GBR's future approach to freight mark-ups

Industry Engagement to shape GBR's Charges Scheme ahead of PR28

Introduction

– Gareth Russell

Workshop purpose

- This is the tenth of our workshops exploring options for GBR's future charges scheme: today we will focus on freight demand elasticity analysis informing GBR's approach to setting mark-ups (for freight).
- During the workshop we will recap the **current approach taken by the Office of Rail and Road (ORR)** to set mark-ups (the Freight Specific Charge, FSC) on specific freight market segments. We will then briefly recap the **legislative changes in the Railways Bill** to contextualise the changes needed under GBR.
- We will provide a comprehensive overview of the **rail freight demand elasticity analysis** that has been completed for Network Rail, in advance of GBR setting track access charges for Funding Period 1 (FP1; 2029 to 2034), including the approach to market segmentation and the efficient operator test. The report by MDS Transmodal has been circulated and published online, ahead of today's workshop.
- We will finish by exploring our **early-stage policy position on which freight markets could be subjected to a mark-up in FP1** which has been informed by the demand elasticity analysis.
- The key objective of today's session is to seek stakeholder views on our current position ahead of formal consultation by GBR in Spring 2027. Caveat: All policy options discussed during the workshop carry no legal weight or commitment that they will come into effect. We are seeking industry views to help shape our proposals, ahead of formal consultation. Toda's focus is policy options, not detailed calculation of rates.

Recap of ORR policy on freight mark-ups

– Conor Murrells

Understanding ORR freight mark-up policy in CP7

Over successive Periodic Reviews, ORR has charged a mark-up on freight services to recover a proportion of Network Rail's fixed costs, based on an assessment of each market's ability to pay.

PR13 (CP5) 1

ORR introduced the Freight Specific Charge (FSC), to increase contributions from freight operator's to fixed costs and reduce reliance on public funding.

PR18 (CP6) 2

The FSC was consolidated with the Freight Only Line charge to create a single mark-up for freight services, know as the Infrastrcuture Cost Charge (ICC).

PR23 (CP7) 3

The current policy is to levy the ICC based on the Market Can Bear (MCB) test. The charge is currently levied on ESI Coal, Iron Ore, Spent Nuclear Fuel, and ESI Biomass.

The ICC is still referred to as the FSC in access contracts.

In setting policy on mark-ups, ORR has broadly taken a three-tier approach:

1. Review and define freight market segments, distinguishing markets based on common characteristics and commercial position;
2. Explore market segment demand elasticity as a result of hypothetical increases in track access charges;
3. A qualitative assessment of market segments' ability to pay. This included consultation and independent analysis of broader market conditions.

ORR's PR23 Final Determination

"A commodity can bear an ICC which is associated with less than a 10% modelled reduction in rail freight demand".

Source: PR23 DD charges policy position.

The calibrated rates (in 23/24 prices) determined in PR23 were:

Commodity Type	ICC rate (£ per kgtm)
Biomass	1.74
Coal ESI	1.25
Iron Ore	1.28
Spent Nuclear Fuel	21.23

Note: the Freight Only Line charge was levied from PR08.

