

How freight awareness shapes public views on rail priorities

Balancing passenger with freight rail services



 TRANSPORT FOR THE
NORTH



Transport for the North

- TfN's [Strategic Transport Plan](#) (STP) sets out a long-term vision to create a more integrated, efficient, and sustainable transport network across Northern England
- Within the STP we have a target to treble rail's share of freight carried to 25.5% by 2050, measured as tonne km
- The drivers behind this target are two of our strategic ambitions:
 - Transforming economic performance
 - Rapid decarbonisation of our transport system
- To achieve the North's strategic ambitions the balance between passenger and freight services on rail needs to be right



Context

- Our railways are congested
- Rail infrastructure needs to accommodate both passengers and freight
- At present, 94% of total kilometres travelled by rail are by passenger services
- Many people regularly use passenger services, but *everybody* is dependent upon the efficient movement of goods
- In terms of the right balance, we don't currently understand the views of the public on this
- Previously referred to by the National Infrastructure Commission as 'freight blindness' we know that improving freight awareness is needed to drive better understanding of the importance of freight
- Public preference may be skewed in favour of passenger services due to a lack of freight awareness



Freight awareness

- The tendency to overlook or underestimate the importance of freight transportation
- Can result in decisions that neglect the movement of goods
- Results in the need for a more balanced approach that considers both passenger and freight needs

Objective

TfN to undertake a research piece to:

- Understand the preferences of the public regarding the right balance between passenger and freight use of rail
- Test the impact that a lack of freight awareness has on people's preferences

Northern Transport Voices

- Northern Transport Voices is TfN's online research community
- Circa 1,400 people are on the panel
- Comprises a cross-section of the public across the North
- Members of the community are invited to engage in an ongoing programme of research activities

Method



- In summer 2024 Members of the panel were invited to take part in an online survey entitled “Making the Most of Our Railways in the North”
- Members were presented with a series of questions to gather their views on the right balance of passenger and freight use of rail in the context of limited capacity
- After they had completed the questions, members were given information about the benefits of rail freight. They were then asked to complete the same questions again
- This before vs after comparison helped us to determine whether having more knowledge about the benefits of rail freight services impacted members’ views

Survey context

Respondents were provided with the following context in advance of the questions:

"Transport for the North is interested in your views on rail freight services.

The capacity of our existing railway lines in the North is limited. It is difficult to add new rail services because our railways are currently congested. With the cancellation of High Speed 2 in the North of England, and significant funding for large infrastructure schemes unlikely in the short to medium term, there is a need to make the most out of the infrastructure we already have.

There are only so many 'timetable slots' for trains which are shared out to all services by Network Rail. Both passenger and freight rail services operate along the same tracks, and so we need to find the right balance between the two.

These questions have been designed to help us to understand your views on rail freight services, and how they should be balanced with passenger services."



Fact Pack

After the first set of questions, participants were provided with information on the benefits of rail freight by way of the Fact Pack and Network Rail's animation

A Freight Deal Better

July 2024

Better understanding the benefits that rail freight brings to society



Rail freight is good for the environment



Carbon

- An average diesel powered freight train produces 76% less CO₂ per tonne than road transport. As industry looks to use more alternative low-carbon fuels, like Hydrocracked Vegetable Oil (HVO), rail freight's carbon footprint will be reduced even further.¹
- Even under the assumption that both road and rail are electrified, rail freight will continue to produce 75% less CO₂ per tonne than road in 2050.²

Air Quality

- Rail freight produces less air pollution. It typically generates nearly 90% less small particulate matter (PM10) and up to 15 times less nitrogen oxide (NO_x) when compared with equivalent road haulage³. It's a lot better for our lungs!
- Rail freight means fewer lorries passing through the heart of small villages and towns meaning local communities suffer less visual, air and noise pollution.⁴
- Air pollutants produced by rail freight are generally emitted further away from people, and are often more contained by railway cuttings, tunnels, fencing and buildings which can act as physical shields. This limits the impact on human health.⁵

Rail freight is good for the economy

The orderly movement of goods is important to control costs of the things we buy. When goods move efficiently, savings are passed onto consumers through competitive pricing for everything we consume, from fridges to French fries.

Rail freight currently contributes £2.45bn to the UK economy every year. It could potentially generate £5.2 billion in economic benefits annually by 2050, if TfN's target to triple rail freight was realised. 90% of the benefits would come from outside London and the South East.⁶



So, what moves by train in the UK?

Did you know freight trains carry many different consumer items such as:

- Groceries
- Electronics
- Cars
- Building materials
- Animal feed
- Grain
- Chemical products
- Metal products
- Waste and recycling

Did you know...

x1000

One freight train load of steel can make 60,000 white goods or 1,000 new cars¹

x30

One freight train can carry enough material to build 30 houses²

Did you know some passenger trains have dedicated space for small to medium sized parcels?

Rail freight takes trucks off the road

Freight trains can move larger volumes and heavier goods than lorries. Fewer lorries on our roads means:

- Less congested roads
- Faster journey times for other road users
- Less wear and tear to the road network



6.4m

The rail freight sector removed 6.4 million lorry movements from the road network in 2022.¹

x76

One average sized freight train can take up to 76 lorries off our roads. One jumbo freight train can remove 129 lorries.²

Rail freight is tackling gridlock and pollution in London, removing as many as 1,000 lorries from London's roads every day. There are similar benefits for cities across the North.³

Rail freight is safer than road

Rail freight has a much better safety record than road haulage¹. The risk of a rail accident is around 40 times lower than for road transport.²



Thefts from rail freight containers are rare. It is difficult for criminals to get close to a train and unload from a container. Theft from trucks parked at rest areas is more common as access is easier.³ Fewer thefts keep the cost of goods low.





Don't just take our word for it...

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Case Studies



Case Study

Getting carried away

Merseyside and Halton's residual household waste is taken by freight train to the Wilton energy-from-waste facility on Teesside. Each week, the equivalent of 80,000 wheelie bins of rubbish is transported to the North East over 9 trains, pulling 84 containers at a time. The Wilton energy-from-waste facility in Teesside uses this waste which cannot be recycled as fuel to generate electricity¹.



The equivalent of 80,000 wheelie bins of rubbish is transported via freight train to an energy-from-waste facility in the North East

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With thanks to partners across the industry for sharing their own research

¹ Rail Freight Working for Britain, Rail Delivery Group, available 2022
² How can we? 10 Cargo, available 2022

³ Freight Expectations: how rail freight can support Britain's economy and environment, Rail Partners, 2020, available 2022
⁴ Freight Expectations: how rail freight can support Britain's economy and environment, Rail Partners, 2020, available 2022

⁵ Association - The vital role of Britain's rail freight, Network Rail, 2022, available 2022
⁶ Freight Expectations: how rail freight can support Britain's economy and environment, Rail Partners, 2020, available 2022

⁷ Freight Expectations: how rail freight can support Britain's economy and environment, Rail Partners, 2020, available 2022
⁸ Delivering Your Goods Benefits of Using Rail Freight, Transport Scotland, 2017, available 2022

⁹ Freight Expectations: how rail freight can support Britain's economy and environment, Rail Partners, 2020, available 2022
¹⁰ Freight Expectations: how rail freight can support Britain's economy and environment, Rail Partners, 2020, available 2022

¹¹ Delivering Your Goods Benefits of Using Rail Freight, Transport Scotland, 2017, available 2022
¹² Rail Freight - Price and Costs of Rail Transport, UK, 2020, available 2022

¹³ Rail Freight: Benefits and Benefits, 2001, 2024, available 2022

¹⁴ The waste journey, S&P, 2024, available 2022

¹⁵ Delivering for Our Economy, Environment and Regional Workforce, Rail Freight Group, 2024, available 2022



Case Study

Wine on time

Did you know the glass of wine you are drinking may have reached you by rail?

