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Partners

Freight Expectations: How rail freight can support Britain's economy and environment

March 2023



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Introduction

This report provides evidence of the 'size of the prize' strengthening the case for targeting a trebling of rail freight by 2050 and putting in place the necessary supporting policies to achieve it.

A growing rail freight market can deliver even greater economic and environmental benefits between now and 2050.

Britain faces a number of headwinds as it seeks to accelerate economic growth at the same time as striving to decarbonise the economy and improve air quality across the country. Aspirations to deliver a more prosperous, greener future cannot be realised without a clear focus on the logistics sector.

Rail freight is already playing an important economic and environmental role. It contributes £2.45bn to the UK economy every year. And new analysis in this report demonstrates that longer, heavier rail freight services are improving the productivity of the sector – with a single freight train removing up to 129 HGV movements and an average diesel-hauled freight service producing 76% less CO₂ per tonne than road transport. The report highlights the role that electric traction and the use of innovative alternative fuels can play to reduce greenhouse gas emissions further and deliver even greater air quality improvements.

Freight operators stand ready to do even more to help support the delivery of the UK Government's strategic objectives. Rail reform can be the catalyst for a transformative approach to rail freight. Both the public and private sectors must work in partnership to seize this opportunity, establishing the conditions for a growing, greener rail freight industry in the generation to come.

To harness rail freight's potential, Rail Partners is calling on government to set an ambitious target to treble the amount of freight moved by rail by 2050. New analysis in this report demonstrates that this will create a minimum of nearly £5.2bn in economic benefits annually, and remove over 20 million HGV journeys from the road network each year.

The rail freight industry has changed significantly since privatisation. The *Plan for Rail* White Paper recognised the dynamism that rail freight operators have demonstrated in adapting to evolving market requirements. Markets like coal, which historically underpinned the rail freight sector, have been replaced by flourishing intermodal and construction markets. More recently, as the pandemic shifted the way that people travel and consume goods, freight operators showed agility to respond to market volatility, ensuring the continued delivery of critical goods. Freight volumes have recovered strongly, with prospective customers increasingly looking to rail as a more sustainable and reliable way to transport their goods to market.

Post-pandemic, the railway is facing new challenges as it seeks to achieve greater financial sustainability and resolve ongoing industrial disputes. At the 2023 George Bradshaw Address, the Secretary of State reaffirmed Government's commitment to delivering rail reform, setting out a clear vision of a system that delivers for both passengers and freight customers while representing good value for money for taxpayers. If the Government follows through on the recommendations relating to freight set out in the *Plan for Rail*, strengthening the important legislative and regulatory safeguards, rail freight can help governments and devolved authorities to deliver against their priorities.

Rail Partners has commissioned new analysis developed by Aether, the University of Hull's Logistics Institute and Railfreight Consulting, which underlines the environmental benefits offered by rail freight today. This takes account of recent improvements made in the road haulage sector. This report highlights how rail freight can expand its environmental and decongestion benefits between now and 2050, should the rail freight market be supported to treble over that time period.

This research also considers how the rail freight market could evolve over the next generation and demonstrates, with an appreciation of changing market demands and future government policy, that a trebling of rail freight by 2050 is a realistic proposition with a supporting framework in place. Importantly, significant growth could be realised through productivity improvements such as the operation of longer, heavier and more direct services or improved path utilisation across all days of the week.

Rail freight growth cannot be taken for granted and will require supporting action by public authorities. This report outlines a policy framework that can enable the freight market to thrive over the course of the next generation.

The policy framework to treble rail freight includes:

- setting an ambitious growth target;
- maintaining a stable access, charging and performance regime;
- making optimal use of existing capacity on the rail network;
- targeted infrastructure investments on areas of the network with high rail freight growth potential;
- an expansion of incentives, including the Mode Shift Revenue Support (MSRS) scheme and Freight Facilities Grant (FFG), to make rail the mode of choice for freight customers.



Today

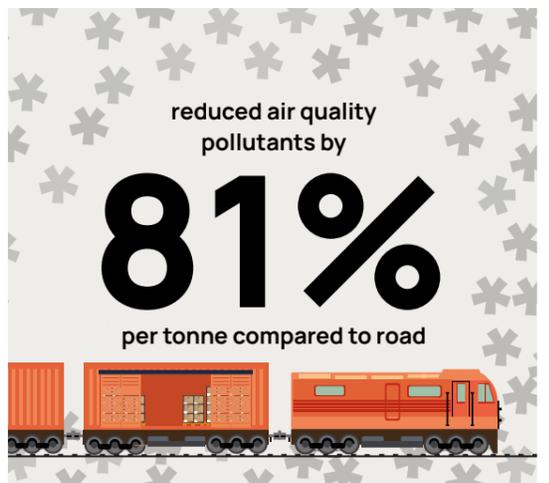
x3 What a trebled rail freight sector means for the UK economy in 2050



of rail freight's economic benefits occur outside London and the South East.



A diesel-hauled rail freight service reduces carbon emissions by **76%** per tonne compared to road.