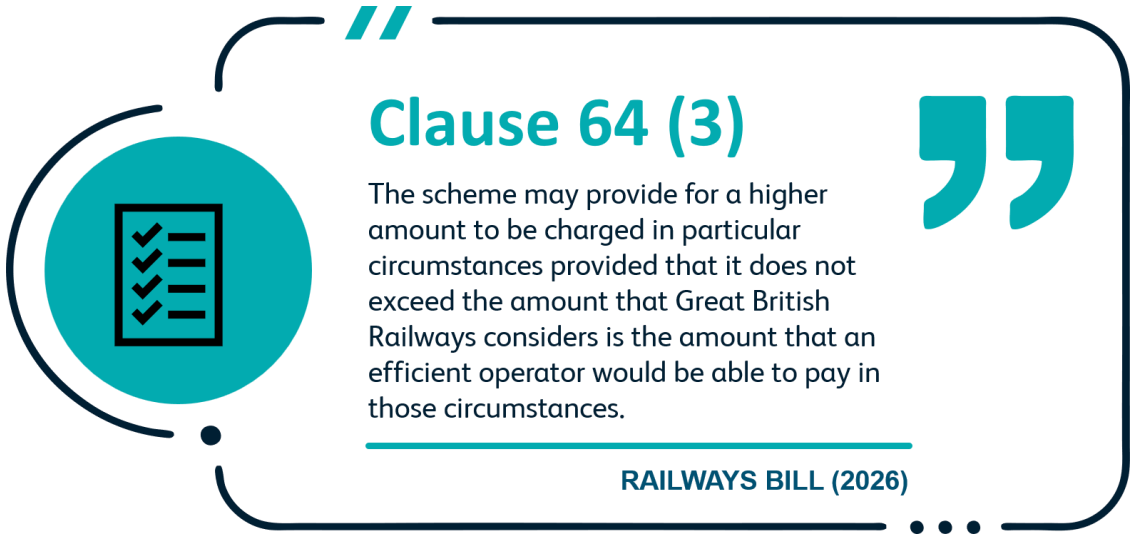
Legislative context & problem statement

– Conor Murrells

Key legislative principles of the Railways Bill – mark-ups

Ahead of further analysis on freight mark-ups under GBR, we have tested the policy intent and sought a legal review of our proposed approach.

- As with ORR today, GBR is permitted to set charges at a higher amount than Costs Directly Incurred, only where GBR considers that an efficient operator could afford to pay the additional ('mark-up') charge. GBR is intended to have discretion in how this framework is applied.
- Policy intent: the shift from the ORR's market can bear test to GBR's efficient operator test reflects the need to establish a domestic statutory framework, following the replacement of EU-derived regulations, rather than a change in policy intent.
- Legislative compliance: our approach reflects internal legal advice that the assessment should consider comparable, like-for-like services when determining what an efficient operator would be able to pay "in those circumstances", with market segmentation providing the basis for that comparison.



Problem statement – balancing key trade-offs

With GBR assuming responsibility for setting mark-ups in FP1, we need to consider the appropriate balance between private sector contributions to the railway's fixed costs and GBR's long-term freight growth target commitments.

In setting policy on this topic, GBR must balance important trade-offs:

- *Statutory duties:* promoting the carriage of goods by rail (i.e., by limiting price shocks and protecting against modal shift away from rail), as well as considering the costs to be met from public funds and the efficient use of these funds;
- *Charges objectives:* proportionate and sustainable cost recovery linked to providing infrastructure used by train operators, as well as supporting planning and investment (i.e., developing a charges scheme conducive to attracting inward investment from third parties).

KEY CONSIDERATIONS

- ***How GBR should assess the potential impact of higher charges on rail freight volumes when determining mark-ups***
- ***How GBR should understand growth markets for rail freight***
- ***How GBR should consider recent trends in relation to markets currently subject to a mark-up***
- ***How GBR should be explicit about assumptions and decisions relating to the efficient operator test.***

Summary of demand elasticity analysis

– Conor Murrells

MDS Transmodal (MDST) research

- We commissioned MDST to provide independent advice on which freight markets GBR could consider to be candidates for being charged mark-ups in FP1 under the revised legislative framework set out in the Railways Bill.
- **Scope**: Reviewed ORR's existing market can bear framework; reviewed freight market segments; modelled demand elasticity for each market segment; and presented independent conclusions about candidacy for mark-ups.
- **Output:** MDST's research places each market segment into one of three categories: strong, marginal and weak candidates for mark-ups. Crucially, this is predicated on an assessment of what an efficient operator can pay.
- The research provides recommendations for further consideration by GBR. It does not provide a definitive answer, rather an evidence-base to support GBR decisions.

OVERARCHING ASSUMPTIONS

1. **At present, there is no ex ante target for how much mark-ups are meant to raise.** MDST is modelling traffic changes as a result of hypothetical track access charge increases, to provide a view on demand elasticity.
2. **Mark-ups are to be calculated at the market segment level**. Approaches will not explore setting mark-ups at the level of individual operators or individual services.
3. **The results are prior to any re-routing, and not subject to capacity constraint.** The 2033/34 re-routing has little impact on tonne kms, but the results are very slightly different from those in the forecasting report.
4. **This work is intended to be representative of the whole of FP1.** MDST has straight-line interpolated between 2025 and 2033/34 to the middle year of the FP1 period: 2031/32.