Vats of wine travel by ship to the UK from countries such as Australia, New Zealand, Chile, Argentina and South Africa. The vats travel inside shipping containers which are transferred onto rail at the ports. They are carried by train to Liverpool Rail Freight Terminal, and then onto a bottling facility in Ellesmere Port. This saves additional HGVs travelling on some of the country's busiest motorways as well as bringing benefits to the economy.¹⁴



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Case Study

Parcels as Passengers

InterCity RailFreight is a company that transport parcel sized goods in the unused space of existing passenger rail services. The goods are carried in places such as overhead lockers. There is a surprising amount of spare space on mainline railway passenger services which could equate to a surprising number of HGVs! They transport a broad range of goods, from fresh fish to medical supplies. The concept has been successful elsewhere in the country, with further opportunities for roll-out in the North.



InterCity RailFreight have innovated by using spare space on mainline passenger services to transport parcel sized goods, from fresh fish to medical supplies.



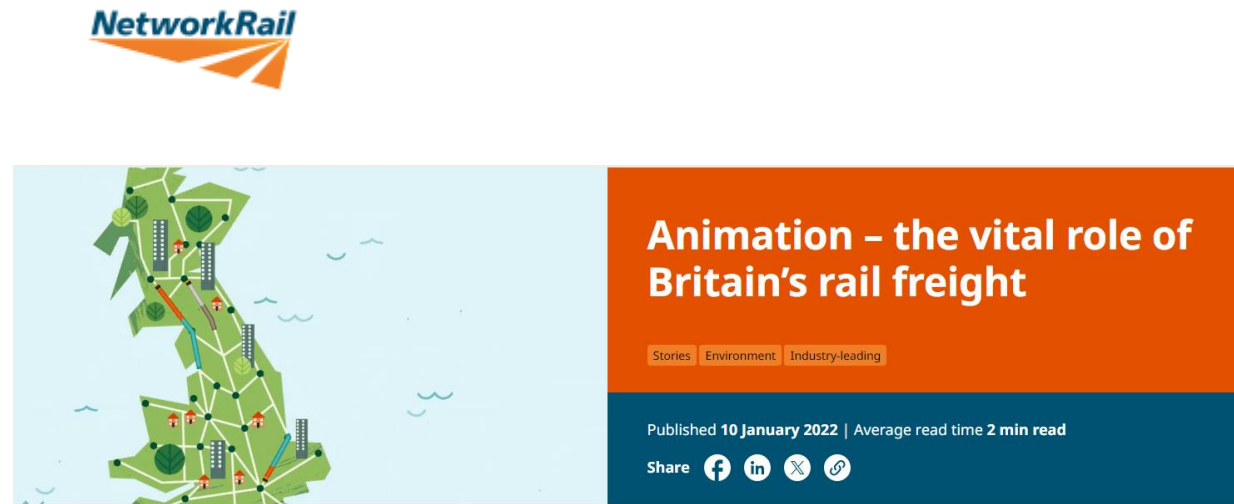
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Network Rail's Animation

Animation - the vital role of Britain's rail freight - Network Rail

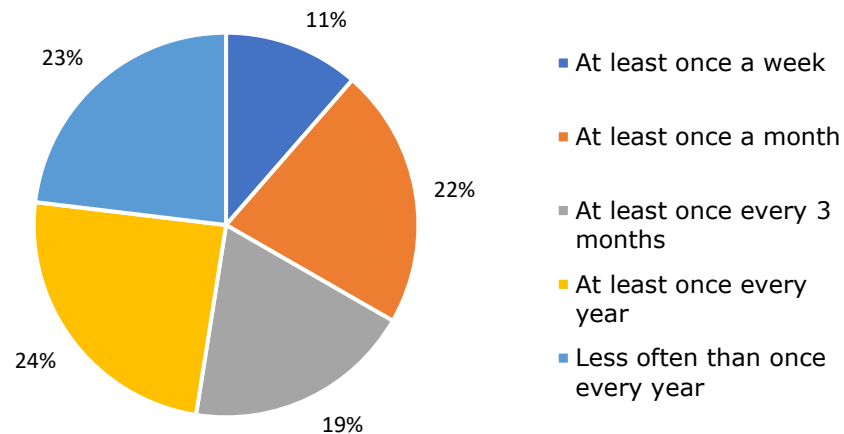


Survey Results

Respondents

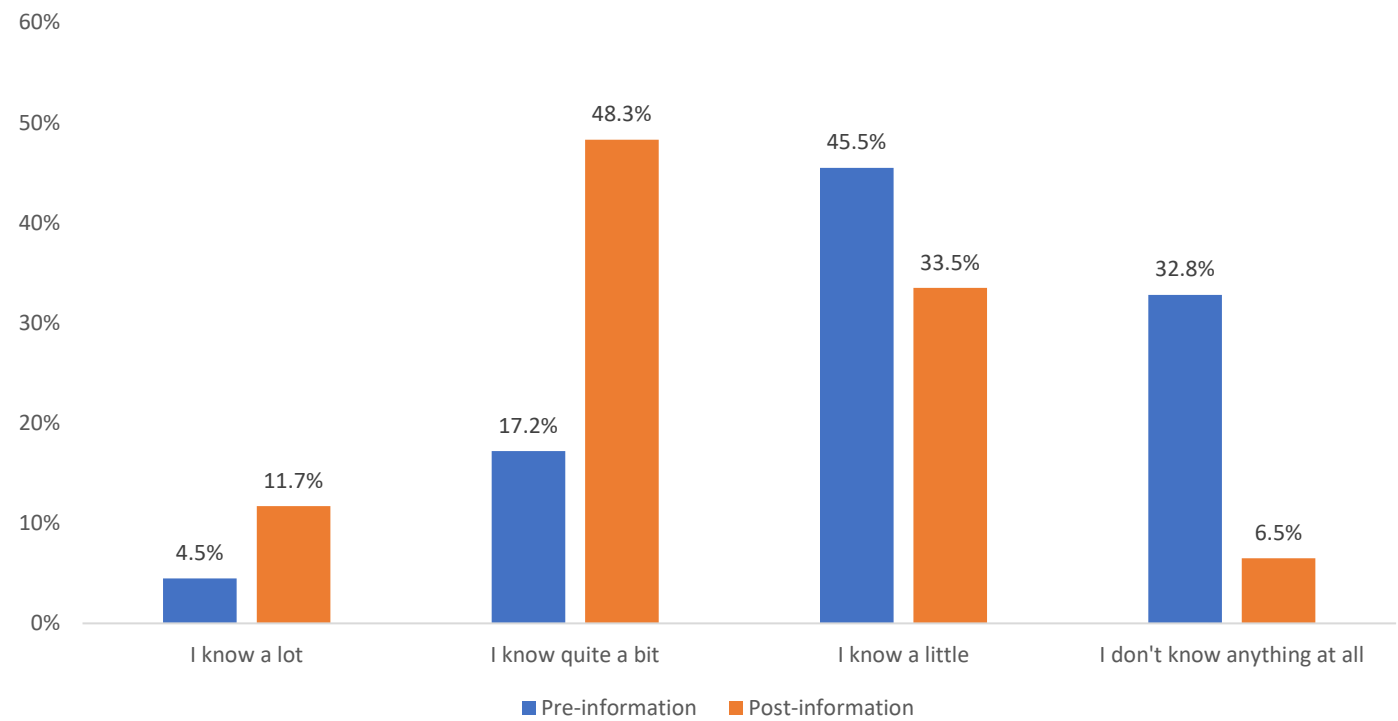


How often do you travel by train?



