

Freight Study Call for Evidence
National Infrastructure Commission

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Timber Transport Forum Response to UK NIC Freight Study Call for Evidence

Please find below some background to the structure, context and work of the Timber Transport Forum, followed by responses to some of the questions set out in the call for evidence.

The Timber Transport Forum would be happy to provide further information as required.

The Timber Transport Forum

The [Timber Transport Forum](#)ⁱ is a voluntary partnership organisation set up in 2000 to address the issues raised by timber transport in Great Britain. The Forum includes representatives of the forestry and timber industries, the local roads authorities and various national agencies and organisations, including Forestry Commission England, Forestry Commission Scotland and Transport Scotland (freight).

Forestry and Timber Transport

The UK forest area has expanded substantially since the 1950s with much of the expansion in Scotland the north of England and Wales. The area of woodland in the UK at 31 March 2017 is estimated to be 3.17 million hectares. This represents 13% of the total land area in the UK, 10% in England, 15% in Wales, 18% in Scotland and 8% in Northern Ireland. Seven thousand hectares of new woodland were created in the UK in 2016-17.

In some local authorities, such as Dumfries & Galloway and Argyll, forest cover is around 30%.

The rate of growth of the forest industry is significant, for example, timber production from Scotland's forests has grown from 1m tonnes /yr in 1976 to over 7.5m tonnes/yr today. It is forecast to increase to 10m tonnes/yr by 2030.

11.0 million green tonnes of UK roundwood (softwood and hardwood) were delivered to primary wood processors and others in 2016, representing a 2% increase from the previous year.

A substantial processing industry has grown around this resource which feeds around 50? large processors including sawmills, board mills, pulp mills, and various biomass fuel processors throughout rural UK and many smaller processors.

In Scotland alone , a [recent economic evaluation](#)ⁱⁱ gave an industry value of £1bn GVA and employment of 25,000 jobs.

The Forum's own analysis funded by the Roads Maintenance Research Board estimates that timber comes onto the public road network from Scottish forests at around 3000 places, mostly in upland, rural Scotland and often onto the minor road network of council-managed, B, C and Unclassified roads. Many of these roads have minimum structure, drainage and geometry dating from the early 20th century.

A similar situation is found in the uplands of the north of England and Wales. Moving several millions of tonnes of timber each year on standard 44 tonne lorries (27 tonne load) across this minor road network can have impacts on the fabric, structure and drainage of the roads, and on neighbours, communities and other road users.

To keep this impact to a minimum the Forum promotes the following voluntary measures:

- [Agreed Routes Map](#)ⁱⁱⁱ. The Agreed Routes Map covers Scotland and north England and includes over 10,000km of B, C and U class roads. It sets out the hierarchy of roads for use timber traffic. The categories are:
 - Agreed Routes: Used for timber haulage without restriction as regulated by the Road Traffic Act 1988. A-roads are classified as Agreed Routes by default unless covered by one of the other TTG classifications below.
 - Consultation Routes: Recognised as key to timber extraction but which are not up to Agreed Route standard. Consultation with Local Authority is required and it may be necessary to agree limits of timing, allowable tonnage etc. before the route can be used. B-roads and minor roads are classified as Consultation Routes by default unless covered by one of the other TTG classifications below.
 - Severely Restricted Routes: Not normally to be used for timber transport in their present condition. These routes are close to being Excluded Routes. Consultation with the Local Authority is required to achieve an agreed management regime to avoid land-locking of timber.
 - Excluded Routes: Should not be used for timber transport in their present condition. These routes are either formally restricted, or are close to being formally restricted, to protect

the network from damaging loads. Consultation with the Local Authority is required to explore alternatives.

The majority are categorised as 'consultation routes' and this prompts those involved in the harvesting and transport of timber to consult the local roads/highways authority (councils) to discuss the transport and agree appropriate voluntary management of the road and/or the traffic to minimise impacts on the road and disruption to other road users thereby sustaining the road network.

- [Timber Transport Groups](#)^{iv}. There are 10 timber transport groups covering 10 rural councils. The groups are a parallel local partnership of industry and roads authority representatives meet 2-3 times a year to establish good communications, discuss timber transport issues, highlight any concerns that have been raised and propose any changes to agreed routes maps or suggest traffic management measures that may be appropriate. Most of the groups, and the GB Forum, are supported by part time project officers.
- [Good Practice](#)^v. The Forum produces good practice guidance covering safe loading, load security, agreed routes, consultation with local roads authorities and other stakeholders and managing timber operations close to public roads. We have also produced technical guidance on lower impact lorry technologies which can help to reduce the impact of heavy lorries on the road structure. Some of the groups produce their own local good practice guidance and [protocols](#)^{vi}.

Within the context of these voluntary measures and subject to the voluntary implementation of the Agreed Routes Map process, the forest and timber industries presume the right to use the unrestricted public road network for timber transport. There is no such voluntary arrangement in place for other rural industries using the minor road network (whisky, agriculture, fishing, fish farming, quarrying, construction, wholesale etc.). Similarly, the voluntary partnership does not limit the council's statutory powers, as roads/highways authority, to restrict traffic on the public road to protect the road network where necessary.