A trebled rail freight market means **20million** HGV movements removed



Sources: Deloitte and Aether



Rail freight makes a significant contribution to the UK's economic and environmental outcomes today



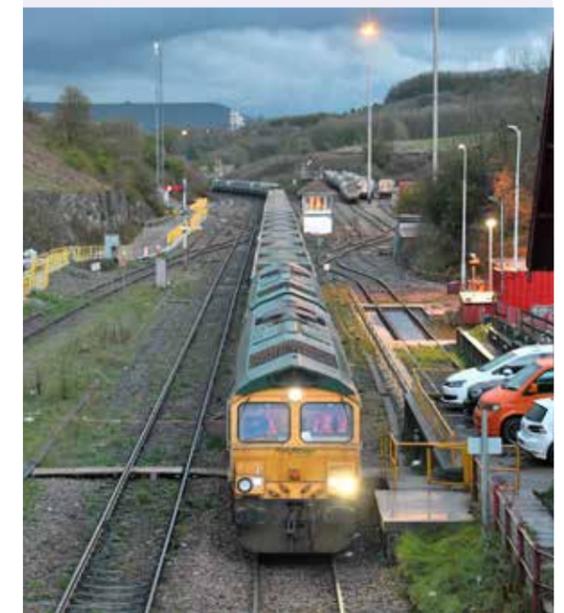
New analysis commissioned by Rail Partners has added to the evidence base demonstrating rail freight's strong environmental advantage over road freight today. Recent analysis also highlights the important economic contribution the sector makes to the UK.

1.1 Longer, heavier freight services are removing up to 129 HGV movements from the road network.

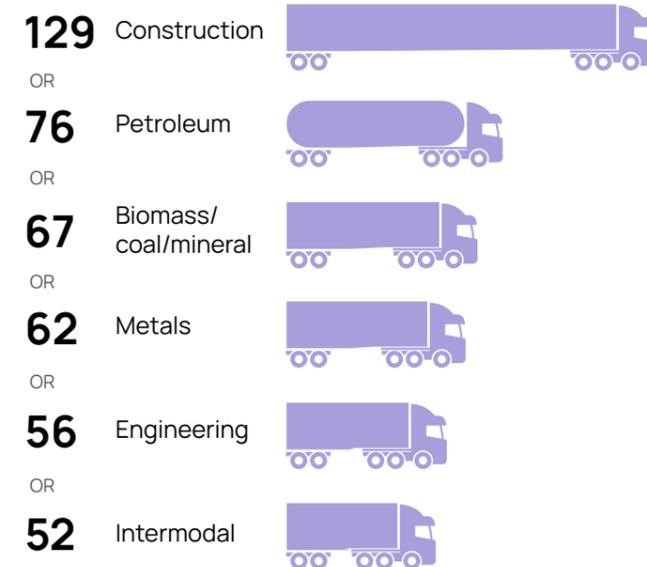
A single freight service is now removing up to 129 HGVs from our roads, with services in the construction and petroleum industries removing the largest amount of equivalent road movements. Overall, new analysis led by Aether estimates that in 2022 the freight sector removed 6.4 million lorry movements in total. Decongestion is a key benefit of rail freight services, freeing up space and reducing journey times for other road users and reducing the wear and tear to the road network caused by HGV movements. As an example, in the absence of jumbo trains carrying construction materials used for housing and major infrastructure projects between the Mendip Hills in Somerset and London, it is estimated that a HGV movement on the already congested M4 would be required every two minutes, every day of the week, to transport the same volume of material.

Case study: Jumbo trains supporting the construction sector

The reduction in the number of passenger services on the network has allowed Freightliner to work with Tarmac, one of the leading suppliers of construction materials, and Network Rail to improve efficiency by introducing new jumbo aggregates trains. At around 4,000 tonnes these trains are 60% longer and heavier than the typical aggregates trains departing from the Peak District quarries. Transporting this construction material into our towns and cities by road instead would require over 110 HGV journeys for every train, increasing carbon emissions by nearly 90 tonnes.



A single rail freight service can remove up to...



...HGVs from our roads





Case study: Alternative fuels are helping to lower rail freight's carbon footprint

In January 2023 Freightliner started a new service for Ocean Network Express (ONE), connecting the Port of Southampton with Coatbridge, outside Glasgow, using GD+, a revolutionary new alternative fuel, between Southampton and Crewe, and electric locomotives between Crewe and the Central Belt of Scotland. GD+ is a type of Hydrotreated Vegetable Oil (HVO), with an additional additive that improves air quality. Using GD+ and electric traction for this 700-kilometre journey instead of diesel locomotives reduces carbon emissions by up to an additional 80% (compared to diesel) – increasing yet further the attractiveness of rail freight.



Using modelling that assesses rail freight's environmental performance across 17 representative freight flows using the Railfreight Energy and Emissions Calculator (REEC), developed with support from the DfT/Innovate UK First of a Kind (FOAK) programme, our new analysis shows that a diesel-hauled rail freight service produces 76% less CO₂ per tonne compared to road. This favourable comparison is in spite of recent improvements made across the road sector. Longer, heavier and more direct rail freight services reduce carbon emitted per tonne substantially – for example a jumbo construction service between Merehead and Acton reduces carbon emissions by 87% compared to road. As industry looks to use more alternative low-carbon fuels, like Hydrotreated Vegetable Oil (HVO), rail freight's carbon footprint will be reduced further. Incentives to accelerate the use of low-carbon fuels, as a stepping stone to rail freight decarbonisation, should be explored further.

Rail freight also has advantages from an air quality perspective. Whereas HGVs travel through dense urban areas emitting NOx and particulates by the kerbside, typically near to the general public, air pollutants produced by rail freight are generally emitted further away from people, and often in a contained environment where railway cuttings, tunnels, fencing and buildings can act as shields, limiting the impact on human health.