- 402 respondents
- A mix of ages and locations throughout the North
- 33% of respondents use passenger rail services once a month or more

How much would you say you know about the types of goods and products transported by rail freight services?



Key Findings

- Before the panel received information on the benefits of rail freight, most (78%) knew a little, or nothing at all, about the type of goods transported by rail
- The information on benefits had a notable influence on improving people’s knowledge about the types of goods transported with a shift to 60% knowing a lot or quite a bit

Conclusions

- The lack of knowledge before information provision suggests that limited freight awareness is an issue
- The data suggests that a lack of freight awareness can be effectively tackled with the provision of bite sized and relatable information

	Pre-information	Post-information	Net change
I know a lot	4.5%	11.7%	+7.2
I know quite a bit	17.2%	48.3%	+31.1
I know a little	45.5%	33.5%	-12.0
I don't know anything at all	32.8%	6.5%	-26.3

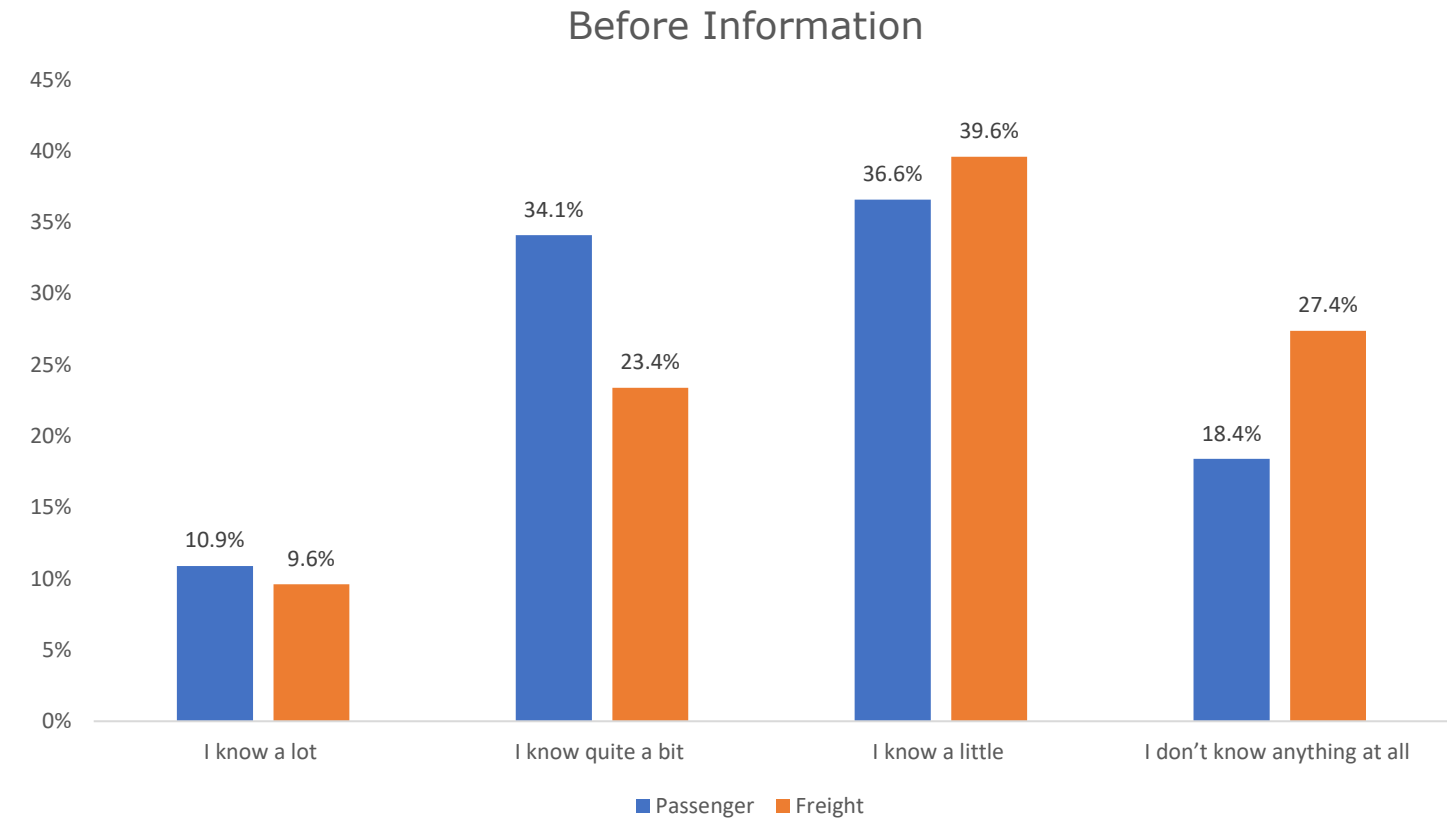
How much would you say you know about the benefits of rail services to society?

Key Findings

- Before the panel received information on the benefits of rail freight, 45% responded positively regarding having knowledge of passenger rail benefits compared with 33% for freight
- More people didn't know anything at all about freight service benefits (27%) compared with passenger (18%)

Conclusions

- The data supports the theory that there is a lack of freight awareness amongst the public



	I know a lot	I know quite a bit	I know a little	I don't know anything at all
Passenger rail services	10.9%	34.1%	36.6%	18.4%
Rail freight services	9.6%	23.4%	39.6%	27.4%