This voluntary partnership is effective and has enabled the expansion of the timber industry over the last two decades adding value to our forest resource and helping this 'carbon positive' industry become a major driver in rural development and employment.

The voluntary partnership has also sustained the local roads networks without investing the huge resources needed to fully upgrade the infrastructure to suit modern haulage vehicles.

However, this approach obviously impacts on the efficiency of the supply chain and the tonnage that can be hauled daily.

Rural Road Infrastructure

The Forum recognises that the development of the rural road network has not kept pace with changing forest cover, despite its long-term nature. The Forum regularly presents information to councils and national governments on medium to long term timber transport requirements. We proposed, and support the continuation of, the Scottish Government's [Strategic Timber Transport Fund](#)^{vii} and the associated scheme which provides national co-finance to public road improvements and other projects to reduce the impact of timber traffic. This fund has been running for 12 years and has contributed over £26 million to projects worth over £50m.

The Forum supported and welcomed Northumberland County Council's successful bid for rural challenge funding for rural road improvements in 2017.

We recognise that there remains a significant gap between the demands of our land use and the infrastructure that serves it.

For example, Audit Scotland's [report on road maintenance](#) last year showed that the condition of local roads in rural Scotland is poor; on average around 60% are in good condition and in some areas this figure is much less. Even those in good condition may not be suitable for haulage from large scale timber operations. There are not the resources to maintain local road infrastructure at a reasonable level for timber transport, let alone invest in much -needed modernisation for 21st century land uses and businesses.

The Forum encourages local and national government to take account of the infrastructure requirements of modern rural land use and is working with other rural sectors to make the case for a step change in rural transport infrastructure investment to ensure economic opportunities for people throughout rural UK.

In the meantime the forest and timber industries (unlike any other rural industry) continue to take voluntary measures to manage timber transport.

However there is a limit to what such measures can achieve especially with rising volumes of timber freight and deteriorating minor roads. Limited freight capacity of rural roads is already taking a toll on the efficiency of the supply chain.

Sea and rail transport of timber

Transport by sea as a way of taking timber traffic off rural roads has been a major development in recent years. The [Timberlink service](#)^{viii} is a public service contract operating under an EU derogation for peninsulas that

supports the shipping of timber from forests in Argyll to timber processors in Ayrshire. The support from the Strategic Timber Transport Fund pays the additional cost of haulage by sea rather than by road. However, the first leg of haulage from the forest to the harbour is by road.

The fund has also supported the use of floating piers and the development of a landing craft to transport timber from islands and from coastal forests distant from trunk roads or processors. In a handful of cases this obviates the need for local road haulage.

Rail haulage is used to serve one major wood processor in north Wales bringing timber directly into the yard from various sites across England and Wales. In most cases however the scope for a shift from road to rail is limited by the limited access to the peripheral rail network and the relatively large catchments of forest. There are a few places from which rail haulage could help shift concentrations of timber from fragile roads but again the cost of creating efficient new access and established freight paths on single tracked stretches of the network means these are proving challenging to establish.

Where there is a road haulage option this is usually significantly cheaper. The state aid approved mechanisms to support a mode shift to sea or rail transport would appear not to be suited to the scale and nature of forestry operation as uptake of these grants has been limited. The Forum is currently reviewing this subject and will offer suggestions for a review of coastal shipping support mechanisms in due course. Barriers to modal shift are various and were highlighted in the Forum's response to the Scottish Parliament's Infrastructure and Capital Investment Committee [Inquiry into freight transport in Scotland](#)^{ix}.

Critically, however, modal shift will rarely diminish the need for initial road haulage from the forest and in non coastal parts of the country coastal shipping would not offer a viable or sensible alternative to road haulage operations.

Responses to the Questions

1. What are the key constraints to the effective and efficient movement of freight in the UK and what can be done to overcome them?

For the home grown timber industry perspective, the main constraint is the very limited freight capacity of both rural trunk roads and the local rural road network which provides access to most rural land uses and land-based businesses. The forest resource is generally in the rural uplands on the periphery of all infrastructure networks. The processors are located within these catchments. Neither can relocate to better infrastructure provisioned sites. Many of the minor roads serving forests are singletrack with passing places with very limited capacity for modern 44 tonne trucks. Even the local A roads are rarely up to modern standards for single carriageway roads and rural trunk routes to markets remain mostly long distances on aged, poor standard, single carriageway roads.

- 1.1. What do you see as the key drivers to a successful freight system that is fit for the future?

Modern well-engineered local roads. Most freight km are on local roads not trunk roads and these need modernisation if we are going to have any impact on overall freight efficiency.

- 1.2. Which are the key freight corridors that matter the most? Where are the bottlenecks in the freight network, and what investments in upgrades could deliver the best value for money for freight efficiency and UK plc?

For rural land uses and industries it is not main corridors or bottlenecks that are the issue it is the limited strength, geometry and freight capacity of the minor road network and peripheral rural trunk roads.

- 1.3. To what extent are the economic benefits of freight factored into wider transport infrastructure investment planning?

