RAIL FREIGHT GROUP
WRITTEN SUBMISSION

A. EXECUTIVE SUMMARY

The Rail Freight Group (RFG) – which represents users and suppliers of rail freight throughout Britain – welcomes the opportunity to contribute to the ICI Committee Inquiry into freight transport in Scotland. RFG has previously engaged with the Committee as part of the National Planning Framework 3 (NPF3) process, in which both parties expressed concern about the NPF3 treatment of rail freight. We offer some general comments on the role of rail freight (Section B), followed by consideration of key themes suggested by the Committee insofar as these relate to rail freight (Section C).

Rail freight provides a reliable and resilient mode of transport, with a strong role in the bulk and intermodal (container) markets serving Scotland. Rail inherently cannot be as ubiquitous as road haulage, but for big-volume and/or long-haul flows it can offer significant commercial, economic, energy, environmental and safety advantages.

Rail’s ability to compete for traffic depends on a number of factors, including the availability of suitable route and terminal infrastructure (partly determined by government investment) and whether the terms of competition with other modes are fair, with regard to a variety of relevant government policies. It has been a longstanding objective of Scottish Government policy to encourage freight modal shift from road to more sustainable modes, including rail, and this aim is shared at the European, UK, regional and local levels of government.

1. Main infrastructure and policy obstacles to the free flow of rail freight in Scotland

While road hauliers benefit from the ubiquity of dual-lane trunk roads, there are significant infrastructure capacity pinch points on the rail network, notably insufficient long overtaking loops on key double-track routes, and inadequate quantum and length of crossing loops on largely single-track routes such as Perth-Inverness and Aberdeen-Inverness.

By contrast to the widespread provision of generous structure height clearances for trucks on the Scottish trunk road network, the rail system is a patchwork of varying capability to handle the modern generation of containers. Key routes with ‘loading gauge’ pinch points include Coatbridge / Mossend / Grangemouth to Aberdeen and Inverness.

As noted above, government policies are critical in determining rail freight’s ability to compete for traffic against road and sea transport. RFG highlights examples of the absence of a level playing field with competing modes, including failure of planning policies.
2. How Scotland’s rail freight routes to the rest of the UK, to Europe and worldwide can be improved

Key improvements required are:

- providing sufficient long loops (of up to 775m length) to allow 125 mph passenger trains to overtake 75mph freight trains on the East Coast and West Coast Main Lines
- a simple redesign of the layout – to include the replacement of 1960s’ vintage road-rail transfer cranes – at Coatbridge Freightliner Terminal, Scotland’s multi-user rail terminal serving as both ‘inland port’ and domestic hub for cross-border traffic
- possible government pump-priming of a direct Scotland to mainland Europe container train.

3. How the Scottish Government can structure its freight grant schemes to support the switch of freight to more sustainable modes of transport

The Scottish Government needs to consider how it can restructure and more widely promote its Freight Facilities Grant and Mode Shift Revenue Support schemes – which are based on the environmental benefits of mode switch from road to rail – to reflect the trading realities of the current business environment and logistics supply chain trends.

In England, the Department of Business, Innovation & Skills administers the ‘Regional Growth Fund’, which has supported three rail freight terminal developments, on the basis of the economic benefits which these would generate. Scotland needs to keep up with such changes elsewhere if we are to remain competitive.

Grant aid could also assist the development of innovative methods for handling rail freight, not least on peripheral routes, using potential lower-cost solutions such as the ‘Non-Intrusive Crossover’ and the light-weight ‘Freight Multiple Unit’ or ‘TruckTrain’.

RFG is concerned that the €200k grant aid award to DFDS / Forth Ports in respect of the Rosyth-Zeebrugge freight ferry – a direct competitor for rail freight – appears to have been made on the basis of a different (and less exacting) set of rules for sea compared to rail.

