www.open.gov.uk/hse/hsehome.htu">www.open.gov.uk/hse/hsehome.htu</a></td>
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<tr>
<td>Managing Public Safety on Harvesting Sites</td>
<td>(FASTCo Booklet)</td>
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<tr>
<td>Code of Practice - Safety of Loads on Vehicles</td>
<td>Department for Transport <a href="http://www.dft.gov.uk">www.dft.gov.uk</a></td>
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<td>Electricity at Work</td>
<td>(FASTCo Booklet)</td>
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