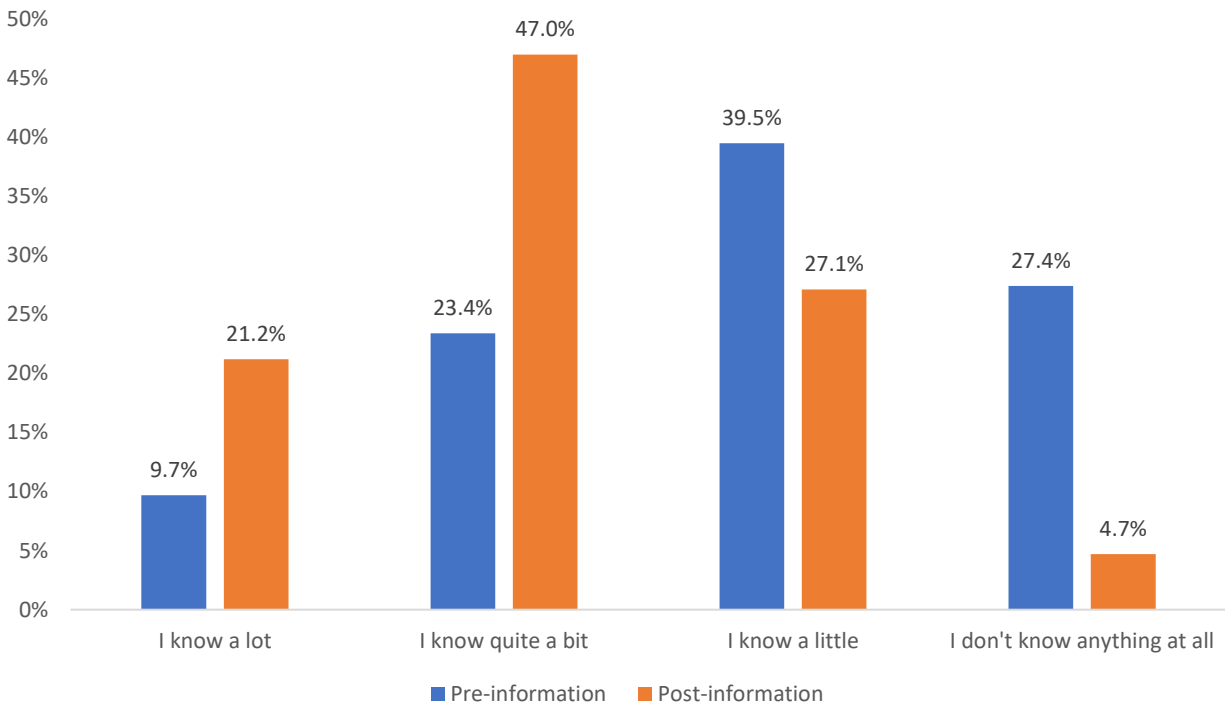
How much would you say you know about the benefits of freight rail services to society?

Key Findings

- Information provision on the benefits of rail freight had a notable positive impact on the public's perceived level of knowledge about rail freight
- Information provision saw a notable shift away from people feeling they 'know a little' or 'I don't know anything at all' towards feeling they 'know a lot' or 'know quite a bit'

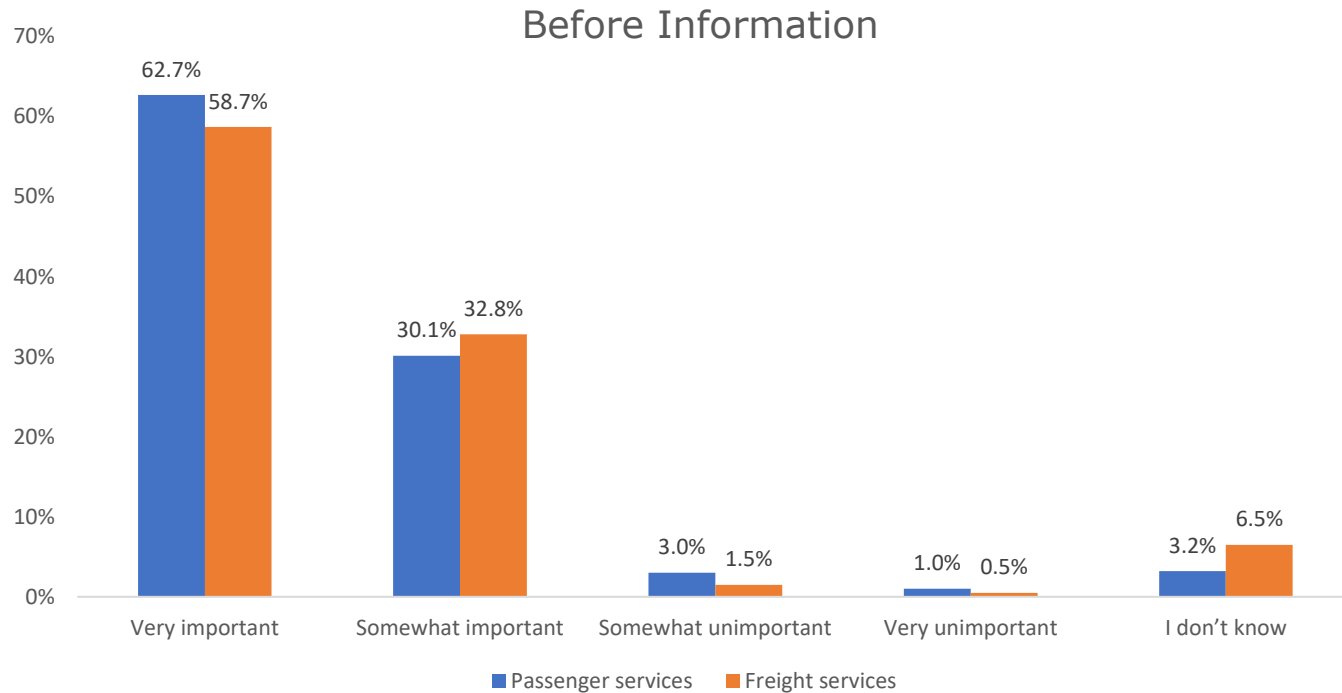
Conclusions

- Limited freight awareness can be remedied by the provision of bite sized and relatable facts



	Pre-information	Post-information	Net change
I know a lot	9.7%	21.2%	+11.5
I know quite a bit	23.4%	47.0%	+23.6
I know a little	39.6%	27.1%	-12.4
I don't know anything at all	27.4%	4.7%	-22.7

How important or unimportant do you think rail services are to society?



	Very important	Somewhat important	Somewhat unimportant	Very unimportant	I don't know
Passenger services	62.7%	30.1%	3.0%	1.0%	3.2%
Freight services	58.7%	32.8%	1.5%	0.5%	6.5%