4. EU initiatives which could provide further opportunities for Scottish rail freight

It is suggested that the scope for EU assistance for rail freight projects be pursued more vigorously – in terms of both (a) route infrastructure capacity and capability, and (b) terminal capacity and capability. Scottish Government should also review the scope for a greater advocacy role to encourage businesses to consider rail.
5. How the freight industry can contribute to greenhouse gas emissions reduction

Research has demonstrated clearly that, for equivalent transits, rail offers very substantial greenhouse gas advantages over road – typically one third of that generated by trucks.

6. Policy changes, or infrastructure improvements, required to increase the flow of goods through Scotland’s major rail freight hubs

While acknowledging the crucial role of ports, RFG also wishes to see similar importance attached to the role of Scotland’s major rail freight hubs at Coatbridge, Grangemouth and Mossend – which together generate an equivalent volume of container traffic to Scotland’s largest container port at Grangemouth. Key enhancements required are:

- redesign and upgrade of facilities at Coatbridge Freightliner Terminal
- extension and upgrading of capacity at Mossend EuroCentral Terminal
- planning permission for the Mossend International Railfreight Park
- improved ‘loading gauge’ clearance to the Grangemouth railheads
- enhanced freight capacity on the East Coast Main Line.

B. THE ROLE OF RAIL FREIGHT

Rail freight provides a reliable and resilient mode of transport, with a strong role in the following markets serving Scotland:

- domestic bulk – such as coal, oil, cement, industrial minerals and waste
- domestic intermodal (containers) – notably supermarket supplies
- Deep Sea intermodal (containers) – export and import traffic to and from Britain’s five main Deep Sea ports

It also has untapped potential (of which, more later) to serve European intermodal markets – including export and import traffic through the Channel Tunnel.

Rail’s overall share of the freight transport market is between 7% and 10% (depending on the unit of measurement), but as high as 35% at key Deep Sea ports and up to 90% at coal-fired power stations, for example.

Rail freight’s technical characteristics – steel wheel on steel rail, a guided track and a segregated and signalled right of way – allow low ‘line-haul’ costs for long hauls and/or big volumes. A single bulk train can haul a payload of up to 1,500 tonnes, while a container train can convey 72 Twenty Foot Equivalent Units – generally less than a ship, but the equivalent of around 50 HGVs. Rail is much faster and more reliable than shipping and is not vulnerable to sea weather conditions, nor to growing congestion at major continental ports such as Rotterdam.

Rail inherently cannot be as ubiquitous as road haulage, but for big-volume and/or long-haul flows it can offer significant commercial, economic, energy, environmental and safety advantages – and being land-based, can generally penetrate much closer to final destinations than shipping, thereby reducing damaging road miles.
Rail freight’s ability to compete for traffic on specific Scottish and Anglo-Scottish corridors depends on a number of factors:

- the underlying economics of specific flows (in particular in terms of volume and/or haul length) in relation to rail’s low line-haul costs but high fixed costs
- the quality of service offered by rail, in particular its reliability
- the availability of suitable route infrastructure (partly determined by government investment)
- the availability of suitable terminal infrastructure (partly determined by government investment)
- whether the terms of competition with other modes are fair, with regard to government policies on strategic planning, regulatory intervention, taxation, infrastructure investment, grant aid, etc.

Rail freight plays an important part in helping to realise four of the five high-level objectives set out in Scotland’s National Transport Strategy (2006), namely: promote economic growth; protect our environment and improve health; improve safety; and improve integration. It also contributes to the Scottish Government’s core aim of sustainable economic growth and to four of the five Strategic Objectives set out by the Scottish Government – namely Wealthier and Fairer, Healthier, Safer, and Stronger and Greener.

It has been a longstanding objective of Scottish Government policy to encourage freight modal shift from road to more sustainable modes, including rail, and this objective is shared at the European, UK, regional and local levels of government.

