

Network availability measures – PR23, stakeholder engagement and additional assurance

Office of Rail and Road

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FINAL REPORT



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GLOSSARY

Term	Abbreviation	Definition
Access Agreements		An agreement between Network Rail and operators that grants access to Network Rail's infrastructure.
Access Disputes Committee	ADC	The body responsible for the operation of the dispute resolution procedures that form part of all Access Agreements on the national network of Great Britain.
Control Period 7	CP7	Control Periods are the 5-year timespans into which Network Rail works for planning and financial purposes. CP7 is due to commence in Apil 2024, finishing in March 2029.
Department for Transport	DfT	The government department responsible for the English transport network, and transport affairs across Great Britain which are not devolved.
Engineering Access Statement	EAS	Details the rules, arrangements, and plan for engineering access to the rail network.
Great British Railways	GBR	The planned state-owned body that will have responsibility of overseeing rail transport across Great Britain, replacing Network Rail as the rail infrastructure operator.
Great British GBRTT Railways Transition Team		A branch of GBR set up to drive reforms across the rail network as part of the transition from Network Rail to GBR.
Informed Traveller Requirement	T-12	Network Rail's contractual obligation to released confirmed timetables to operators at least 12 weeks in advance of the departures associated with that timetable. ¹
Network Code		Contractual rules between Network Rail and train operators that are embodied into each Access Agreement
Network Rail	NR	The infrastructure manager of the majority of the railway network in Great Britain
Office of Rail and Road	ORR	The government department responsible for regulating and monitoring the rail network in Great Britain.
Transport for London	TfL	The government body responsible for the transport network across London.
Train Operating	TOCs	Companies that operate the majority of trains on the GB rail network.
Companies		TOCs operate rail passenger services.
Freight Operating Companies	FOCs	FOCs use the rail network to transport freight.
Open-access operators	OAOs	OAOs are passenger operators that run on third-party owned infrastructure and take full commercial risk in their operations.

¹ Other timescales are also given this abbreviation. For example, T-26 refers to 26 weeks in advance of a timetable occurring.



EXECUTIVE SUMMARY

The Office for Rail and Road (ORR) commissioned CEPA to provide advice on the options for monitoring network availability in CP7. Following its consultation on the Policy and Outcomes Framework for CP7, ORR recognised that there is wide-ranging stakeholder interest in how Network Rail (NR) manages the availability of the network and seeks the right balance between taking possession of the network to undertake engineering works and minimising disruption to passengers and freight customers – whilst also taking into account the industry's financial situation.

The scope of this study was to develop and assess a range of options for a package of network availability and possession management measures; engage with stakeholders and ORR's internal staff to understand their views on the options; and provide a recommended option(s) for ORR's consideration ahead of the PR23 Final Determination.

Our scope was limited to recommending options which are feasible to implement in time for CP7, and therefore we have focused on existing measures and information which already exists or was previously reported. We have not recommended the development of substantially new measures but, for reasons we explain below, this is potentially an area where more substantial investment in new measures is needed over the longer term.

Key themes arising from the stakeholder engagement

We engaged with a range of passenger train operators and freight operators, as well as NR, the GBR Transition Team (GBRTT) and Transport Scotland. Several key themes were raised:

Schedule 4 has been an insufficient incentive to keep the network open. Most operators felt strongly that NR did not take Schedule 4 into account when planning possessions. All operators and owning groups were concerned that if the majority (or potentially all) of operators opted out of Schedule 4, NR would have no incentive to consider the impact of planned possessions on passengers, i.e. that it could close the network whenever it suited NR.

The needs of passengers need to be balanced with industry cost. Some operators felt that NR should make greater use of its existing access to the network and that network availability should improve during CP7. GBRTT noted that the purpose of the network availability measures should not only be to minimise disruption, as the cost of possessions is a significant source of the £1.5bn efficiency gains identified in the Plan for Rail. Most stakeholders emphasised that any new measures should not introduce perverse incentives to use possessions less productively.

Some operators have a greater commercial interest than others. All operators understand that NR requires disruptive access to the network. But freight operators – and to a lesser extent open access operators – are particularly concerned about the impact of disruptive access on their businesses and planning horizons, and ultimately their customers. The freight stakeholders were particularly concerned about their paths being cancelled.