1.2 Rail freight is securing economic growth, delivering £2.45bn in economic benefits each year

Recent analysis conducted by Deloitte estimated that the rail freight sector contributes £2.45bn to UK PLC each year.¹ Deloitte's analysis also demonstrates how rail freight plays a critical role in levelling up the UK economy, with 90% of its benefits accruing outside of London and the South East with areas in the North, East of England and Wales benefitting most.² Deloitte also estimated that a single rail freight path can be worth £1.5m per year in economic benefits.

Rail freight contributes

£2.45bn



in economic benefits to UK PLC every year

Case study: Rail freight keeping the lights on

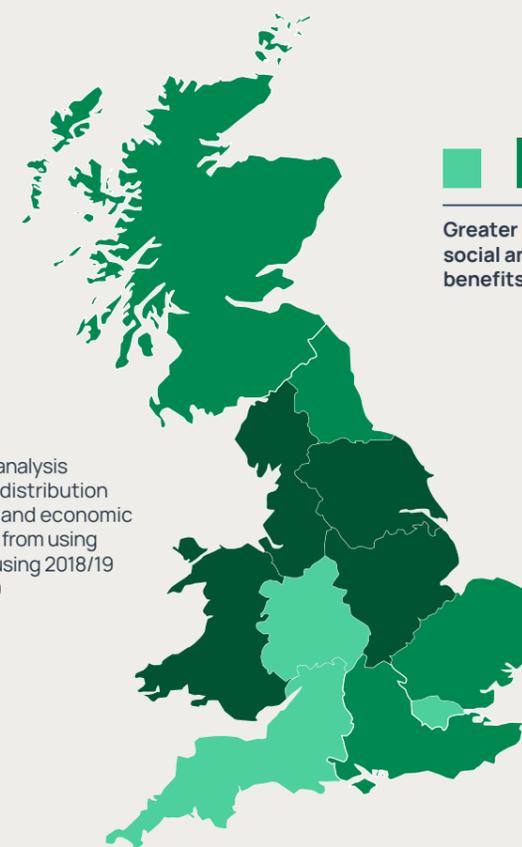
DB Cargo operates 60 trains per week transporting sustainable biomass pellets between Immingham and Drax Power Station near Selby, North Yorkshire.

These services provide a critical function to the UK economy, with Drax Group producing 6% of the UK's total energy needs and 17% of its renewable electricity – with every train carrying enough biomass to power a city the size of York for a day!

Rail freight is a much safer and more sustainable way of transporting energy products, with Drax estimating that using rail takes off 192,000 HGVs from the UK's already congested road network.



Rail freight supports the levelling up of the UK economy



Deloitte analysis showing distribution of social and economic benefits from using freight (using 2018/19 volumes)

¹ The Role and Value of Rail Freight, RDG, 2021
² ibid



A trebled rail freight market by 2050 will deliver even greater benefits

2

Rail Partners and its members are calling for a trebling of rail freight by 2050. Aether's new analysis that models the future environmental performance of both the rail and road freight networks, and future economic benefits provided by rail freight demonstrates that a trebling of rail freight will enhance the sector's contribution to the strategic priorities of government.

2.1 Rail freight will continue to hold an environmental advantage in a largely decarbonised transport network

Independent analysis by Aether for Rail Partners has modelled the likely decarbonisation roadmap of both the road and rail freight sectors through to 2050. The analysis shows that rail freight will continue to have a comparative carbon benefit in 2050, even with a heavily decarbonised road sector. Under the assumption that both road and rail are electrified, and in-line with current BEIS assumptions for the decarbonisation of the National Grid, rail freight will continue to produce 75% less CO₂ per tonne than road in 2050, though in absolute terms these numbers will be small. This advantage is due to the lower electricity requirements, reflecting the inherent energy efficiency of rail compared to road due to lower overall friction and drag.

Given rail's strong existing environmental credentials, rail freight can play a key role in accelerating the transition to net zero between now and 2050 if a clear pathway to decarbonise the railway is put in place. This should include early commitment to infill electrification schemes that will have a large and immediate benefit for decarbonising key rail freight flows – some specific schemes have been assessed within this report (see adjacent case study).

From an air quality perspective, it is forecast that rail freight will produce 81% less particulate matter per tonne than road as a result of lower abrasive emissions on the rail network from steel wheels on steel rail in comparison to rubber tyres on asphalt.

Analysis also shows that a trebled freight market will play an enhanced role in the decongestion of the road network, with estimates indicating that the rail freight sector could remove over 20 million HGV journeys in 2050. Many of these additional saved lorry movements can come from lengthening existing services.

Case study: A strong case for delivering infill electrification schemes

It is estimated that the electrification of the London Gateway Branch would enable over a third of traffic from the port to convert to electric traction – saving around 10,000 tonnes of CO₂ across freight routes every year. With a conservative estimated cost of £23m, over 30 years the forecasted environmental route-wide benefits from lower carbon emissions and reduced air quality damage are valued at £110m using government appraisal techniques. This yields a positive benefit-cost ratio of 4.75:1 before wider economic and societal benefits are factored into the analysis.

Similarly, the electrification of the Felixstowe Branchline to Ipswich, while significantly longer than the route from London Gateway, is also identified as a priority within the freight industry due to the high volumes of freight moved by rail from the UK's busiest port. The scheme would also benefit passengers. Analysis informed by RSSB project T1186, which maps rail's air quality impacts, estimates the electrification of this route would reduce carbon emissions by almost 29,000 tonnes per year and lower air quality pollutants by nearly 200 tonnes per year. The benefit-cost ratio for this scheme over 30 years is estimated to be 4.24:1 from environmental benefits alone – with reduced environmental damage valued at £321m.