C. KEY INQUIRY THEMES

1. Main infrastructure and policy obstacles to the free flow of rail freight in Scotland

Infrastructure: The key elements of rail route infrastructure relate to (a) capacity – including the ability to accommodate the longest and most cost-effective (up to 775m long) trains, and (b) capability – in particular ‘loading gauge’ of sufficient height and width for the modern generation of tall containers through tunnels and overbridges.

While road hauliers benefit from the ubiquity of dual-lane trunk roads, there are significant capacity pinch points on the rail network, notably;

- insufficient long overtaking loops (of up to 775m length) to allow 125 mph passenger trains to overtake 75mph freight trains on the East Coast and West Coast Main Lines
- insufficient long overtaking loops – and remaining single-track sections at Perth and Montrose/Usan – on the Coatbridge/Grangemouth/Mossend-Aberdeen trunk route
- inadequate quantum and length of crossing loops on the largely single-track Perth-Inverness railway (to allow trains travelling in opposite directions to pass each other), restricting freight trains to just 20 containers instead of the 28 containers which could otherwise be hauled – and the competitive
disadvantage from single-track operation will increase enormously should the A9 be fully dualled in line with Scottish Government plans

- inadequate quantum and length of crossing loops on the single-track Aberdeen-Inverness railway – a competitive disadvantage which will increase enormously should the A96 be fully dualled in line with Scottish Government plans
- inadequate length of crossing loops, and speed-restricted structures, on the single-track West Highland Line from Glasgow to Fort William.

By contrast to the widespread provision of generous structure height clearances for trucks on the Scottish trunk road network, the rail system – as illustrated by the Network Rail map in the Appendix on Page 10 – is a patchwork of varying capability to handle the modern generation of containers. While low-deck wagons can allow taller containers to be accommodated on otherwise constrained routes, this limits flexibility compared to infrastructure solutions such as lowering track and raising bridges – and in any event Scottish Government has not shown interest in funding low-deck wagons as a partial solution to this problem. Excluding works currently in progress, key routes with loading gauge pinch points include:

- the trunk route from Coatbridge / Mossend to Grangemouth
- the trunk route from Coatbridge / Mossend / Grangemouth to Aberdeen
- the trunk route from Coatbridge / Mossend / Grangemouth to Inverness
- the Aberdeen-Inverness line, in particular between Elgin and Inverness.

**Electrification** of rail routes to Aberdeen and Inverness would increase the potential for rail freight to capture more traffic through the competitive benefits of faster transits, heavier payloads and better utilisation of locomotives and wagons.

**Policy:** As noted above, government policies are critical in determining rail freight’s ability to compete for traffic against road and sea transport. RFG wishes to highlight five key examples to illustrate the absence of a level playing field with competing modes.

We have long been concerned over the **unequal treatment of rail and road on the Perth-Inverness corridor**, symbolised by the planned £3bn expenditure on full dualling of the A9 but a maximum of just £600m earmarked for the still predominantly single-track Highland Main Line. The road and rail investment appraisal processes are being undertaken entirely separately, without consideration of how a balanced package of road and rail developments might best meet public policy objectives, as well as securing best value for money. Equally, there has been no analysis of the extent to which road improvements will lead to modal shift of freight from rail to road – the opposite of Government policy. A lengthy correspondence between RFG and Transport Scotland (including the Freedom of Information process and an appeal to the Scottish Information Commissioner) failed to produce any evidence that Transport Scotland had undertaken any ‘cross-modal’ analysis of the costs and benefits of a road/rail package, for example based on dualling only the busier sections of the A9 – from Aviemore to Inverness and Blair Atholl to Perth – while substantially extending double track on the railway and electrifying the route throughout.
The Perth-Inverness corridor provides another example of a lack of a level playing field. The Scottish Government’s decision to increase the A9 HGV speed limit to 50mph on single-carriageway sections took no account of the extent to which this could put rail freight at a competitive disadvantage – and no explanation was given as to why this decision was taken after the A9 Safety Group’s research concluded that retaining the 40 mph lorry speed limit was “the safest option”.