Adherence to timetable development timescales. Most operators noted that there had been an increase in late notice possession changes. It was suggested that in practice in most regions NR is not able to meet the T-12 timetable requirements at present and that operators have to adjust to alterations to the timetable as late as T-3.

Options assessed for CP7

Drawing on the findings from our engagement with industry stakeholders, we considered three options:

1. Retain the status quo

- Late notice possession changes after T-26
- Access disputes escalated to the Access Disputes Committee

2. Evolve the CP6 metrics

- Late notice possession changes changes after T-26 PLUS more granular supporting information
- Access disputes open on the EAS, CPPP and escalated to the Access Disputes Committee

3. Planning plus disruption

- Late notice possession changes after T-26 PLUS more granular supporting information
- Access disputes open on the EAS, CPPP and escalated to the Access Disputes Committee
- Train cancellations by operator (e.g. prior 'plan of day' timetable compared to reference timetable with no possessions



We assessed each of these options against the following criteria to consider whether the option:

- Provides increased granularity of reporting that enables analysis of trends and effective dialogue.
- Illuminates the key outcomes, even if it does not measure those outcomes directly.
- Enables stakeholders to assess whether they are receiving fair treatment in comparison to others.
- Focuses on aspect that are practical to measure in the short term; and
- Provides the potential for performance to be reported against targets/trajectories.

The breakdown of how each option scored against the criteria is summarised in Table 0.1 below.

Table 0.1: Comparison of qualitative assessment of options against assessment criteria

Criteria	Option 1	Option 2	Option 3
Improved granularity	Red	Amber	Amber
Presents key outcomes	Amber	Amber	Green
Comparison of treatment	Red	Green	Green
Practical in the short term	Green	Green	Amber
Targetable	Red	Red	Red (CP7)/Amber (CP8)

We concluded that Option 1 – the existing approach to monitoring network availability in CP6 – has several shortcomings which make it difficult for ORR to monitor network availability effectively. For example, it relies on the Schedule 4 regime to incentivise NR to plan possessions to minimise passenger and freight disruption. But it is widely accepted that Schedule 4 is not a key driver of NR's behaviour. Moreover, the current approach does not provide ORR with sufficient information to explore the causes of late notice possession changes, and whether operators are being treated consistently with respect to late notice changes and train cancellations.

Option 2 and Option 3 scored similarly against our qualitative assessment criteria. The only differences between them are that:

- Option 2 scores better than Option 3 against the implementation criterion. This is because the proposed 'cancellations due to planned possessions' measure would require more development effort and there is a risk that NR may not be able to develop it in time for the start of CP7.
- Option 2 scores worse than Option 3 against the key outcomes criterion. This is because the combination
 of 'late notice possession changes' and the 'cancellations due to planned possessions' measures provide a
 more holistic view of outcomes that affect customers indirectly (the efficiency of NR's possession planning)
 and more directly (the disruptive impact of planned possessions).

On balance, we recommend that ORR adopts Option 2 for the start of CP7. But we further recommend that it work with NR to develop a 'cancellations due to planned possessions' measure which might be introduced as soon as possible after the start of CP7. To demonstrate its application and value with respect to monitoring outcomes across different customer groups, we also suggest that ORR explores an initial pilot for freight cancellations which might then be extended to open access operators.

Recommended package for monitoring network availability in CP7

Enhanced reporting of Late Notice Possession Changes to provide additional supporting information on:

• Number of late notice possession changes after T-26 reported by date, location (including route and region), type of change, categorised as disruptive/non-disruptive², possession length, type of work and asset type/activity, project/programme reference and affected operators.

² We understand that disruptive possession changes are those which impact on the train service plan.



Extended reporting of Access Disputes escalated to the ADC and additional reporting on the number of disputed possessions in the EAS and CPPP to provide additional information on:

- The number of disputes open/closed per operator, and the length of time each dispute was open.
- The number of individual disputed possessions by operator, by location (including route and region), type of work and asset type/activity, and project/programme reference.

PLUS an initial pilot for freight operators and open access operators with respect to:

• The number of services 'cancelled' due to planned possessions, by operator, day and time – where 'cancelled' means the difference between the 'Plan of Day' and the Corresponding Day Timetable.