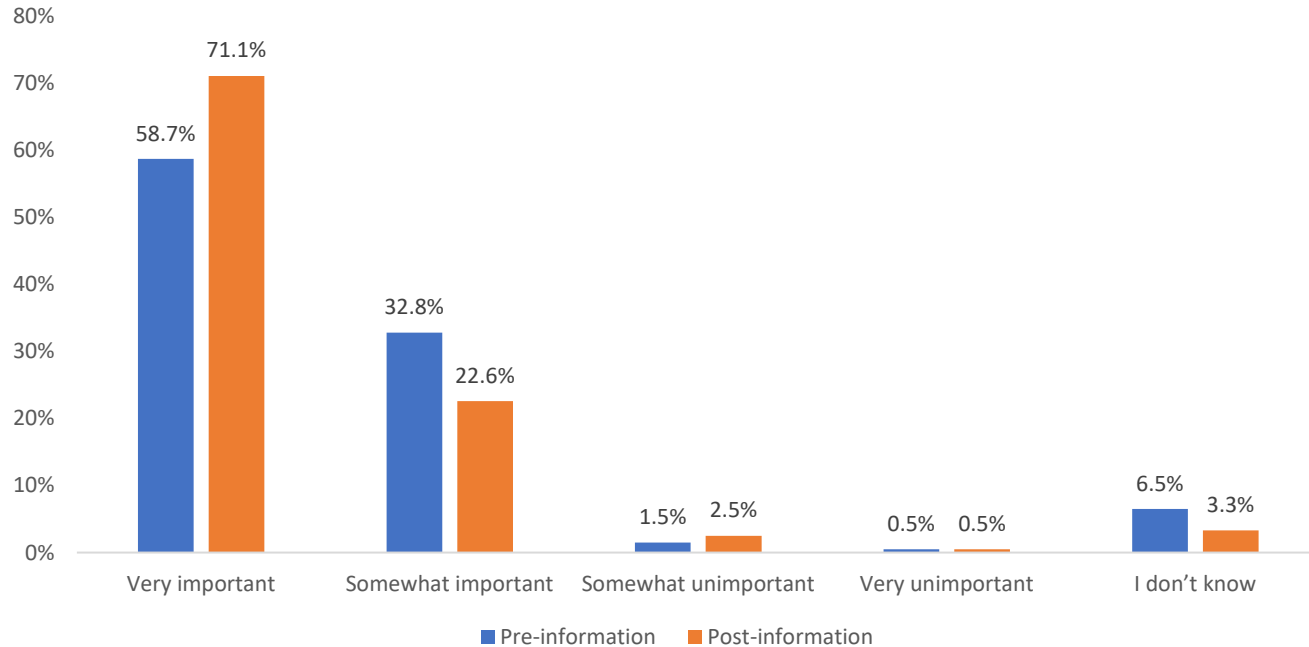
Key Findings

- The results were very similar for both passenger and freight services
- Before information was given on the benefits of rail freight, despite poor knowledge of the type of goods carried by rail, 92% of respondents thought that freight services are important

Conclusions

- Broadly, the public viewed freight services as equally important as passenger services
- This could suggest potential public acceptance if passenger services needed to be altered to accommodate freight growth

How important or unimportant do you think freight rail services are to society?



	Pre-information	Post-information	Net change
Very important	58.7%	71.1%	+12.4
Somewhat important	32.8%	22.6%	-10.2
Somewhat unimportant	1.5%	2.5%	+1.0
Very unimportant	0.5%	0.5%	0.0
I don't know	6.5%	3.3%	-3.2

Key Findings

- Before information was given on the benefits, rail freight services were viewed as important (92%). This increased to 94% after information
- After information, a shift was seen away from 'somewhat important' towards 'very important'

Conclusions

- Despite limited freight awareness, the view of the panel was that freight services are important
- This could suggest potential public acceptance if passenger services needed to be altered to accommodate freight growth

The panel were asked: Do you have any additional comments about rail freight services and their importance for society?

"It's very important because we need this service for delivering products"

"They need to be utilised more often and help take traffic off the roads"

"Would be nice to know more if possible"

"Better for the environment than road transport"

"It takes a lot of traffic off the roads"

"When businesses look to invest in the UK and build in new locations, good transport links make this more attractive. The availability of rail freight means investment is more likely and this brings more jobs for people and tax income for the government"

"Make it clear what the advantages are to everyone"

"More freight carried on the rail network has to be good for the environment"

"With the roads as they are, rail freight is very necessary"

"Time is here now to push Government into finding ways to do this"

"It is better to travel by train because a lot more goods can be transported by rail than by road. It also keeps the roads from being too busy"

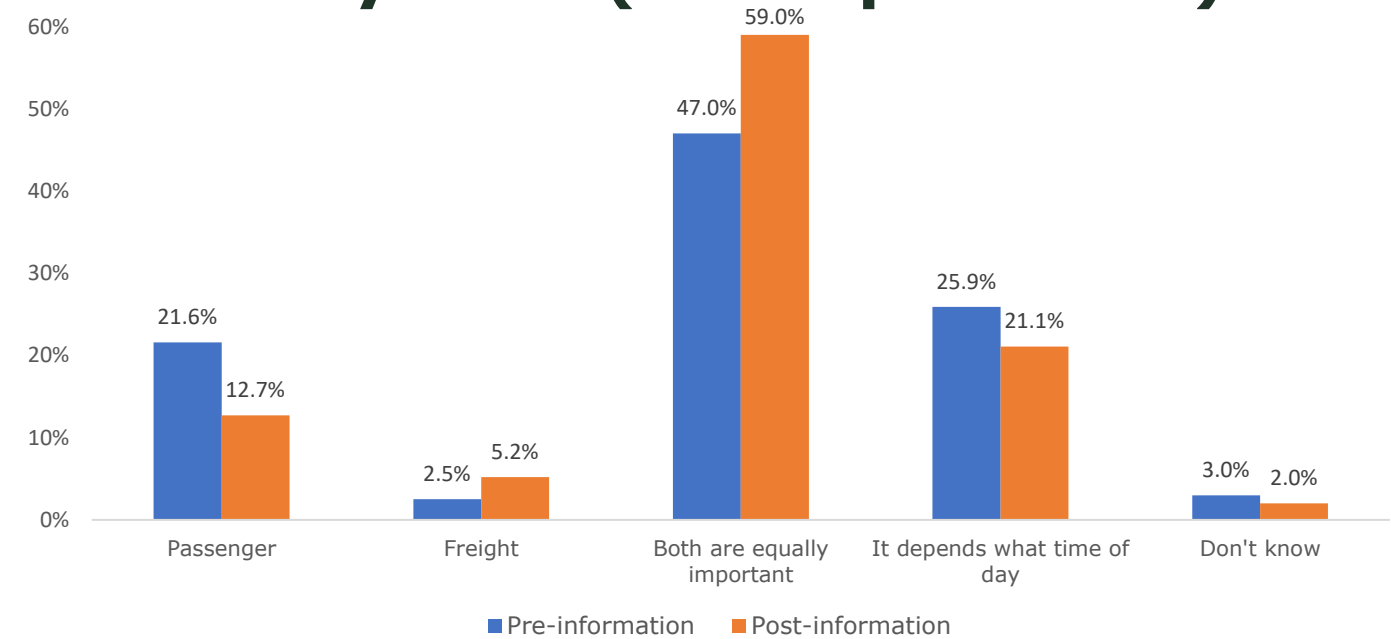
"For environmental reasons and as a way of reducing congestion on the roads, rail freight services are vital."