Rarely in rural areas. Current investment appraisal models simply will never support rural road investment on any scale. Unless there is a deliberate policy agenda it will not happen.

- 1.4. What are the regulatory and legal issues that, if changed, could improve freight efficiency without increasing costs or reducing efficiency?

Better integration of rural land use policies into strategic freight planning. Given the length and condition of rural road networks it will be very difficult for significant modernisation to take place without national funding.

2. How might the demand for freight develop and change over the next 20-30 years?

2.1. How has the demand for freight, and types of freight, changed over the last two decades, and what will be the drivers for changes in the future?

The timber freight tonnage has doubled in the last 20 years and will continue to grow by 50% again over the coming decade. We can only shift 11mt/yr using modern HGvs and this requires a modernisation of the local minor roads serving forested areas as well as improving capacity of the rural trunk roads. While moves towards electric and more autonomous freight vehicles may increase core route efficiencies it may leave the rural areas, relatively speaking, even less competitive driving further disparities between urban central economies and the rural periphery.

2.2. How is the freight industry planning for future changes in the demand? What levers might be available to shape future demand for freight transport?

3. What effects does congestion have on the efficiency of freight movement and emissions?

It is not just motorway and major road congestion that limits efficiency. Single carriageway rural trunk roads quickly become over capacity in terms of overtaking etc. leaving rural traffic with ever longer journey times. Rural road fuel efficiency is already much less than dual carriageway and motorway figures.

3.1. How does congestion impact upon the productivity and economic contribution of freight? To what extent does congestion affect changes to mode, time or other freight choices?

Rural freight haulage rarely has mode options as access to ports and railheads is also constrained by limited and aged infrastructure. Ferry freight capacity is limited and can create bottlenecks.

3.2. How does congestion affect the environmental impacts of the movement of freight?

3.3. With limited space for new infrastructure, how can we better use our existing urban network to support freight? Are there changes – such as changes to modes, methods, or delivery times - that could help reduce the stress on the urban transport network?

Remember rural haulage – most haulage is rural!

3. How can freight lower its carbon and air quality impacts?

4.1. Are there efficiencies within freight management and distribution practices that could help reduce the CO₂ and NO_x emissions from freight?

Not always with rural freight where there is less opportunity for back loads and improved logistics. Improved road infrastructure will reduce emissions.

The home grown forest and timber resource is the only carbon sink in our carbon budgets and the timber industry has the benefit of being effectively carbon positive and providing material for sustainable low carbon housing. However it does require the modernisation of rural transport infrastructure.

4.2. What role do alternative fuels such as electricity, Liquid Petroleum Gas and biofuels have to play? What are the barriers and challenges to wide-scale uptake of alternatives to diesel and what could be done to help remove these issues?

Major investment and countrywide distribution of new power technologies. There is little point making the core roads electric if the local roads are not also supported.

4.3. What technologies could best and most realistically be utilised to manage the carbon impacts of freight, both within urban areas and on longer strategic journeys?

5. How could new technologies be utilised to increase the efficiency and productivity of UK freight?

5.1. How will new technologies change the capacity and performance of the freight transport network? Over what timeframes might these new technologies begin to affect the freight transport network?

Our concern is that unless these new technologies are distributed across the whole country they will increase disparity between a more efficient central distribution network and a relatively even more disadvantaged rural periphery.

5.2. How can the use of data such as real-time traffic information by artificial intelligence and machine learning systems help to improve freight efficiency and productivity? How might this affect the business models and requirements of freight in the future? Are there any barriers to the greater use of data in freight?

Even mobile phone coverage is limited across much of rural GB let alone data coverage and the modern 4G or even 5G networks required..

5.3. How do you see technologies such as HGV platooning, digital railway signalling, and autonomous vehicles being integrated into freight distribution?

5.4. How might regulations and physical infrastructure need to adapt to new technologies and business models in the freight sector?

Land based industries cannot move to the centre. We need improved physical freight infrastructure across the length and breadth of the UK.

6. Are there good examples internationally of freight systems, policy, infrastructure or technology development and implementation that the UK can learn from to increase freight efficiency and/or reduce the carbon and congestion impacts?

i <http://timbertransportforum.org.uk/>

ii <http://timbertransportforum.org.uk/attachments/article/123/economic-contribution-forestry-2015.pdf>

iii

<https://timbertf.maps.arcgis.com/apps/webappviewer/index.html?id=cd6737077f1044728a121c8e311d781f>

iv <http://timbertransportforum.org.uk/groups>

v <http://timbertransportforum.org.uk/work/good-practice>

vi

<http://timbertransportforum.org.uk/attachments/article/87/STTTG%20Timber%20Transport%20Protocol%202013.pdf>

vii <http://scotland.forestry.gov.uk/supporting/forest-industries/timber-transport/strategic-timber-transport-fund>

viii

<http://timbertransportforum.org.uk/attachments/article/118/FCS%20Publication%202014%20Case%20Study%20Timberlink.pdf>

ix

<http://timbertransportforum.org.uk/attachments/article/123/Scottish%20Parliament%20Enquiry%20Freight%20Infrastructure%202015.pdf>