Status of network availability within the proposed outcomes framework

We conclude that none of the 'Late Notice Possession Changes', 'Access Disputes' or 'Cancellations due to planned possessions' measures should have Tier 1 status. This is because they do not capture all the dimensions of 'success' as measures of network availability. But the decision between Tier 2 and Tier 3 status is a more finely balanced. We recommend that ORR considers whether there is a middle ground that would enable public reporting of these measures without setting a target or trajectory.

- Late Notice Possession Changes: there is a clearer argument for making this a Tier 2 'supporting' measure
 but it is a finely balanced decision. Given that the industry appears to have become accustomed to late
 changes well after the T-12 "informed traveller" timetable publication, Tier 2 status would help to
 demonstrate that improved timetable stability is an important outcome to be delivered in CP7.
- Access Disputes: the argument for making this a Tier 2 measure is weaker. The process of objecting to the
 developing EAS and appealing against NR's access decisions is an important part of timetable
 development. It is also a useful 'leading indicator'. But the measure has notable drawbacks that make it
 more difficult to justify as a direct measure of the desired outcome for passengers and funders, particularly
 where it is focused only on disputes which make it as far as the ADC panel.
- Cancellations due to planned possessions: not currently used to monitor outcomes in this area, so will need to be developed and then trialled in the first instance perhaps starting with freight cancellations and then extending to open access services. This suggests Tier 2 status, if the data proves reliable, stable, and there are no major issues to overcome in the development of a reasonably reflective 'baseline' timetable.

Ongoing development of ORR's monitoring in this area

Network availability is likely to become a higher priority for ORR's monitoring activities given the new commercial relationships between DfT, the TOCs and NR, and eventually the creation of GBR. But it starts from a position where it has a relatively thin understanding of how NR makes access decisions such that it minimises the impact on its customers whilst also delivering efficiently. This is partly because ORR has traditionally been a step removed from the process as the TOCs were relied upon to hold NR to account through the access disputes regime.

The measures we recommend for CP7 provide ORR with a starting point. They can be used to identify high level trends or areas of significance which may require closer examination, analysis and ongoing monitoring to understand what is happening beneath the surface of the measure. But like many performance measures they are imperfect and, in this case, it is challenging to identify a suite of existing measures which appropriately captures all the dimensions of possession management which NR must consider and trade-off against one another. A negative change in the metric may not always represent a deterioration in the quality of NR's performance (e.g. cancellations may increase if/when NR increases the rate of renewals activities at short notice), so ORR will need to explore the range of short-term 'noise' in measured performance, and how it might expect NR to breakdown longer-term changes in measured performance into the possible constituent factors. There is potentially a richer level of detail and commentary which NR can provide to support these measures, so it will need to work with ORR to iterate its reporting and respond to more targeted requests from ORR where the data indicates closer monitoring is required.

As ORR operationalises its monitoring in this area, it might start by gathering as much data as possible but in a relatively simple format. As ORR's understanding of the issues improves, it might then be appropriate to refine the



information it requests from NR and adopt a more targeted approach focused on the data which provides the best intelligence on NR's performance in particular areas. This understanding will take time to develop, but NR should also expect to realise benefits from this process in the form of improved management information that enables it to learn what works well, and then make better decisions and more informed trade-offs.

Finally, we conclude that there is a longer-term opportunity to develop more direct and meaningful measures of network availability, which in turn are more likely to influence the behaviour of the future infrastructure manager and instill a greater customer focus. One such measure is the Lost Customer Hours (LCH) measure used by TfL to measure the reliability of London Underground services. The LCH approach is credited with driving cultural change around the planning of infrastructure interventions by measuring the expected disruption to passengers and converting this into a monetary value, then used as an incentive to minimise network unavailability. The investment needed to develop such a measure for the national rail network would be substantial, and it may take more than one control period to develop it to such a state where it is useful across the network. But if the issues which have hindered the incentive effect of Schedule 4 can be overcome (such as payment rates which do reflect the true economic value of customer access to the network), then the benefits of LCH could be substantial and extend far beyond possessions planning.

Therefore, in readiness for the transition to GBR and a more customer focused industry structure, we suggest that ORR might consider ways to encourage NR, GBRTT and other industry partners to collectively explore the feasibility of moving to a LCH based approach for CP8 and beyond.