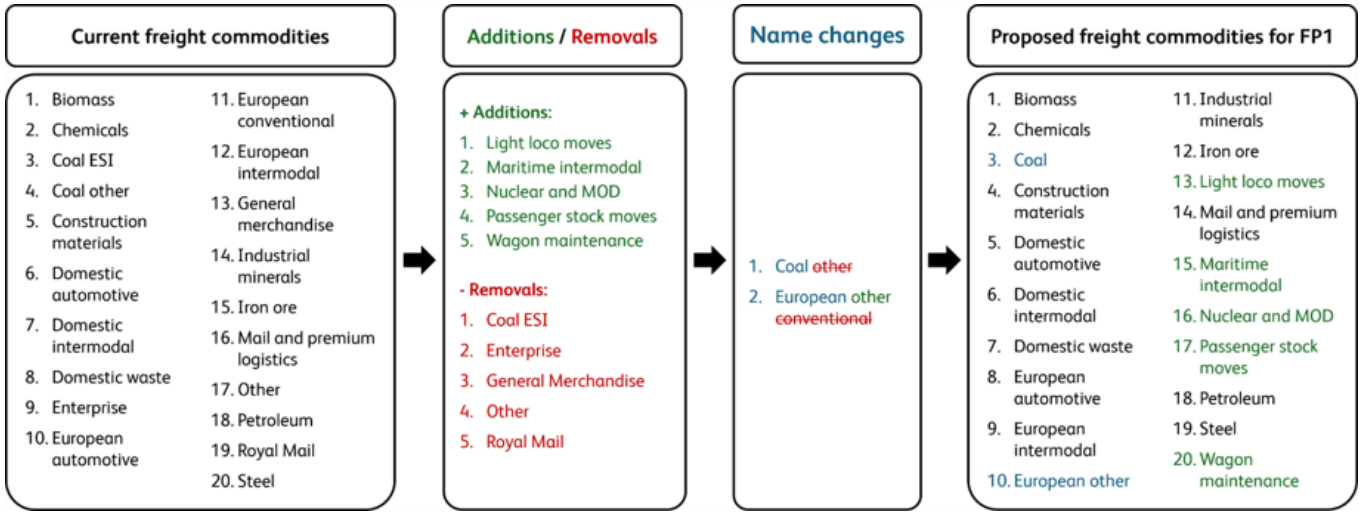
(1) Defining distinct freight market segments for mark-ups

Stage one of the analysis by MDST was to validate the list of market segments provided by Network Rail and to ascertain if it adequately captures the market for rail freight.

To underpin the calculation of mark-ups for freight, we have undertaken a structured review of the freight commodity list (see *right*). This was explored in workshop 1 on mark-ups.

- This list of market segments will also be used consistently to underpin VUC commodity rates.

Having reviewed our list of market segments, MDST has advised that (1) 'Steel' *could* be further disaggregated to differentiate flows of scrap metal; and (2) MOD *could* be separated from Nuclear traffic; and (3) Chemicals could be aggregated with Petroleum.



Overall MDS Transmodal has reviewed this list of commodities; it concluded that all rail freight that is likely to be operating in FP1 is represented.

Workshop discussion point:
Is there evidence to support MDST's proposed changes to the market segmentation, or evidence that would support the segmentation shown above?

(2) Representing an efficient operator

In stage two, MDST considered a notionally representative operator within each market segment, to ensure the legislative efficient operator test is underpinned throughout the analysis.