"More sent by rail would ease road congestion and improve air quality"

"The same as passenger services, you get from A-B quickly rather than sitting in traffic polluting our air"

"There are far too many lorries on the roads so it's a no-brainer to increase freight services and distribution hubs so smaller electric vehicles can transport goods from the hubs"

In the timetabling of rail services, which type of service do you think is the most important to prioritise for railway use? (all respondents)



	Pre-information	Post-information	Net change
Passenger services	21.6%	12.7%	-8.9
Freight services	2.5%	5.2%	+2.7
Both are equally important	47.0%	59.0%	+12.0
It depends on the time of day	25.9%	21.1%	-4.8
Don't know	3.0%	2.0%	-1.0

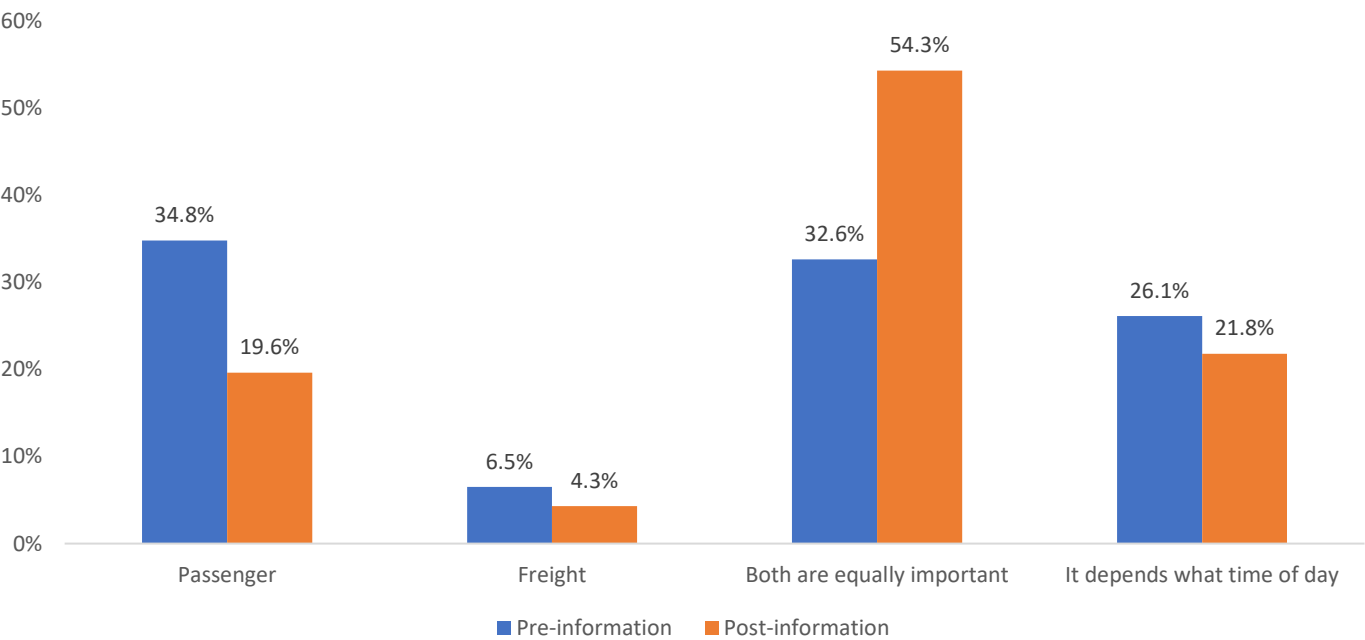
Key Findings

- The most popular response both before and after information was given on the benefits of rail freight was that passenger and freight services are equally important
- The provision of information generally shifted preferences away from passenger services being most important towards passenger and freight being equally important

Conclusions

- Given the general perception of equal importance, this could suggest potential public acceptance if passenger services needed to be altered to accommodate freight growth
- If changes to passenger services needed to be made to accommodate freight growth, pairing this with a public awareness campaign around the benefits of rail freight would maximise support

In the timetabling of rail services, which type of service do you think is the most important to prioritise for railway use? (regular rail users)



	Pre-information	Post-information	Net change
Passenger services	34.8%	19.6%	-15.2
Freight services	6.5%	4.3%	-2.2
Both are equally important	32.6%	54.3%	21.7
It depends on the time of day	26.1%	21.8%	-4.3

Key Findings

- Before information was given on the benefits of rail freight, respondents who travel by rail at least once a week (11%) were relatively evenly split between a preference for passenger services and feeling that passenger and freight are of equal importance
- There was a shift after receiving information towards a feeling that passenger and freight services are of equal importance

Conclusions

- The findings challenge a common assumption that regular rail passenger service users would be opposed to changes to passenger services to accommodate freight growth
- If changes to passenger services needed to be made to accommodate freight growth, pairing this with an awareness campaign around the benefits of rail freight would maximise support

The panel were asked: Do you have any additional comments on the balance between passenger and rail freight services in the North of England?



"It depends on the time of day"

"If freight is at non-peak passenger hours perhaps that would be a better balance"

"I think both are important in contributing to the economic growth of the UK"

"I don't know that much about freight services. Aren't they used more at night?"

"Passengers by day Freight by night"

"I don't know enough about how this is currently arranged to say anything accurately, but I would assume rail freight does bring high economic benefit so should not be forsaken entirely for passenger services"

"They are both a necessity; our roads are over-crowded"

"Rail freight should be expanded"

"I think both passengers and freight are equally important"

"Passengers generally don't have a choice when they travel for work or education so they shouldn't be penalised for this"

"I assume freight services would be outside of commuting hours. In the day passengers should be prioritised, and then out of hours freight should be allowed. It's difficult to even get on a train to work as they are full"

"I have never been inconvenienced by rail freight interfering with my journeys, so I assume whatever arrangements are in place to get these services to interact smoothly work very well"

"We need more of both"

Scenario based time-period questions

- Panel members were given a hypothetical scenario where 'Rail Corridor A' in the North of England is heavily congested with competing passenger and freight service demands
- It runs past a village on the outskirts of a major urban railway hub station. The typical split between *passing* freight and passenger services was set out in the questions. This was based on observed data
- Members were tasked with reviewing the split in different time periods on a typical weekday
- They completed the scenario questions twice - both before and after receiving information about the benefits of rail freight



Scenario posed

'Rail Corridor A' is a key transport artery for Great Britain. It connects the North of England with Scotland, the Midlands, London and the South with frequent, and busy, intercity passenger services. As well as the national function, it also forms a significant part of the North's wider rail network supporting regional and local passenger services.

'Rail Corridor A' is also capable of carrying the country's largest freight trains. In terms of freight the line is well connected to major hub stations, major ports and key inland freight terminals. It provides an alternative to freight travelling by HGVs on the country's motorways and main roads.

These competing passenger and freight demands mean that Rail Corridor A is very congested.

Within the North, 'Rail Corridor A' runs past a village on the outskirts of a major urban railway hub station. At this point on the network, the typical split between passing freight and passenger services on a normal weekday in different time periods is set out in the next questions.

Now imagine that you have been tasked with reviewing the split between passenger and freight services along this important rail corridor.