1. INTRODUCTION

1.1. SCOPE

Following its consultation on the Policy and Outcomes Framework for CP7, ORR commissioned CEPA to engage with stakeholders and provide recommendations on the approach to monitoring network availability and possessions management.

The scope of this study was to develop and assess a range of options for a package of network availability and possession management measures; engage with stakeholders and ORR's internal staff to understand their views on the options; and provide a recommended option(s) for ORR's consideration ahead of the PR23 Final Determination.

Our scope was limited to highlighting the strengths and weaknesses of current measures, rather than proposing the development of new metrics. Therefore, our focus is on metrics that can be implemented at the start of CP7, or relatively quickly thereafter. Where we identified the potential for the development of new metrics which might support the wider objectives of rail reform (as outlined in the Plan for Rail), we made suggestions which ORR might explore over the longer-term in collaboration with other industry stakeholders.

ORR also asked us to explicitly consider how it should monitor 'fairness' with respect to this outcome area, particularly given the diverging commercial and contractual arrangements between Public Service Contract (PSC) passenger operators, open access operators and freight operators.

1.2. CONTEXT

ORR is carrying out the Periodic Review 2023 (PR23) which will determine Network Rail's (NR) outputs and funding for Control Period 7 (CP7) which runs from April 2024 to March 2029. As part of the PR23 process, ORR has consulted on how it proposes to hold the infrastructure manager to account for the outcomes it must deliver.

An important outcome is network availability. The infrastructure manager – currently NR – needs sufficient access to the infrastructure to efficiently maintain, renew and enhance it, but this can cause disruption for train operators and passengers. The aim of a network availability measure is to provide sufficient incentive for the infrastructure manager to plan efficiently, considering these competing demands.⁴

PR23 takes place ahead of a period of significant change for the rail industry, based on the wide-ranging reforms outlined in the Plan for Rail.⁵ Proposed changes which are particularly relevant for this study include:

- The creation of Great British Railways (GBR). It is expected that GBR will inherit the infrastructure
 management role from NR; but it will also contract with most passenger operators and accept much or
 most of the industry's revenue risk. This may introduce an incentive to treat GBR-contracted passenger
 operators differently to open access operators and freight operators with respect to network availability.
- The option to withdraw from Schedule 4. ORR will allow train operators the option to withdraw from the Schedule 4 incentive regime because they are no longer exposed to revenue risk under the new National Rail Contracts.⁶ Since Schedule 4 was intended to provide a financial incentive for NR to plan engineering possessions efficiently, in advance, and to minimise disruption, this change has the potential to weaken NR's incentives.

³ We define fairness in a broad sense, to mean that the monitoring allows for the comparison of the measured outcome across different groups of operators, so that ORR might consider whether different and/or fair treatment is being applied.

⁴ ORR (2022) "PR23 policy framework: technical consultation on the proposed CP7 outcomes framework", available online.

⁵ DfT (2021) "Great British Railways: The Williams-Shapps Plan for Rail" available online.

⁶ ORR (2021) "Review of the Schedule 4 possessions regime: technical consultation – initial proposals", p.16., available online.



Several stakeholders raised similar concerns in response to the July 2022 consultation on the policy and outcomes framework. Various responses asserted that if most operators opt-out of Schedule 4, ORR should ensure that there is sufficient monitoring and reporting in place to track network availability and encourage efficient possessions.⁷

For CP6, ORR did not set a specific outcome measure for network availability, as it determined that there was no single metric that appropriately captured the relevant challenges and trade-offs. Instead, it has monitored NR's performance through two measures that were originally proposed by NR⁸:

- Late Notice Possession Changes, and
- the level of Access Disputes escalated to the Access Disputes Committee.

After considering the responses to its consultation on the Policy and Outcomes Framework for CP7, ORR has set out its intention to focus more closely on network availability than it has in CP6. It intends to increase the granularity of its monitoring and to make it more transparent by publishing the data.⁹

1.3. Approach to this report

We approached this study in three parts:

- Scoping of options. First, we scoped a range of possible options based on the previous measures used in CP5 and CP6. We then discussed these measures in a workshop with ORR's internal team of specialists to better understand the granularity of information required and in relation to which issues/measures. Finally, we developed four high-level packages of measures to discuss with industry stakeholders, ranging from the continuation of the status quo to a suite of measures which are reported against targets.
- **Stakeholder engagement.** Second, we discussed the initial list of options with a range of industry representatives. ORR provided a list of organisations to invite to participate in our engagement.