- The cost models define an efficient operator by looking at all traffic movements within each market segment and using the 75th percentile as a benchmark for key operating characteristics.
- The cost components inherent in the model include: track access charges, rolling stock capital costs, depreciation, interest rates, staff costs, fuel, and maintenance.
- This has been considered alongside assumptions about tonnes per wagon, HGV or train, average speed, dwell times, and terminal changes. These are shown *right*.
- **We are confident that this approach is a reasonable representation of an efficient operator, within a clearly defined market segment, as it uses a benchmarking approach of actual train movements (as opposed to a hypothetical model).**



Sensitivity test: the analysis found that demand elasticity in intermodal and bulks markets, on the whole, was broadly similar when determining efficiency as the 50th percentile

Market Segment	Trailing length (m)	Gross trailing weight of loaded trains (t)	Average speed (kph)
Biomass	470	2,375	53
Chemicals	476	2,600	46
Coal	470	2,475	47
Construction Materials	403	2,428	47
Domestic Automotive	423	620	46
Domestic Intermodal	656	1,290	67
Domestic Waste	464	1,391	44
European Automotive	423	620	46
European Intermodal	656	1,290	67
European Other	335	2,381	47
Industrial Minerals	470	2,475	47
Iron Ore	470	2,475	47
Maritime Intermodal	560	1,480	53
Petroleum	476	2,600	46
Steel	349	2,161	45

(3) Modelling the impact of charge increases: scenarios

In stage three, MDST modelled the impact of charge increases to illustrate demand elasticity between transport modes in each segment.

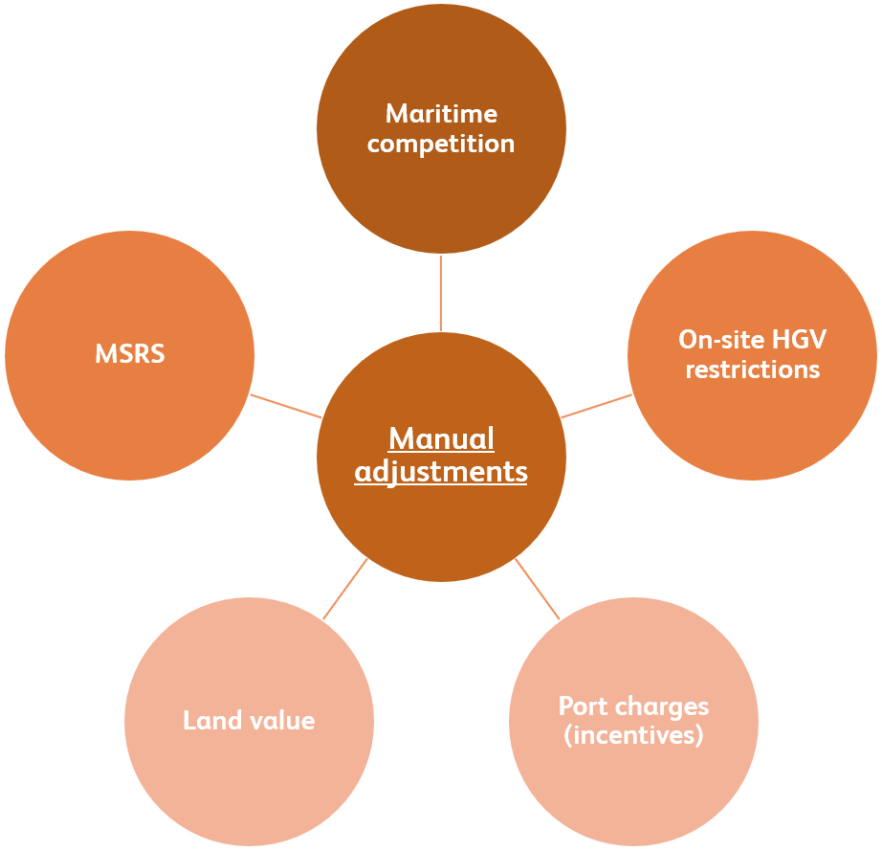
- The analysis has considered four separate increases to track access charges:



- These modelled increases are intended to represent a broad range of hypothetical increases in track access charges. This differs from previous work completed by ORR in several ways. First, it starts at first principles approach assessing elasticity for all market segments. It also considers £/kgtm increases, rather than a percentage increase. Each piece of analysis has also taken a different view on how to approach levels of traffic loss.
- The mid-two scenarios broadly allow us to model the impacts around the current ICC rate, which are mostly set around the £1.50 mark-up. The obvious exception is Spent Nuclear Fuel. While the +£10.00 scenario is considerably lower than the current ICC for this market segment, we considered this to be an appropriate increase to ensure that other modelled results are worthwhile to understand.