A trebled rail freight market means

20million
HGV movements removed



£5.2bn

in economic benefits by the year 2050



2.2 The rail freight sector could contribute a minimum of nearly £5.2bn by 2050

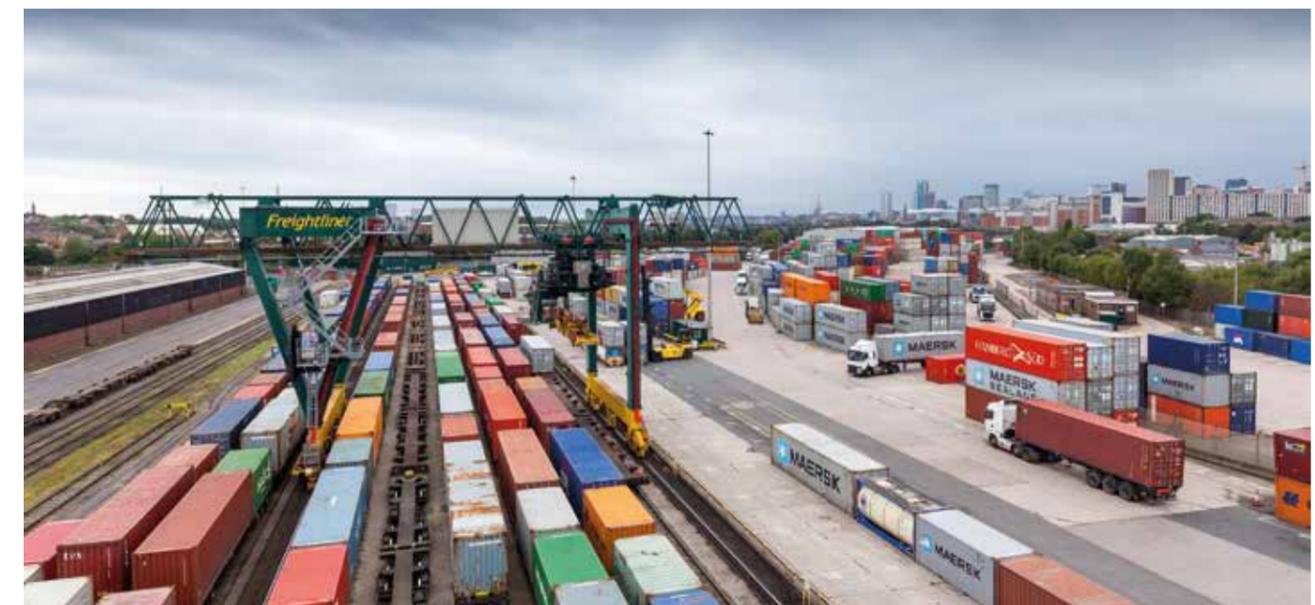
Aether's research for Rail Partners using Department for Transport's Transport Appraisal Guidance (TAG) cost-benefit analysis appraisal tool, shows that a trebled freight market in 2050 would be worth £5.2bn annually to the UK economy as a minimum. Much like today, rail will continue to have a strong advantage against road in 2050 in its economic, environmental (carbon, air quality, noise) and social (congestion and safety) benefits.

While Rail Partners believes that the TAG methodology is robust, some of the key benefits to customers from using rail freight are not wholly captured using the tool. For example, time is one of the factors valued highly by customers when opting to use rail, however TAG does not quantify an economic value for this benefit. Similarly, it is widely considered that the reliability benefits from using rail are not wholly included in TAG. If the TAG methodology were updated to internalise these benefits, rail freight's estimated economic contribution could further increase significantly.

Nonetheless, this independent analysis shows the considerable economic benefits that rail freight can deliver in 2050, presenting a strong case for setting an ambitious target to treble rail freight by 2050.

Category of economic benefit	Value in 2050 (£billion, 2022 prices)
Economy	3.736
Public accounts	-0.836
Environment	0.241
Social	2.036
Total for all sectors (weighted by volume)	5.177

Source: Aether





There is huge potential to grow rail freight

3

Since privatisation, freight operators have demonstrated they are able to respond to changing customer demands and economic trends in order to support the continued success of the rail freight market. A largely private rail freight sector has invested well over £3bn to improve the productivity, performance and safety of rail freight services.

Realising an ambitious target to grow the rail freight market cannot be achieved without a partnership between both the public and private sectors. With a clear policy direction from government for the rail freight sector, and commitment to deliver against a long-term strategy for the railway, the commercial expertise of freight operators and their customers can be harnessed. The sector must have the confidence to invest in new assets, including a new fleet of green locomotives and wagons to facilitate the additional volumes of freight that are expected, and further support the transition to net zero. Additional rail-connected terminals and improved capacity at ports, for example, will also be necessary to substantially grow the rail freight market – all of which will be largely-driven by private investment. Therefore an environment must be created that gives the private sector the confidence to make sizeable investments. This includes ensuring that there is capacity on the rail network to accommodate additional services and more productive heavier and longer rail freight services, to ensure that rail freight can compete with other transport modes.

Case study: A new generation of greener rail freight trains

GB Railfreight has invested in 30 Class 99 bi-mode locomotives that are capable of operating using electrification, or a low-emission diesel engine for non-electrified routes. Designed and built in collaboration with Stadler and Beacon Rail, the Class 99 – the first heavy freight locomotive capable of hauling mainline speeds and tonnages on UK rail networks – will run from 2025 and is intended to replace existing diesel-only powered Class 66 locomotives. Bi-mode locos will play an essential role in reducing carbon emissions while network electrification is implemented.