RFG engaged with the ICI Committee in early 2014 with regard to the NPF3 process and its imbalanced treatment of rail and sea freight – a criticism endorsed by the Committee in its submission to Government. The final NPF3 endorsed three sea freight National Developments (one of which is clearly speculative) but none for rail freight, despite RFG’s proposed National Development scoring as highly (against mandatory and optional criteria) as two of the sea freight developments – a decision which we described as “illogical, inconsistent and unfair treatment of two competing modes of transport.” Our conclusion from this highly unsatisfactory episode is that sea freight interests must have begun strongly lobbying the Scottish Government at a very early stage of the process, positioning its commercial interests as being in line with public policy objectives. Rail freight has not engaged in heavy political lobbying, since this has been felt to be inappropriate where policy making is intended to be based on the rational analysis of evidence.

Local planning policies can also have a major impact on rail freight prospects. Dundee is one of the largest cities in Britain with no rail freight facilities, and indeed there are none anywhere on Tayside. Ideally, rail would be reconnected to Dundee docks, providing a tri-modal (rail, sea and road) facility, which could assist the city to attract oil platform decommissioning work. But in any event there is an alternative low-cost start-up rail location available at nearby Dundee West sidings – which unfortunately has not found favour to date with city planners, in our view mistakenly, due to concerns about noise, traffic and visual impacts. Road haulage has unconstrained access to Dundee, but rail freight cannot get established without either substantial investment at the docks or a more rail-friendly approach in local planning policy.

Rail’s economics are optimised where at least one end of the through transit has direct rail connection, and this underscores the importance of strategic protection for rail-connectable sites. Consideration of rail access must be undertaken at a sufficiently early stage of industrial site development planning, since past experience shows that trying to retro-fit rail facilities when these have not been ‘passively’ planned within the overall development footprint can be expensive or indeed impossible – as rail access is more constrained, eg in terms of curvature, than is the case with road haulage. The recent granting of planning consent by Highland Council for a major expansion of the Dalcross Norboard plant – without any requirement for passive provision for future rail access – is a case in point.

2. How Scotland’s rail freight routes to the rest of the UK, to Europe and worldwide can be improved

Scotland’s key rail freight routes to the rest of the UK, to Europe and worldwide, are the East Coast and West Coast Main Lines. As noted above, there are insufficient long loops (of up to 775m length) to allow 125 mph passenger trains to overtake
75mph freight trains on the East Coast and West Coast Main Lines – and this reduces the number of timetabled ‘paths’ available for freight traffic.

With regard to ‘worldwide’ (Deep Sea) traffic, while rail already has a very significant market share of export/import traffic from and to Scotland, its capacity is constrained by the current layout and limited capability of the road-rail transfer cranes at Coatbridge Freightliner Terminal, Scotland’s multi-user rail terminal serving as both ‘inland port’ and domestic hub for cross-border traffic. These cranes date from the 1960s and 1970s – and their potential replacement by modern equipment has to date been constrained by (a) tight margins in the highly competitive intermodal business and the difficulty of securing long-term customer contracts in the current climate, and (b) the rules governing the Scottish Government’s Freight Facilities Grant scheme (see 3 below).

When the Channel Tunnel was opened in 1994, there were high hopes for the development of through intermodal (container) rail services from the new Mossend EuroCentral terminal to mainland European destinations, but these were frustrated by a bureaucratic marketing structure and excessive charges for freight use of the Tunnel. Recently, EuroTunnel has substantially reduced transit charges for freight trains through the Tunnel, and the increased cost of shipping from Scotland as a result of the introduction of the EU Sulphur Emissions Control Area (SECA) on the North Sea and English Channel from 1st January 2015 is also prompting renewed interest in the rail alternative. However, while a through container train from Scotland to key destinations such as Paris (a 700-mile haul) is likely to be a straightforward commercial proposition in the medium and long term, the early period of a possible direct European service might need pump-priming from the public sector. Unfortunately, the Scottish Government’s ‘Mode Shift Revenue Support’ (MSRS) grant scheme is based on retrospective payment of grant, leaving either the rail operator or a logistics ‘aggregator’ company to take all the risk up-front. In contrast, the Scottish Government’s recent €200k revenue subsidy award to DFDS / Forth Ports in respect of the Rosyth-Zeebrugge freight ferry was made up-front as opposed to retrospectively (see Section 3 below).