Table 1.1: List of stakeholders interviewed

Passenger operators	Freight operators	Infra manager and funders
• [Redacted]	• [Redacted]	 Network Rail
• [Redacted]	[Redacted]	• GBRTT
[Redacted]	 Rail Freight Group 	 Transport Scotland

The interviews we undertook were prefaced by context for the study and covered our initial list of options. Interviews involved a mix of common questions and questions specific to particular stakeholder groups.

- Assessment of refined options. Third, we refined the options based on the stakeholder engagement and
 eliminated those that were considered unlikely to be useful in terms of meeting the study objectives. Based
 on ORR's objectives, we established a set of criteria by which to the assess options:
 - Provides increased granularity of reporting that enables analysis of trends and effective dialogue.
 - Illuminates the key outcomes, even if it does not measure those outcomes directly.
 - o Enables stakeholders to assess whether they are receiving fair treatment in comparison to others.

⁷ ORR (2022) "Responses to PR23 policy framework consultations" available online.

⁸ ORR (2022) "PR23 policy framework: technical consultation on the proposed CP7 outcomes framework", p26., available online. We note that there were 11 metrics used in CP5 to monitor network availability and possession management, published by NR alongside a related commentary in the Possession Indicator Reports. This included the Possessions Disruption Indicator (PDI-P and PDI-F). On review for CP6, ORR considered that these metrics were not acting as useful indicators of NR's performance.

⁹ ORR (2022) "PR23 policy framework: technical consultation on the proposed CP7 outcomes framework", p26., available online.



- o Focuses on aspect that are practical to measure in the short term; and
- Provides the potential for performance to be reported against targets/trajectories.

The views gathered from our engagement with stakeholders were used as inputs to our assessment of each option's relevant strengths, weaknesses and other practical implementation matters which informed our recommendations. The analysis and resulting iteration of options is presented in the following sections of this report:

- Section 2 presents the key themes from our engagement with industry stakeholders and sets out how we refined the options considered.
- Section 3 sets out our assessment of the final options against our assessment criteria.
- Section 4 considers the status of the potential measures within the outcomes hierarchy.
- Section 5 presents our conclusions and recommendations; and
- Appendix A presents more detailed feedback on the initial options from our engagement with stakeholders.



2. SCOPING OF OPTIONS AND STAKEHOLDER ENGAGEMENT

2.1. SCOPING OF INITIAL PACKAGES

In the first part of the study, we developed 4 'initial options' which represented packages of measures which might form the basis of ORR's monitoring of network availability and possessions management in CP7. The packages were based on existing measures which had been used in either CP5 or CP6 and represent the potential development of those measures to better align with ORR's objectives for CP7, including more granularity of information and monitoring.

The options ranged from a continuation of the current CP6 approach to a more comprehensive set of indicators that capture possessions planning and the impact of disruption. We also developed an option that included targeting particular possessions planning measures and/or measures of disruption, as shown in Table 1.2 below.

Table 1.2: Initial options for packages of measures to be monitored in CP7

Option 1: Status Quo / 'Do nothing'

ORR's approach in CP6 was to monitor the number of late notice possession changes and the number of access disputes being escalated to the ADC.

This option is predicated on the assumption that Schedule 4 provides a sufficient incentive on NR to plan possessions efficiently and well.

But given the potential for TOCs to opt-out of Schedule 4 in future, and a perception amongst stakeholders that Schedule 4 costs do not have an effective incentive effect on possession planning, this was primarily offered as a 'counterfactual' option.

Option 2: Extension of the Status Quo

Retain existing measures but collect more information from NR.

For late notice possession changes:

- The number of late notice changes reported by date and in 2-week bands from T-26 down to after T-12.¹⁰
- For changes after T-12, additional information on why the lateness occurred, steps that NR took to mitigate the lateness, and the resulting impact on operators.¹¹

For access disputes:

- The no. of disputes raised per operator in relation to the Engineering Access Statement and CPPP.
- The no. of disputes open/closed per operator, and the average length of time each dispute was open.
- Categorisation of the disputes based on cause of possession requirement.
- For longer/more advanced 'disputes', a short summary of the background and NR justification.