*** Interpretation of scenario based time-period results ***

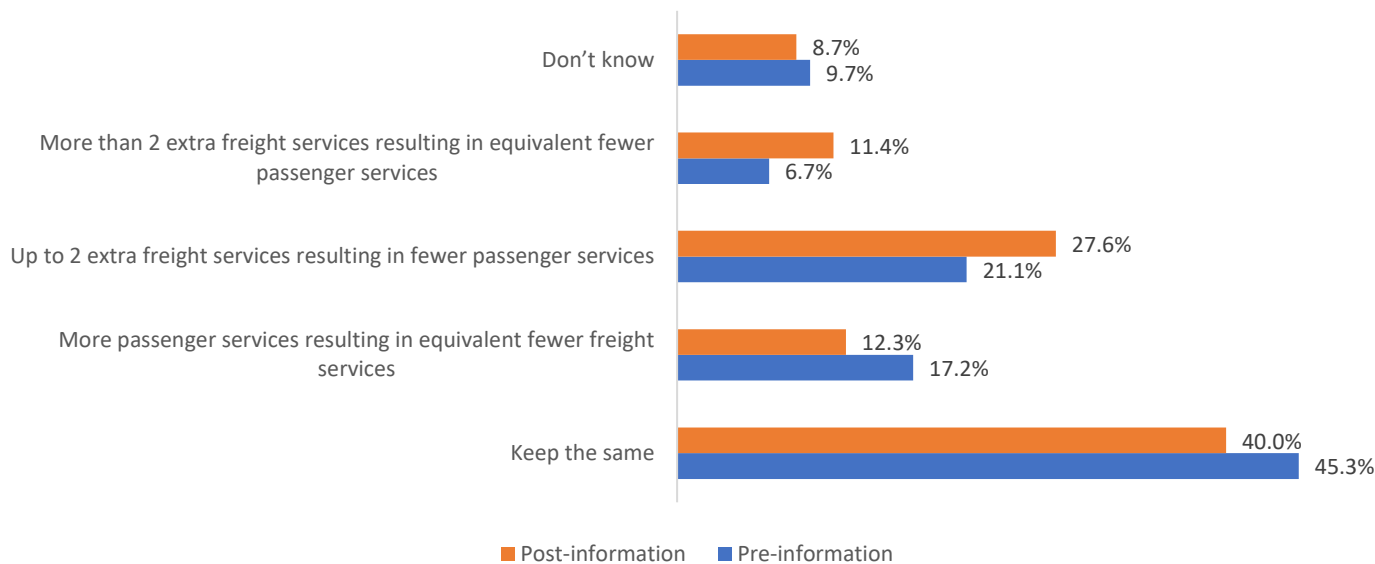


- An assumption made within the questions was that it is necessary to lose some passenger services to accommodate rail freight growth
- The time-period questions were an intentional over-simplification of reality. They balanced the need to represent the complexities of network operation alongside the need to present a small number of simple questions to the panel
- Limited importance should be attached to specific numbers (which were based upon the observed number of passing trains at a particular point on the rail network in the North)
- The intention was to gauge, at a high level, how palatable the loss of passenger services is to the public in the traditional perceived peak commuter periods and traditional perceived off-peak times
- The perceived peaks here are defined as those that were the norm pre-covid
- Actual peak times post-covid are different and more nuanced, but the conclusions drawn here in terms of acceptability of freight growth remain applicable to actual on and off-peak periods

7am – 10am

**** Refer to 'Interpretation of Time Period Results' ****

At 'Village A' on a weekday between 7am - 10am the number of passing services is typically 59 passenger services 2 freight services. What is the right split between passenger and freight?



Key Findings

- There was the most support for keeping the balance the same
- Before information was given on the benefits of rail freight there was appetite amongst 28% to accommodate rail freight growth. This increased to 39% after information provision

Conclusions

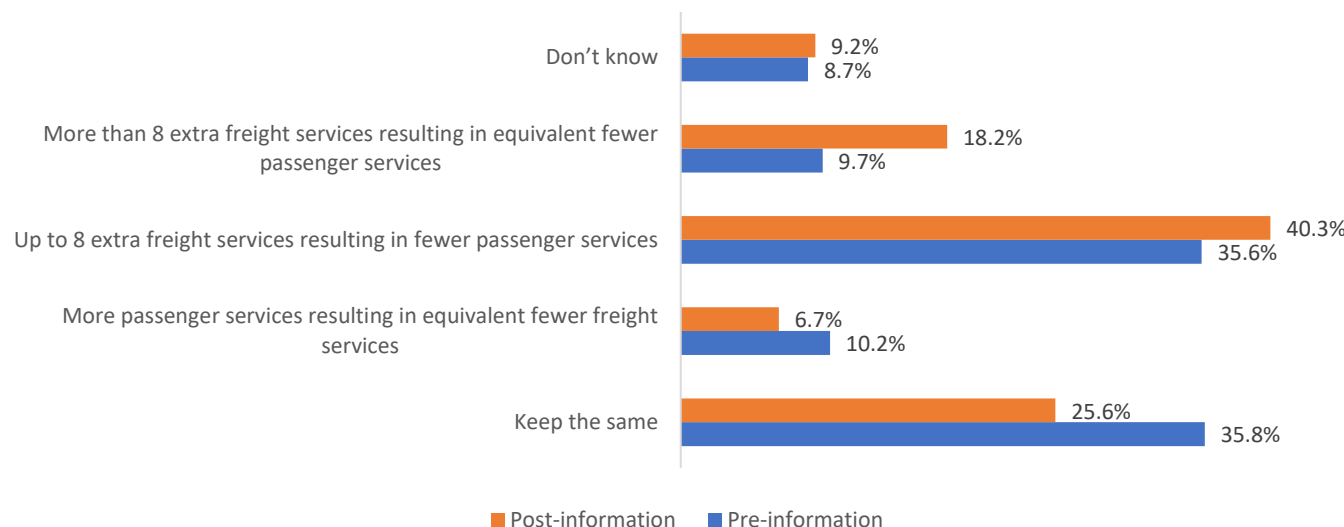
- Overall, there was the most support for keeping the balance the same in the perceived morning peak commuter period
- It can be reasonably assumed that the same preference would apply for the actual peak commuter period on the network

	Pre-information	Post-information	Net change
Don't know	9.7%	8.7%	-1.0
More than 2 extra freight services resulting in equivalent fewer passenger services	6.7%	11.4%	+4.7
Up to 2 extra freight services resulting in fewer passenger services	21.1%	27.6%	+6.5
More passenger services resulting in equivalent fewer freight services	17.2%	12.3%	-4.9
Keep the same	45.3%	40.0%	-5.3

10am – 4pm

**** Refer to 'Interpretation of Time Period Results' ****

At 'Village A' on a weekday between 10am – 4pm the number of passing services is typically 123 passenger services 11 freight services. What is the right split between passenger and freight?



	Pre-information	Post-information	Net change
Don't know	8.7%	9.2%	+0.5
More than 8 extra freight services resulting in equivalent fewer passenger services	9.7%	18.2%	+8.5
Up to 8 extra freight services resulting in fewer passenger services	35.6%	40.3%	+4.7
More passenger services resulting in equivalent fewer freight services	10.2%	6.7%	-3.5
Keep the same	35.8%	25.6%	-10.2

Key Findings

- After information was given on the benefits of rail freight, the majority of respondents (59%) would prefer to accommodate rail freight growth compared with before information (45%)