(3) Modelling the impact of charge increases: elasticity results

- The following two slides show the results of MDST's core elasticity analysis.
- In many cases, MDST's model (GBFM) was used directly to quantify the response to increases in track access charges. GBFM predominantly considers road versus rail competition, so MDST made manual adjustments to consider real-world issues that are not included in the model. Examples of these are shown right.
- Where a particular market is dominated by, or is entirely by rail, there is normally little scope for mode shift to road, so GBFM does not well-represent the likely responses to increased TAC for those markets. For these markets MDST has used expert judgement to consider elasticity impacts.
- The results shown on Slide 15 (with the green banner) are those well-represented in GBFM. Whereas the results on Slide 16 (with the orange banner) are those that have also relied on judgement.
- Note: when considering the results, a smaller percentage increase represents a smaller loss of traffic to other modes (meaning the inelastic markets are those closest to 0%).



(3) Modelling the impact of charge increases: elasticity results

Market segments	Gross tonne kilometres (million)	Lost % for the TAC increase (£/kgtm) scenarios			
		£0.30	£1.00	£3.00	£10.00
Maritime intermodal	19,026	2.1 %	9.9 %	27.8 %	71.6 %
Domestic intermodal	4,472	4.2 %	12.4 %	34.9 %	77.0 %
Construction materials	10,402	1.8 %	3.4 %	11.8 %	40.8 %
Domestic Automotive	403	1.2 %	3.7 %	10.6 %	62.9 %
European Automotive	66	4.6 %	14.7 %	38.4 %	80.7 %
European intermodal	44	4.6 %	14.7 %	38.4 %	80.7 %
European other	202	4.6 %	14.7 %	38.4 %	80.7 %
Industrial minerals	573	1.2 %	2.3 %	7.1 %	24.0 %
Petroleum	910	0.1 %	0.2 %	0.8 %	2.5 %
Steel	2,462	0.4 %	2.4 %	8.4 %	32.2 %
Chemicals	0	0.4 %	5.6 %	10.1 %	21.5 %

(3) Modelling the impact of charge increases: elasticity results

Market segments	Gross tonne kilometres (million)	Lost % for the TAC increase (£/kgtm) scenarios			
		£0.30	£1.00	£3.00	£10.00
Iron ore	*168*	*0.0%*	***0.1%***	*0.3%*	*1.0%*
Coal	*106*	*0.0%*	***0.1%***	*0.3%*	*1.0%*
Biomass	1,470	0.9 %	**3.1%**	9.4 %	31.5 %
Domestic waste	*751*	*0.0%*	***0.1%***	*0.3%*	*1.0%*
Engineering haulage	*2,571*	*0.0%*	***0.0%***	*0.1%*	*0.2%*
Nuclear and MOD	*68*	*0.0%*	***0.1%***	*0.3%*	*1.0%*
Light locos	385	1.8 %	**6.7%**	19.6 %	52.8 %
Passenger stock moves	*324*	*0.0%*	***0.1%***	*0.3%*	*1.0%*
Wagon maintenance	*55*	*0.0%*	***0.1%***	*0.3%*	*1.0%*
Mail & Premium Logistics	~	~	~	~	~
Carbon capture, usage and storage	~	~	~	~	~
Hydrogen	~	~	~	~	~

(3) Modelling the impact of charge increases: sensitivities

To better understand the impact of charges increases we have considered a range of sensitivity tests. None of these sensitivity tests are recommended for further consideration.

Disaggregating intermodal by distance

1

Journey-length disaggregation is not recommended for intermodal traffic: losses generally increase with distance (0.6% at 100–200km vs 16.1% at 500–600km at £1/kgtm), providing no evidence of greater resilience at longer distances.

Disaggregating bulks by distance

2

Journey-length disaggregation is not recommended for bulk traffic: modelling shows no consistent evidence of greater resilience at longer distances, with losses of 2.7–3.9% across the main 0–400km bands at £1/kgtm; identifying potentially rail-secure flows would also be difficult.

Disaggregating all traffics by volume

3

Volume-based disaggregation is not recommended: at £1/kgtm, traffic losses range from -0.5% to 12.6%, with no evidence that higher-volume flows are consistently more resilient. Differentiation could also discourage growth and distort competition.