Option 3: Planning plus disruption measures

ORR monitors the measures described in Option 2, but also collects additional information on the impact of possessions in terms of disruption to services.

Planned disruption:

- The no. of services cancelled due to planned works per operator, and the origin-destination pairs.
- · Weekend working timetable compliance
- · Rail replacement bus hours

Unplanned disruption:

- No. of possession overruns and duration of overruns.
- No. of cancellations due to possession overruns.
- Delay minutes and cancellation minutes due to possession overruns.

Option 4: Targeted measures

ORR would monitor the measures described in Option 2 and Option 3; but it would elevate some measures to 'Tier 2' status where NR sets and then reports its performance against a target and/or trajectory.

Our suggestion – for the purposes of discussion with stakeholders – was that the majority of late notice possession changes (as a percentage of all possession change notices) should be made before, e.g. T-18.

This option reflects the potential for the 'status' of the metric to have a stronger incentive effect on the behaviour of the regulated company.

¹⁰ The appropriate timelines may be subject to changes in the development cycles for the New Working Timetable process as part of The Better Timetables for Passenger and Freight (BTPF) Programme. ORR will need to consider this further.

¹¹ This additional information might include qualitative further commentary from NR to provide an 'overview', but ORR and NR should work towards agreeing a discrete categorisation of reasons for each issue that would allow a more quantitative analysis first, followed by a more targeted request for further qualitative information in particularly significant cases.



We then presented these options to a range of industry stakeholders which included passenger operators and an owning group, an open access operator, a group of freight operators and freight sector representatives, NR, GBRTT and Transport Scotland. The aim of this engagement was to collect their views on the advantages and disadvantages of each package, and to use that intelligence to refine the packages before our final assessment.

2.2. KEY THEMES FROM THE STAKEHOLDER ENGAGEMENT

The key themes raised during our interviews were as follows:

Schedule 4 and incentives to keep the network open. All operators and owning groups were concerned that if the majority (or potentially all) of operators opted out of Schedule 4, NR would have no incentive to consider the impact of planned possessions on passengers, i.e. that it could close the network whenever it suited NR. Most operators felt strongly that NR did not take Schedule 4 into account when planning possessions. But, whilst it did not disagree with this point, one of the train operators was more positive on the role of Schedule 4 – that at the margin it can incentivise NR to reopen the network sooner than would otherwise be the case; and that it provided some incentive for NR to work with it on mitigations such as temporary stabling works and diversionary routes. NR and GBRTT recognised the shortcomings of Schedule 4 but were less certain that most operators will opt-out of Schedule 4.

Balancing the needs of passengers with industry cost. Most stakeholders recognised that possessions patterns need to adapt, for example taking fewer but longer possessions to enable more productive use of possessions (by reducing the relative amount of start-up and close-down time) and thereby achieve efficiency savings. But there were varying views about the objective of the network availability measure and the expectations on NR in CP7 and, beyond that, GBR. Freight operators felt that NR should make greater use of its existing access to the network and that with sufficient incentive network availability should trend upwards during CP7. Some of the other operators felt that there was some scope to make better use of existing access, but there was probably more scope to do so for mid-week maintenance and light renewals possessions, whereas larger capital project possession windows tend already to be used productively. GBRTT noted a strong view that the purpose of the network availability measures should not only be to minimise disruption to passengers, but that the cost of possessions was as (if not more) relevant – as it was a significant source of the £1.5bn efficiency gains identified in the Plan for Rail. GBRTT noted that GBR may in future own the overall industry incentive to find the right balance between cost efficiency, revenue and network availability.¹²

Impact on commercial operators. All operators understand that NR requires disruptive access to the network. But freight operators are particularly concerned about the impact of disruptive access on their businesses and planning horizons, and ultimately their customers. Although not explicitly stated, there was a suggestion that freight may be disproportionately affected because of the typical timing of their paths. One of the open access operators was less firm on this issue but did note that the long-distance aspect of its business meant that the weekend timetable was important from a revenue perspective, but most recent weekends had been disrupted by possessions due to the intensity of upgrades on the East Coast Mainline. There is a concern among some operators that GBR may have less incentive to take into account the positions of operators who sit outside its framework of contracted operators (i.e. those currently contracted by DfT).