Rail access to mainland Europe can be developed through a number of routes, not just the Channel Tunnel – for example by train services to key container ports on Tees-side and Humberside. Route capacity on the East Coast Main Line (see above and (vi) below) is therefore a key factor in enhancing transport for Scottish exports, as well as domestic trade.

3. How the Scottish Government can structure its freight grant schemes to support the switch of freight to more sustainable modes of transport

It was noted above that competitive circumstances and the rules of the Freight Facilities Grant (FFG) scheme have constrained the modernisation of facilities at Coatbridge Freightliner Terminal, Scotland’s inland port and cross-border domestic hub. And yet with minimal redesign and upgrade with 21st century equipment, this terminal could double its capacity and efficiency, cut costs for existing customers, improve Scottish exporters’ access to markets, and reduce emissions.
Unfortunately, after the economic down-turn, manufacturers / processors have been reluctant to commit their traffic to long (eg 5-year) rail contracts – but the Scottish Government requires a commitment to rail for this kind of period before awarding FFG. For a typical intermodal (container handling) rail terminal, a variety of individual company flows have to be aggregated to create the critical mass to justify (a) capital expenditure on rail facilities, and (b) the operating cost of running a complete train (typically 20+ containers) – and securing parallel commitments from a number of players can be difficult in this economic climate.

The Scottish Government needs to consider how it can **restructure and more widely promote its FFG scheme** – which is based on the *environmental* benefits of mode switch from road to rail – to reflect the trading realities of the current manufacturing / processing business environment and logistics supply chain trends.

In England, the Department of Business, Innovation & Skills administers the ‘**Regional Growth Fund**’, which has supported three rail freight terminal developments, on the basis of the *economic* benefits which these would generate. Scotland is being left behind England in the development of rail freight interchange facilities, and we need to keep up with changes elsewhere if we are to remain competitive.

Grant aid could also assist the development of **innovative methods for handling rail freight**, not least on ‘peripheral’ routes where (a) justifying expensive infrastructure, and (b) aggregating large trainload volumes, can be difficult. The Non-Intrusive Crossover System (NICS) – which was first developed in Scotland 10 years ago – provides a novel lower-cost means of connecting an existing main line track and a planned freight siding. NICS has been successfully used for engineering ‘blockades’ on the Tyne & Wear Metro and elsewhere – and could be particularly useful in the timber transport sector – but has still to secure Network Rail approval.

The innovative light-weight Freight Multiple Unit (FMU) concept could hold the key to improving the economics of rail freight for shorter hauls and/or lower train payloads than would normally be commercially viable. A largely successful timber trial was undertaken in Wales in 2005, but the FMU project faltered thereafter. However, technology has moved on in the last 10 years, and a ‘TruckTrain’ variant is now being conceptually developed. With Scotland’s peripheral rail routes through forests now encountering capacity problems (eg on the Far North Line) or capability problems (eg speed restrictions on conventional locomotives over weaker structures on the West Highland Line) – the time is ripe to look at a rail freight mover which is both faster and lighter, and to consider potential Scottish market applications.