Disaggregating scrap metal from steel

4

The modelling indicates materially greater sensitivity to TAC, with 5.9% of traffic lost at a £1/kgtm increase compared with 1.1% for other Steel. However, this could add complexity to billing and reporting.

(4) Independent advice on candidates for mark-ups

The final stage of the analysis by MDST presents conclusions, describing each market segment's candidacy for a future mark-up

- To provide a provisional view of each market segment's candidacy for a future mark-up, MDST has taken a purely quantitative approach, using the demand elasticity results to place each segment into one of three categories. The results are shown below.

01 Weak cases

Not suitable candidates for mark-ups

Carbon capture, usage and storage <> Domestic Intermodal <> European Automotive <> European Intermodal <> European Other <> Hydrogen <> Mail and Premium Logistics <> Maritime Intermodal

02 Marginal cases

Marginal candidates for mark-ups

Biomass <> Chemicals <> Construction Materials <> Domestic Automotive <> Industrial Minerals <> Light Locomotives <> Scrap Metal <> Steel

03 Strong cases

Strong candidates for mark-ups

Coal <> Domestic Waste <> Iron Ore <> MOD <> Nuclear <> Passenger Stock Moves <> Petroleum <> Wagon maintenance

How did MDST define an acceptable loss of traffic in the report, and why?

Strong candidate (low elasticity)	**<1%**
Marginal candidate (mixed or sensitive)	**1% to 7%**
Weak candidate (high elasticity)	**>7%**

These parameters were chosen based on the distribution of the results and using a judgement based on previous ORR decisions and GBR's duty to promote rail freight.

Our emerging policy proposals

– Conor Murrells

Interpreting the advice from MDST: filtering steps

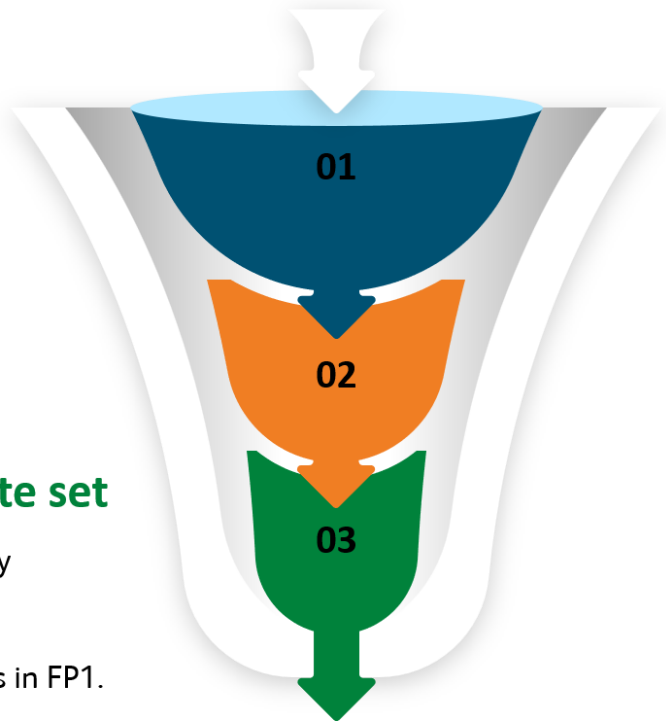
The following slides set out our initial interpretation of how the MDST analysis could be used to identify candidate market segments for a potential mark-up. This is a starting point for discussion, and we welcome views on how the assessment should be refined.

1. Exclude weak cases

Weak cases could be excluded based solely on the MDST evidence. These markets would then not be considered for mark-ups in FP1.

3. Determine candidate set

Relevant strong cases (plus any marginal cases retained after assessment) would become candidates for future mark-ups in FP1.



2. Assess marginal cases (alongside strong cases)

Wider evidence would be used to assess eligibility where the quantitative result is mixed or sensitive. Criteria could include:

1. Elasticity in context
2. Growth potential
3. Internal rail traffic
4. Novel or emerging markets

Workshop discussion point:

What additional evidence should GBR consider before deciding whether a marginal candidate should be subject to a mark-up? Which of these criteria should carry the greatest weight?