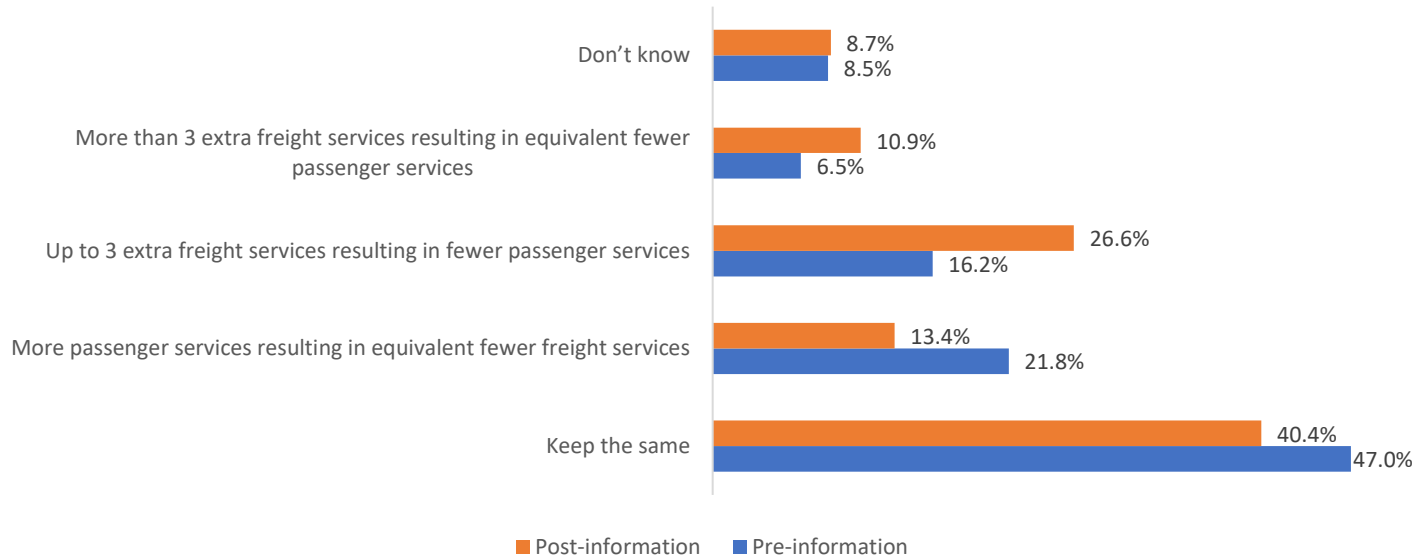
Conclusions

- There may be support from the public for rail freight growth in the perceived daytime off-peak period even when this results in fewer passenger services
- It can be reasonably assumed that the same preferences would apply for the actual daytime off-peak period on the network

4pm – 7pm

**** Refer to 'Interpretation of Time Period Results' ****

At 'Village A' on a weekday between 4pm – 7pm the number of passing services is typically 66 passenger services 4 freight services. What is the right split between passenger and freight?



	Pre-information	Post-information	Net change
Don't know	8.5%	8.7%	+0.2
More than 3 extra freight services resulting in equivalent fewer passenger services	6.5%	10.9%	+4.4
Up to 3 extra freight services resulting in fewer passenger services	16.2%	26.6%	+10.4
More passenger services resulting in equivalent fewer freight services	21.8%	13.4%	-8.5
Keep the same	47.0%	40.4%	-6.7

Key Findings

- The most popular answer was to keep the balance the same
- After information was given on the benefits of rail freight, 38% would support rail freight growth with acceptance this would result in fewer passenger services

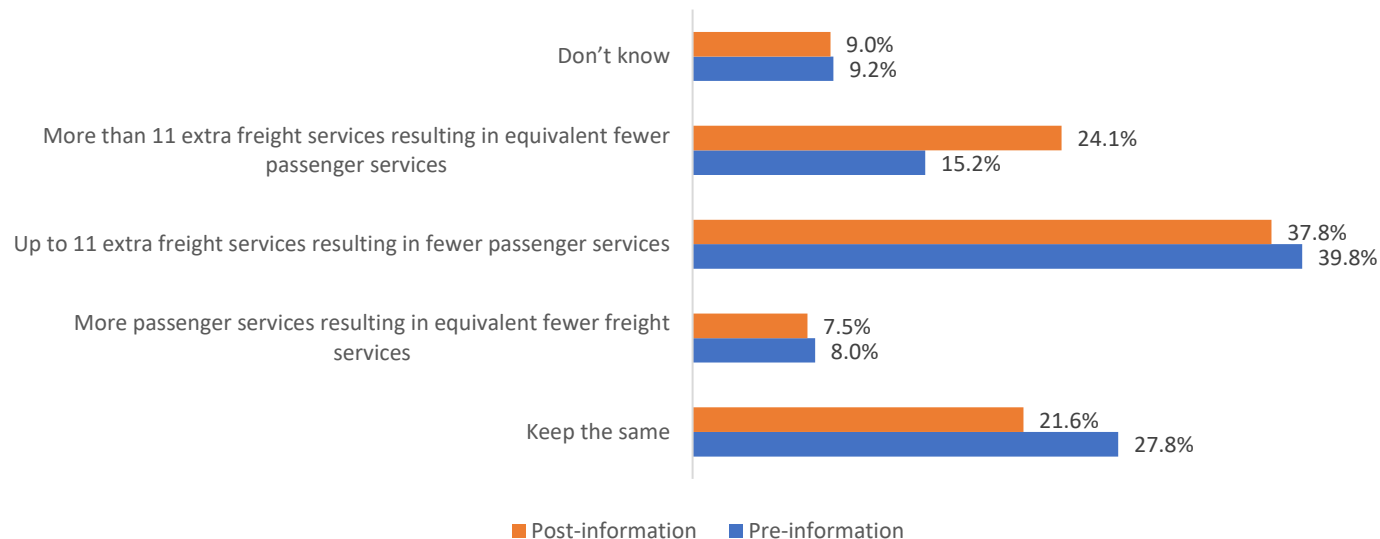
Conclusions

- Overall, there was the most support for keeping the balance the same in the perceived evening peak commuter period
- It can be reasonably assumed that the same preference would apply for the actual peak commuter period on the network

7pm – 12am

**** Refer to 'Interpretation of Time Period Results' ****

At 'Village A' on a weekday between 7pm – 12am the number of passing services is typically 69 passenger services 15 freight services. What is the right split between passenger and freight?



	Pre-information	Post-information	Net change
Don't know	9.2%	9.0%	-0.2
More than 11 extra freight services resulting in equivalent fewer passenger services	15.2%	24.1%	+8.9
Up to 11 extra freight services resulting in fewer passenger services	39.8%	37.8%	-2.0
More passenger services resulting in equivalent fewer freight services	8.0%	7.5%	-0.5
Keep the same	27.8%	21.6%	-6.3

Key Findings

- Before information was given on the benefits of rail freight, most of the panel would prefer additional freight services (55%) compared with a larger majority post-information (62%)

Conclusions

- There may be support from the public for rail freight growth in the evening / nighttime period even when this results in fewer passenger services
- It can be reasonably assumed that the same preference would apply throughout the night

Summary of key findings



- At present, 94% of total kilometres travelled by rail are by passenger services
- A lack of freight awareness affects the preferences of the public, but it can be effectively tackled with the provision of bite- sized and relatable facts
- The public's recognition of the importance of rail freight services was comparable to passenger services. Of those surveyed, 22% responded that passenger services are of greater importance than freight. After receiving information on the benefits of rail freight, this figure decreased to 13%
- The findings may challenge a common assumption that regular rail passengers would be opposed to changes to passenger services to accommodate freight growth
- Although rail demand has changed post-COVID, the overall public view was that the passenger / freight balance should remain unchanged during the perceived peak commuting times. Conversely, support was shown for the growth of rail freight at perceived off-peak times
- This research could suggest potential public acceptance if passenger services needed to be altered to accommodate freight growth. If this was the case, the data shows that pairing this with an awareness campaign around the benefits of rail freight is likely to maximise support