Purpose of Report

1. To advise Committee regarding the consequences of Government proposals for increasing the maximum permitted weight of lorries on roads.

Main Report

2. Following the publication of the Integrated Transport White Paper, the Government asked the Commission for Integrated Transport (CfIT) to advise on whether maximum lorry weights should be increased to 44 tonnes. The CfIT has now published its interim findings.

3. This interim report states that the introduction of 44 tonne lorries will generate efficiency savings, leading to a small net reduction in lorry mileage, and produce environmental benefits. These conclusions are supported by wide consultation conducted by the Commission including hearings with key witnesses. In detail it is anticipated that:
   - traffic levels could be cut by around 100 million vehicle-kilometres per year
   - there would be approximately 1,000 fewer lorries on the roads than would otherwise be the case
   - there would be annual savings of 80,000 - 100,000 tonnes of CO₂ emissions

4. The possible drawbacks of 44 tonne lorries include vehicles travelling increased distances and the diversion of freight from rail to road. While the CfIT has been unable to examine possible longer term changes in logistics patterns, that study shows that the savings in mileage and environmental benefits are likely to outweigh effects from increased lorry mileage and the loss of some rail freight.

5. As a result of these findings, the CfIT are minded to recommend to government that the maximum permitted lorry weight be increased to 44 tonnes. This, however, should not be introduced before the Government has acted to ensure that:
   - all 44 tonne lorries meet Euro II emissions standards
   - there is more enforcement activity and better resourcing of enforcement
   - measures are introduced to strengthen rail freight

The Shadow Strategic Rail Authority has been asked to examine how rail freight can be strengthened and to come up with proposals within 6 months.

Comment

6. 44 tonne lorries are the same size and shape as existing articulated lorries with six axles; they are simply permitted to carry heavier loads. Lorries carrying dense goods such as metals or liquids will tend to reach the current weight limit before they are physically full. At the moment, many lorries are travelling at their weight limit but with some unfilled space inside.
Permitting lorries to operate up to 44 tonnes allows the capacity of vehicles to be used more efficiently and ultimately will mean fewer lorry trips to carry the same weight of goods. This will have benefits for the environment, congestion and economic efficiency. It is important to note that the safety features and minimum braking distances of such lorries are unaffected by operating at 44 tonnes.

The introduction of 44 tonne lorries was first recommended in the Armitage Report published in 1980. Such vehicles are no bigger than existing lorries, but are simply permitted to carry heavier loads.

The only type of lorry being considered to run at 44 tonnes has six axles (three on the tractor unit, three on the trailer), road-friendly suspension and 10.5 tonne drive axle weights. Six axle 44 tonne lorries have been allowed to operate within the UK under certain conditions relating to combined road/rail operations since 1994. Such vehicles meet the same minimum braking and maximum noise requirements as current articulated lorries as well as being the same size. Correctly loaded they would cause less road wear than existing five axle vehicles with a gross weight of 40 tonnes which have been allowed since January 1999. Indeed the wear and tear would be the same as that resulting from lorries with a gross weight of 38 tonnes, which was the maximum weight permitted up to the end of 1998.

Table 1 attached gives details of the types of lorry/trailer combinations which have been considered in the CfIT study.

The wear to roads and bridges caused by a vehicle depends upon how its gross weight is spread via the axles to the road surface. It is the weight on each axle, rather than the gross weight, that determines wear. Road wear is approximately proportional to the weight of an axle raised to its fourth power. Thus, an 11.5 tonne axle causes about 45% more road wear than a 10.5 tonne axle. Road wear is reduced by spreading loads evenly and avoiding heavy individual axles. On this basis, a fully laden 44 tonne articulated vehicle with six axles (3 on the tractor and 3 on the semi-trailer, referred to as 3+3) and a 10.5 tonne drive axle weight limit causes the same road wear as the 38 tonne, 5 axle vehicles (2+3) which were the heaviest allowed generally up to the end of 1998. It causes considerably less road wear that the 40 tonne, 5 axle (2+3), 11.5 tonne drive axle, vehicles that have been allowed generally since January 1999.

Although the argument is made that a 44 tonne vehicle would cause less wear and tear than the 40 tonne vehicles which are currently permitted, it should be noted that the damage caused to road surfaces by any fully laden heavy goods vehicle is 10,000-15,000 times the wear caused by a private car! Thus a road carrying 100 fully laden trucks per day is receiving the same loading as a road carrying one and a half million cars per day! With the preponderance of distribution centres, mineral workings and road/rail terminals in North Lanarkshire, it is therefore not surprising that the condition of our roads is deteriorating.

Recommendation

The CfIT report is an interim statement and so there are no specific implications for the Council at present. Nevertheless, because of the existing levels of wear and tear on roads and bridges in North Lanarkshire and the potential implications for the interests of North Lanarkshire regarding rail freight operations, it is considered important to draw the CfIT report to the attention of Committee.

David M. Porch
DIRECTOR OF PLANNING AND ENVIRONMENT

28 March 2000

For further information please contact Grahame Lawson on 01236 616202.
<table>
<thead>
<tr>
<th>Lorries discussed in paper</th>
<th>gross tonnage</th>
<th>no of axles</th>
<th>max axle weight</th>
<th>commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38</td>
<td>5</td>
<td>10.5t</td>
<td>Maximum general weight limit up to 1 January 1999. Limit previously raised from 32 to 38 tonnes in 1983.</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>5</td>
<td>11.5t</td>
<td>Maximum general weight limit since 1 January 1999, aligned with EU weight limit for international movements.</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>6</td>
<td>10.5t</td>
<td>Maximum limit for six axle vehicles since 1 January 1999. Additional axle weighs 1 tonne therefore same payload as 40 tonne, 5 axle vehicles but more road friendly. Cannot operate over 40 tonnes in some EU countries and extra axle means one tonne less payload than a 5 axle vehicle at 40 tonnes.</td>
</tr>
<tr>
<td></td>
<td>44</td>
<td>6</td>
<td>10.5t</td>
<td>3 tonnes extra payload compared to 40 tonne/5 axle and 41 tonne/6 axle vehicles. Allowed since 1994 only for combined road/rail transport.</td>
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