Independent analysis by Aether demonstrates that a trebling of freight is entirely credible with the right support. In order to treble freight between now and 2050, the rail freight market will need to grow by around 4% each year. Over the past 60 years, annual economic growth has been 2.25%. If the economy continues to rise in line with this over the long-term, and rail works simply to maintain its market share, over half of the increased freight needed to treble the sector by 2050 would be realised through economic growth alone. Further growth can be achieved through modal shift from more carbon-intensive modes – particularly road.



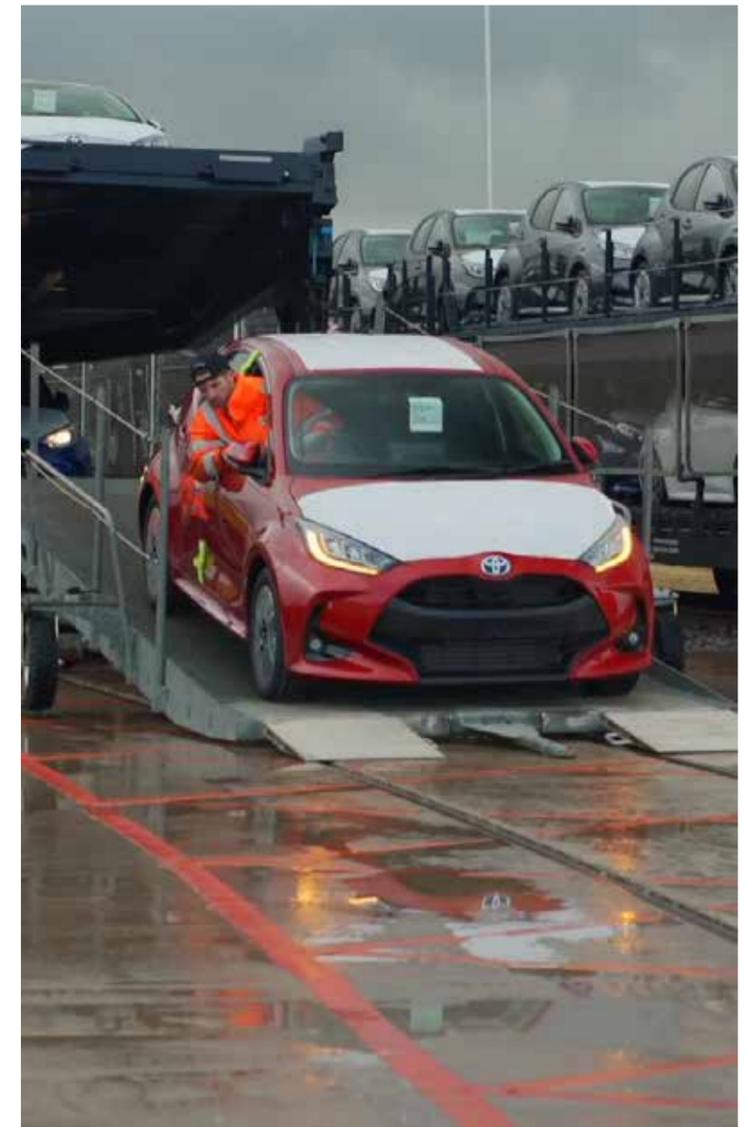


A trebling of freight is not wholly contingent on the creation of new infrastructure or the introduction of new trains. A significant amount of growth can occur by making better use of the existing rail network. This report has demonstrated that freight operators are innovating to improve productivity within the freight sector, including by improving load utilisation and lengthening trains. Improvements in the power capabilities of the future rail freight fleet will support this further, with electric trains designed to carry up to 50% more freight compared to today. As demand increases there will be opportunities to make better use of existing train paths, and operating existing flows six or even seven days a week will unlock a significant growth in rail freight.

If freight growth forecasts prepared for Network Rail until 2043 are extrapolated until 2050, the central case shows that there will be sufficient demand to achieve a trebling of freight. It is anticipated that already prevalent markets such as construction and intermodal (both maritime and domestic) could grow significantly in the coming decades. Metal and minerals traffic used to support a wide-range of domestic manufacturers is also expected to increase between now and 2050.

Naturally, it is hard to predict how consumer demand will change over the next generation. Even if the growth of some commodities develops at a different pace to the forecasts, there is scope for an emerging high speed rail logistics market and the transportation of alternative fuels, to play an important role in the delivery of a rail freight market that is three times as big by 2050. Similarly, since the Channel Tunnel opened, international rail freight volumes have, and are projected to perform, below initial expectations, but with supporting infrastructure and policy interventions, there could be a renaissance in this market.

While these forecasts provide credibility to the trebling of freight that Rail Partners and its members are calling for, this ambitious level of growth cannot be taken for granted. Critically, these forecasts are not capacity constrained, therefore in order to deliver the levels of freight growth predicted, a blend of capital investment to create new infrastructure capacity in the medium to long-term, shifts in the allocation of capacity on the current network, and policies which incentivise greater modal shift will need to be considered.



Case study: Toyota let the train take the strain

In February 2022, DB Cargo UK and Groupe CAT launched a new international rail freight service from the UK to France and the Czech Republic for the global automotive manufacturer, Toyota. This follows the construction of a new, £2.6 million automotive transfer facility at DB Cargo UK's strategic site in the East Midlands and £3 million investment by Groupe CAT in its specialist wagon fleet.