Assessing marginal cases

Workshop discussion point:
Are the proposed exclusions supported by the evidence, and are there any markets for which the stated rationale does not accurately reflect current or expected conditions?

Marginal cases (from MDST)

- Biomass
- Chemicals
- Construction materials
- Domestic automotive
- Industrial minerals
- Light locomotives
- Steel (inc. scrap metal)

+ two markets considered "strong cases" for consideration by MDST

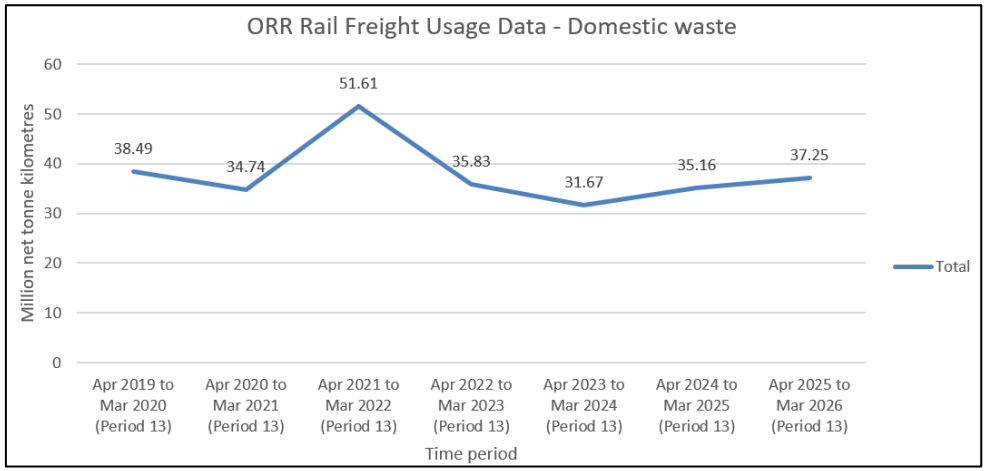
Market segment	Key considerations	Outcome
Biomass	Potential consolidation at a single rail-served site and historic ability to pay.	✓
Chemicals	Material loss of traffic and highly uncertainty. Heterogenous flows could face different competitive conditions.	✗
Construction materials	Identified as a high growth market, with direct competition by sea and road increasing costs for multi-modal transportation.	✗
Domestic automotive	Low baseline and not identified as a growth market.	✗
Industrial minerals	Evidence of market decline by rail undermines ability to pay	✗
Light locomotives	Internal to the rail supply chain and considered incongruent with mark-up policy	✗
Steel (incl. scrap metal)	Treating as a homogenous market segment and strategically important flows could support growth	✗
Passenger stock moves	Internal to the rail supply chain and considered incongruent with mark-up policy	✗
Wagon maintenance	Internal to the rail supply chain and considered incongruent with mark-up policy	✗

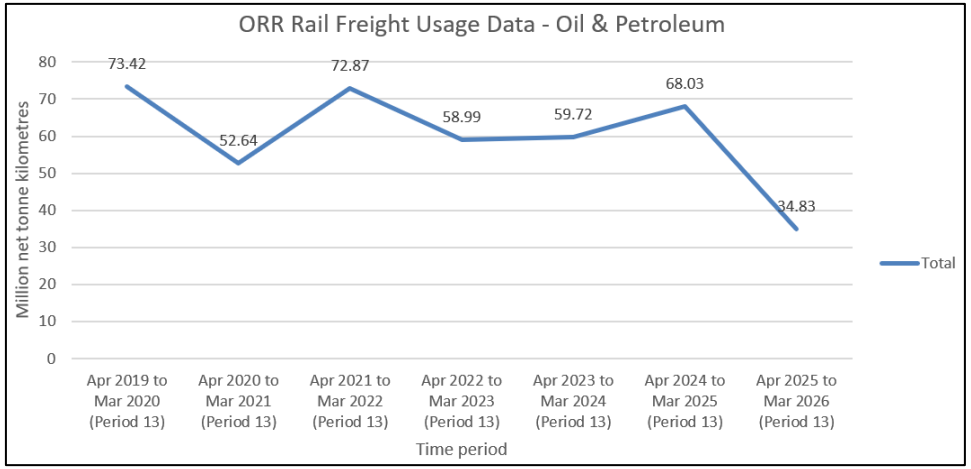
Further analysis: Domestic Waste and Petroleum

Note: these markets have emerged through our analysis and require further exploration and evidence before we reach a view on the treatment of these markets.