It was noted above that the Scottish Government’s **MSRS grant scheme** may not provide the supportive framework required for the early development of direct intermodal train services from Scotland to mainland Europe – this is another area where the Scottish Government needs to consider how grant scheme rules can be modified to better support sustainable logistics, helping to secure the very substantial economic and environmental benefits which a rail freight resurgence would bring to Scotland. There may be parallels / precedent in the successful bus grant scheme which has enabled new services to be developed and supported until the volume has grown sufficiently to cover operational costs.
RFG is concerned that the recent award of €200k grant aid to DFDS / Forth Ports in respect of the Rosyth-Zeebrugge freight ferry – a direct competitor for rail freight – appears to have been made on the basis of a different (and less exacting) set of rules for sea compared to rail. A Freedom of Information response from Transport Scotland to RFG on 24th December 2014:

- confirmed that the €200k award has been made up-front (as opposed to retrospectively, as in the case of rail MSRS and FFG awards)
- could not confirm that cost-benefit analysis – such as the quantification of economic and environmental benefits – has been undertaken to justify this public expenditure
- could not confirm that there has been an assessment of the extent to which rail alternatives could mitigate economic and environmental impacts, and potentially provide better value for money for the taxpayer.

4. EU initiatives which could provide further opportunities for Scottish rail freight

It is striking the extent to which EU funding initiatives have been able to assist research and other initiatives with regard to sea freight – a key example being projects pursued by the SEStran Regional Transport Partnership – but relatively few rail projects have benefitted, one notable exception being the Lifting the Spirit trial whisky train from Elgin to Grangemouth led by HITRANS.

Ironically, much of the Scottish trunk rail network is designated part of the TEN-T (Trans European Network – Transport) network, but in practical terms this has facilitated very few rail infrastructure enhancement projects in Scotland.

It is suggested that the scope for EU assistance for rail freight projects be pursued more vigorously – in terms of both (a) route infrastructure capacity and capability, and (b) terminal capacity and capability. Scottish Government should also review the scope for a greater advocacy role to encourage businesses to consider rail, for example using the lessons of the Lifting the Spirit trial.

5. How the freight industry can contribute to greenhouse gas emissions reduction

Research has demonstrated clearly that, for equivalent transits, rail offers very substantial greenhouse gas advantages over road haulage – typically one third of that generated by trucks. Modal shift from road to rail is therefore a key means by which the freight industry can reduce greenhouse gas emissions.

6. Policy changes, or infrastructure improvements, required to increase the flow of goods through Scotland’s major rail freight hubs

The Committee’s ‘Call for Views’ has a concluding suggested question, ‘Which policy changes, or infrastructure improvements, are required to increase the flow of goods through Scotland’s major sea ports?’ While acknowledging the crucial role of ports, the Rail Freight Group also wishes to see similar importance attached to the role of Scotland’s major rail freight hubs at Coatbridge, Grangemouth and Mossend – which together generate an equivalent volume of container traffic to Scotland’s largest
container port at Grangemouth. Key enhancements required to enhance the capabilities of these rail hubs are:

- upgrading of facilities at Coatbridge Freightliner Terminal, and potential new road access direct from the M73
- extension of rail siding lengths and upgrading of road-rail transfer facilities at Mossend EuroCentral Terminal
- planning permission for the Mossend International Railfreight Park, incorporating 775m train length capacity
- improved ‘loading gauge’ clearance over the route from Mossend and Coatbridge to the Grangemouth railheads
- enhanced freight capacity on the East Coast Main Line to enable this key route to act as a robust alternative to the West Coast Main Line for long-haul transits to the south of England and the Channel Tunnel, as well as providing important inter-regional connectivity between, for example, west central Scotland and Tees-side / Humberside.

Rail Freight Group would be happy to meet with the Committee to discuss these and related issues.

David Spaven / RFG / 15 January 2015

[Appendix: Network Rail ‘loading gauge map’ of Scotland – see next page]
APPENDIX: Network Rail ‘loading gauge’ map of Scotland

The loading gauge categories range from ‘W6’ (effectively barred for any container traffic) through ‘W7’, ‘W8’ (cleared for carrying 8’6” high containers on standard wagons), and ‘W9’, to ‘W10’ (cleared for carrying 9’6” high maritime containers on standard wagons).