On the outbound journey, the new generation of hybrid Corollas manufactured at Toyota's Derby plant are being exported to mainland Europe. Toyota Aygo, Yaris and the new Yaris+ vehicles are being imported on the return leg, to ensure full utilisation of the new services.

The service operates twice a week through the Channel Tunnel, with every train carrying approximately 260 vehicles. Previously the movement had taken five days by road, but using rail has reduced the transportation time to just 24 hours. The benefits extend far beyond time savings, with the flow removing 8,500 HGV movements each year, and avoiding more than 8,000 tonnes of CO₂.

Current and projected freight volumes

	Office of Rail and Road 2021/22	Network Rail (Project and Adjusted) 2050/51	
	Million tonne kilometres	Million tonne kilometres	Proportion of all flows*
Biomass	1,130	2,166	4%
ESI Coal	310	-	0%
Construction	5,130	20,031	36%
Maritime intermodal	5,780	18,605	34%
Intermodal non-maritime	720	5,286	10%
Channel Tunnel intermodal	560	300	1%
Waste	390	424	1%
Industrial minerals	320	2,298	4%
Metals	1,420	2,629	5%
Petroleum	930	1,430	3%
Other	170	97	0%
NR Engineering	1,310	1,631	3%
Total million tonne km	18,170	54,897	
Growth factor	1	3.02	

* Percentages do not add to 100% due to rounding



The right framework is needed to enable rail freight to flourish

4

Rail Partners and its members are calling for a number of interventions so that the rail freight sector can support the delivery of government’s strategic objectives, creating £5.2bn in economic benefits annually by 2050, and playing a pivotal role within a decarbonised logistics sector by removing 20 million HGVs from the road network.

4.1 Government must set an ambitious target to treble rail freight by 2050

While this is an ambitious target that would represent a step change from where the rail freight market is today, this report shows that a trebling of freight by 2050 is achievable. The evidence in this document underscores the environmental sustainability of rail freight today – setting an ambitious rail freight growth target will accelerate the decarbonisation of the logistics sector, saving many millions of tonnes of carbon from being emitted into the atmosphere between now and 2050.

Rail Partners is calling for a commitment to set a target to be enshrined within legislation. The rail freight growth target should be assessed using the freight moved metric (measured in tonne km) and underpinned by shorter-term targets, linked to Great British Railway’s (GBR) five-year funding periods, so there is alignment between freight growth and the GBR business planning process. Though there is recognition that, in practice, freight growth will not occur in a steady, linear way and will be linked to a range of factors including wider economic performance and the delivery of infrastructure projects, short-term targets will ensure that the industry remains on track to treble freight by 2050.

To reflect the network-wide nature of rail freight services, government should set a target that applies across Great Britain – incorporating existing targets set by devolved governments. The *Plan for Rail* White Paper outlined that GBR will have five regional divisions, initially aligned with Network Rail’s current Regions. Most freight services will cross regional boundaries, so it will be critical that the Strategic Freight Unit within GBR is fully empowered to ensure that all parties work collectively when planning to deliver freight growth. To support this, region-based targets sitting below the GB-wide regulated target would help to drive positive outcomes for freight across the network.

Case study: Reintroduction of rail freight timber services

Following a successful trial earlier in the year, in August 2022 Colas Rail started operating new timber trains, with each service moving up to 800 tonnes of newly felled logs from Aberystwyth to Kronospan’s processing plant in Chirk, near Wrexham, where they are manufactured into items such as furniture and flooring.

The introduction of the service brought to an end a 25-year hiatus in the transportation of timber on the Cambrian Line, with rail considered to be a more sustainable way of moving timber across Wales. Every service removes 16 HGV movements, alleviating congestion on the local road network.

Similar services are currently being trialled across Great Britain.



Setting an ambitious target could act as a springboard, being a catalyst for a transformative approach to rail freight across Great Britain. Rail Partners’ members have experienced first-hand how transformative the creation of a growth target can be. In Scotland, where a target to grow freight in Control Period 6 (2019–2024) was set, the sustained focus on realising this target has influenced behaviours and yielded positive outcomes. The Scottish Ministers’ High Level Output Specification (HLOS) for CP7, published recently, built on this commitment by outlining a requirement for Network Rail to grow freight by 8.7% by 2029, with an expectation that a higher level of growth may reasonably be achievable. Other nations across Europe including France, Germany and Spain also recognise the strong economic and environmental rationale for supporting rail freight and have set their own targets to increase rail freight’s modal share. A target will incentivise all stakeholders within the rail industry to work together to understand the requirements of freight customers and create the conditions for freight to grow, including informing policy and investment decisions.

4.2 A stable and affordable access, charging, and performance regime should be retained

A robust, long-term policy framework is critical for private sector operators to invest in assets with lifespans in excess of 30 years. As the structure of the railway changes, it must continue to allow operators to be agile in their response to changing market demands and economic trends. Forthcoming legislation to establish GBR must maintain and enhance safeguards to support the role of the private sector operators including through the creation of a fourth core function for GBR to provide high quality infrastructure for freight and other open access services.

The *Plan for Rail* envisages that GBR will have responsibility for both managing infrastructure and procuring passenger services. As open access operators, rail freight companies will sit outside GBR's contractual landscape. With GBR holding revenue risk for most passenger services, there is a risk that decisions regarding the allocation of capacity on the network are made which favour GBR operators. To ensure that GBR applies its access policy in a non-discriminatory way, it is imperative that ORR retains strong regulatory oversight to challenge and, where necessary, issue direction to GBR in relation to access. Having assurances on future paths and strong regulation are essential to securing private sector investment, and encouraging prospective customers to shift away from road towards rail.