Domestic waste

- In PR23, CEPA recommended to ORR that domestic waste volumes are monitored in CP7, identifying the opening of a rail-linked transport hub in London in 2021.
- Ahead of FP1, MDST has advised that most traffic serves rail-connected sites in Teesside, Bristol and Chesire.
- Analysis of market volumes by rail using published ORR data shows that volumes have increased since the end of CP6.





Petroleum

- In PR23, demand elasticity analysis consistently showed low elasticity which is comparable to our FP1 analysis.
- However, analysis of market volumes by rail using published ORR data shows that volumes have decreased significantly over the past 12 months.
- We believe it is too early to rule this market out, but further work is required to understand market conditions better.

Our emerging policy position

Workshop discussion point:
Is there evidence that any of the proposed candidates for mark-ups would experience a materially greater response in loss of traffic than our analysis indicates, during FP1?

We have considered the analysis and variables such as historic market trends, freight forecasts, and policy changes. Our current policy position is summarised below.



We do not expect mark-ups on these freight market segments in FP1: Carbon capture, usage and storage; Chemicals; Construction Materials; Domestic Automotive; Domestic Intermodal; European Automotive; European Intermodal; European Other; Hydrogen; Industrial Minerals; Light Locomotives; Mail & Premium Logistics; Maritime Intermodal; Passenger Stock Moves; Steel or Wagon maintenance



Our initial assessment identifies Coal, Biomass, Domestic Waste, Iron Ore, Nuclear & MOD, and Petroleum as candidate markets for further consideration for a potential mark-up in FP1. For many of these markets, the modelling suggests that a mark-up of between £1 and £3/kgtm could be applied with a modelled traffic reduction of less than 1%.

Next steps: we will continue to consider whether an FSC should apply and, if so, at what level for each market segment. This will form part of a holistic assessment alongside VUC rate increases (and potential decisions about phasing). Further work will also be undertaken on the ability to pay of Domestic Waste and Petroleum.

Next steps

– Gareth Russell

Summary and next steps

- The purpose of today's session has been to provide an overview of the work completed by MDS Transmodal.
- MDST has reviewed our updated segmentation and modelled elasticity of these markets based on an efficient operator. The results suggest materially different levels of responsiveness across freight markets.
- GBR's emerging view is that a limited group presents a strong case for mark-ups. Other markets are proposed for exclusion because of elasticity, uncertainty, growth, emerging status or their role within the rail supply chain.
- We will continue to consider whether an FSC should apply and, if so, at what level for each market segment, ahead of formal consultation.

Key dates / Look ahead – upcoming charges workshops

Overview of charges proposals on 13 January 2027 – this will be a concluding session where we present our proposals ahead of formal consultation.

For more information on our charges and performance workshops, please visit this link: GBR's Charges and Performance Schemes.

- **The immediate next step is to reflect on the feedback from this session and to develop these proposals further, ahead of formal consultation in Spring 2027.**

How you can help shape GBR's Charges Scheme and Performance Scheme Statements for FP1

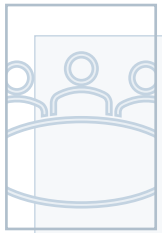
Ways to get involved:

- Technical workshops on important charges and performance scheme topics.
- Targeted engagement with freight, devolved bodies, open access, other infrastructure managers, and funders.

We are committed to:



Early visibility of emerging approaches.



Open feedback and transparent reporting.



Listening to concerns and perspectives.

For more information on our emerging proposals for charges and performance , please visit this link:
https://www.networkrail.co.uk/industry-and-commercial/developing-gbrs-charges-and-performance-schemes/

If you have any questions or would like to discuss this further, you can contact the team via our dedicated inbox:
chargesandperformanceschemes@networkrail.co.uk