A stable and affordable charging framework is also critical, helping to inform the commercial decisions made by operators and their shareholders. It provides future certainty to customers and enables rail freight to compete within a highly price sensitive freight and logistics sector.

The creation of GBR must enable a renewed focus on operational delivery and support the delivery of a high-performing railway – which is critical to the growth of the rail industry. It is essential that the performance regime incentivises parties to invest in assets, infrastructure and operational practices will improve performance. Reliability is an important factor for freight customers, particularly as supply chains become increasingly tight. Maintaining a high level of performance on the railway is important to position rail freight as an attractive option for prospective customers.

4.3 The railway must make best use of existing capacity

Analysis in this report has demonstrated the significant environmental benefits of operating longer and heavier freight services through reduced carbon emissions, significantly better air quality, and the removal of up to 129 HGV movements per train. Analysis by Aether indicates that a doubling of tonnage hauled can lead to an additional 20% reduction in CO₂ emissions per tonne. Also by enabling freight services to operate more directly with less time spent in loops or under speed restrictions, freight emissions can be reduced significantly. More productive rail freight services are not just good for the environment: the improved asset utilisation enhances rail's competitiveness, supporting additional modal shift. Improving the efficiency of freight services also helps to grow volumes and makes the best use of existing infrastructure.

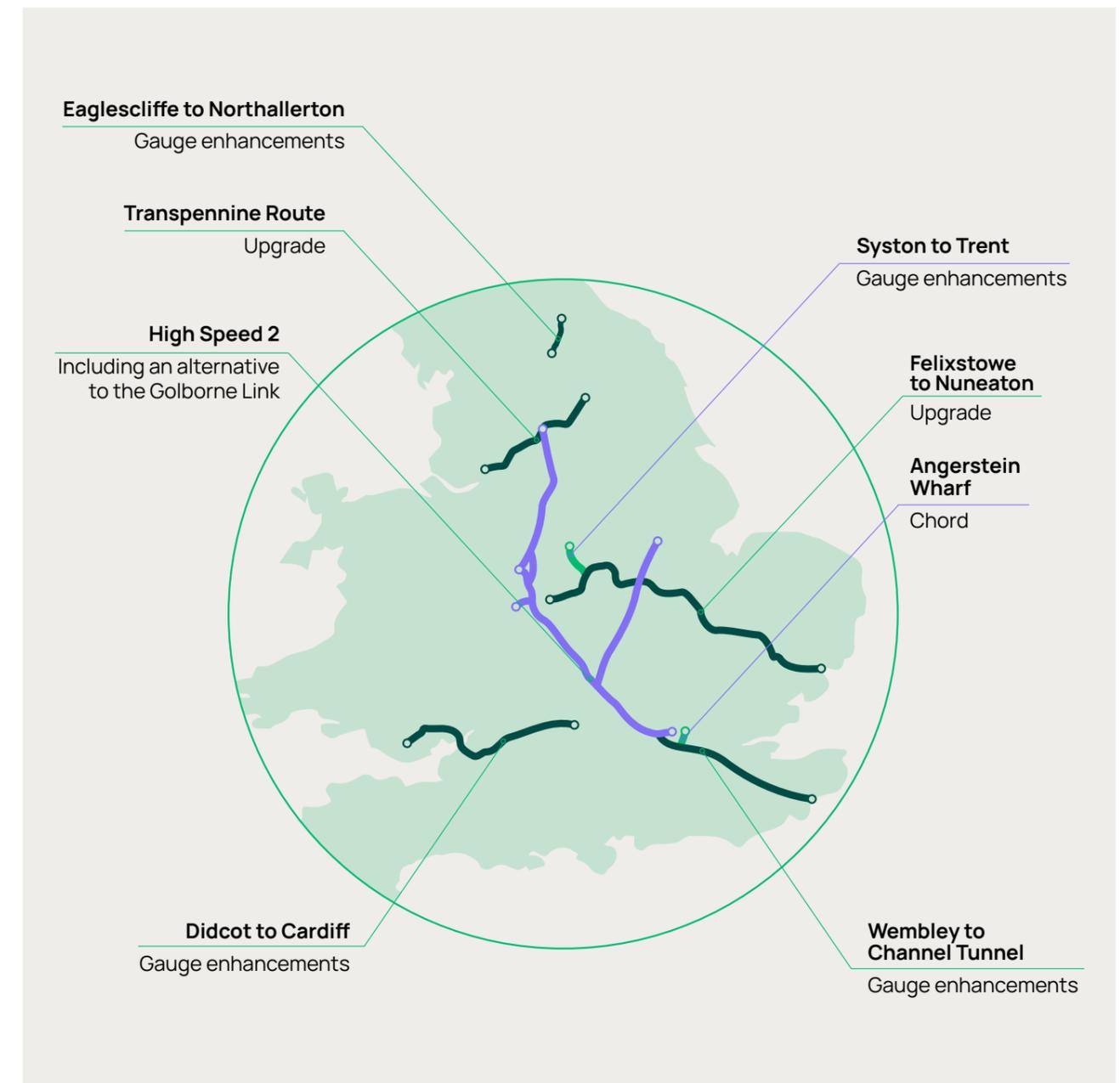
In order to unlock further rail freight growth, it is vital that additional opportunities to run longer, heavier and more direct services are explored. As long-term shifts in the way that passengers use the railway become more established, it may be appropriate to make adjustments to the specification of passenger services to unlock capacity for additional freight services to run. As outlined in the *Plan for Rail*, GBR can support this through better understanding the value of different competing paths on the network. Understanding the economic value of different capacity options can be used to inform capacity allocation and timetabling decisions, thus ensuring that the railways, as a national asset, are used to yield the highest economic and environmental value.



4.4 Targeted infrastructure investments are required to create capacity for freight growth

As set out in this report, significant freight growth can be achieved without major additional capital investment. In a tight fiscal environment, it is understandable that tough choices have to be made. Appraisal of capital investment schemes should prioritise those that maximise environmental and economic benefit. Rail Partners and its freight members have identified a series of enhancement projects that would go a significant way in delivering a trebled freight market by 2050. Some schemes such as HS2 and the Transpennine Route Upgrade have already received commitment from government – though, in relation to the former, an alternative to the Golborne Link connecting the high-speed network and West Coast Mainline must be delivered to maximise the benefits of HS2 for freight.

Targeted schemes supporting rail freight growth



The Ely Area Capacity Enhancement scheme, part of the wider Felixstowe to Nuneaton upgrade, will open up a substantial increase in intermodal freight services from the East Anglian ports and is a pivotal scheme to unlock rail freight growth both on a regional and national scale.

With infrastructure enhancements, it is not where the concrete is poured but rather the services that are unlocked. Despite its location in the East of England, the delivery of the Ely enhancement will provide better links for businesses across the Midlands, the North of England, Wales and Scotland to export markets around the world.



To support the transition from diesel to electric traction, a clear pathway to decarbonise the railway is required. This will enable freight operators to make significant investments in more carbon friendly rolling stock, particularly bi- and tri-mode trains. Investment in the railway is a partnership – with government investment in rail infrastructure to support improved network capacity and capabilities, realised only when the private sector makes complementary investments in assets, including in locomotives, wagons and other rolling stock, as well as terminals, yards and other facilities. The development of a long-term plan with commitment to deliver, will provide confidence to operators and freight customers in the planning of their own investments.

4.5 An expansion of incentives is needed to encourage customers to use rail

The Mode Shift Revenue Support (MSRS) scheme already plays a vital function within the freight sector. MSRS helps to support modal shift from road to rail on flows where rail would not otherwise be able to compete on cost within a highly price sensitive customer base. With funding currently of £20m per year, the scheme has been instrumental in supporting modal shift and removes 900,000 HGV movements from congested roads. The environmental and congestion benefits are significant – in 2019/20 the scheme delivered a benefit-cost ratio of over 6:1. Rail Partners and its freight operator members are calling for the budget to be doubled when the scheme is renewed in 2025 to support further modal shift and to align with the ambitious growth target.

Similarly, the Freight Facilities Grant (FFG) has been instrumental in Scotland and also exists in Wales, encouraging more customers to use rail freight. In an asset intensive industry, the often high fixed costs associated with building and connecting infrastructure to the rail network can be prohibitive for potential freight customers. FFG supports the construction of new or improved rail-connected facilities, with up to 50% of the total cost, based on the environmental benefits of the new-to-rail traffic. The benefits of the scheme could be widened significantly should it be expanded to England, to ensure that the benefits of the FFG can be realised in all parts of Great Britain.

Furthermore, incentives to increase the use of low-carbon fuels, such as HVO, should be considered to support the transition away from diesel within the rail freight sector. As shown in this report, HVO is already helping to reduce carbon emissions and improve air quality considerably, and if the fuel is affordable

Case study: Supporting the construction of HS2

GB Railfreight is assisting the Skanska, Costain and STRABAG (SCS) joint-venture on their HS2 programme. They are moving c.6m tonnes of tunnel spoil from the Willesden Euroterminal by rail to Cliffe in Kent and Barrington in Cambridgeshire - where it is then sustainably reused. This removes over 600 HGV movements from London's already congested road network per week, improving safety and air quality in densely populated areas.

Additionally, tunnel ring segments each weighing 7.5t, which form a key part of tunnel construction, are moved from the Isle of Grain to London by rail removing in excess of 6,000 HGV road miles a day.



Case study: Grants supporting modal shift in Scotland

A new partnership between Highland Spring mineral water, Russell Logistics and Direct Rail Services (DRS) has introduced a new intermodal rail freight flow to the UK.

Highland Spring's new multimillion pound rail freight terminal, which benefitted from funding provided by the Scottish Government through the Freight Facilities Grant, was built for the new service which removes 8,000 HGV movements and saves 3,200 tonnes of CO₂ every year.

Each DRS train takes 22 HGVs from the road and will travel over 350 miles from Blackford to Daventry. They will carry around 200 million litres of bottled water per year, in a huge step towards Highland Spring's ambitions to reach net zero operations by 2040.

to freight customers, it could play a key role to support the continuous decarbonisation of the sector while electrification projects are being delivered.

Summary of the framework needed to support freight growth



1	Government must set an ambitious target to treble rail freight by 2050
2	A stable and affordable access, charging, and performance regime should be retained
3	The railway must make best use of existing capacity
4	Targeted infrastructure investments are required to create capacity for freight growth
5	An expansion of incentives, including the Mode Shift Revenue Support (MSRS) scheme and Freight Facilities Grant (FFG), to make rail the mode of choice for freight customers

This report has been developed with the support of Rail Partners freight operating company members, who collectively represent over 99% of the rail freight market.



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