Adherence to the network code. Most operators, with only one exception, noted that there had been an increase in late notice possession changes. It was suggested that in practice in most regions NR is not able to meet the T-12 timetable requirements, and that they have to adjust to alterations to the timetable as late as T-3. Network Rail and GBRTT noted that late notice possession changes were sometimes required for a variety of 'critical' reasons, for example concerns that the work could not go ahead in line with its safety requirements, e.g. due to the availability of staff with the required safety experience. An open access operator told us that some passengers expected to be

¹² There was some discussion about whether there is sufficient transparency of the decision-making criteria and process that NR (and in future GBR) follows when planning possessions and how it assesses the impact of disruptive possessions on the access of different customers to the network.



able to book trains further than 12 weeks in advance, and that the needs of passengers did not always appear to be front of mind.

Perverse incentives. Most operators, GBRTT, NR and Transport Scotland highlighted the potential for perverse incentives around some of the options. This was particularly raised in the context of unplanned disruption measures, e.g. possession overruns. Most operators considered overruns to be relatively short and infrequent; they would only worry about the measure if it illustrated a repeated pattern of overruns.

Network availability. Several operators – but particularly the freight operators – raised a new measure in the form of '% of track-km hours for which the network is available' – which has similarities to National Highways' availability metric. They said it could be used to monitor trends and suggested that ORR could use these trends as a means to challenge NR on the efficiency of the volume of possession requests they were anticipating in CP7.

Challenge of identifying a holistic measure. Most stakeholders noted that it was challenging to select a KPI in this area that reflected all the nuance of good possession planning; assessing the reasons for late notice changes to the possession plan; and monitoring the efficient delivery and management of disruption. We found broad agreement that, in principle, there is an opportunity to develop more direct and meaningful measures of network availability. However whilst the freight operators were hopeful this could be introduced in time for CP7, NR's view was that substantial investment would be required in improving the industry's data collection and reporting methods that would take several years to achieve.

More detailed stakeholder comments on the initial packages are presented in the table in Appendix A.

2.3. REFINEMENT OF OPTIONS

Stakeholder feedback was used to refine the packages into more useful options, summarised in the diagram below.

Figure 2.1: Options iteration process summary

(1) Retain Status Quo Late notice possession changes after T-26

 Access disputes escalated to the ADC

(2) An evolution of CP6 metrics

- Late notice changes after T-26 by type, date, location, route/region, programme/ project, affected operators
- Access disputes opened and escalated to the ADC; number of disputes opened/closed per operator, categorisation of dispute, summary & justification for 'longer' disputes

(3) Planning plus disruption measures

- (2) plus;
- Planned disruption: number of services cancelled due to planned works, weekend working timetable compliance, rail replacement bus hours
- Unplanned disruption: number & duration of possession overruns, number of cancellations due to possession overruns

(4) Targeted measures
NR or ORR setting trajectories and/or
targets for at least some measures

(1) Retain Status Quo Late notice possession changes after T-26 Access disputes escalated to the (2) An evolution of CP6 metrics Late notice changes after T-26 by type, date, location, route/region, programme/ project, affected Access disputes opened and escalated to the ADC; number of Stakeholder engagement and 2 and 4 by operator iteration of options (3) Planning plus disruption measures Late notice changes after T-26 by location, route/region, programme/ pr oject, affected operators Cancellation due to planned possessions, by operator, day and time (e.g. prior 'plan of day

timetable compared to

possessions)

reference timetable with no

Alternative text: Diagram illustrating how the four initial options were refined and iterated through the stakeholder engagement process into a final set of three different package options.



The main changes were as follows:

- We retained an unchanged Option 1 which represents the 'do nothing' or counterfactual option.
- Option 2 evolved to reflect current data availability. NR has confirmed that some of the additional
 information we proposed can be reported, e.g. the dates of late access notice changes, but information on
 access dispute history is not considered practicable.
- We refined Option 3 such that it incorporates Option 2, but in response to industry feedback it focuses only
 on planned disruption rather than both planned and unplanned. We note NR's view that significant effort
 would be needed to agree a methodology, measure and report a cancellations metric.
- We dropped Option 4 because of the challenges associated with forecasting and setting targets or trajectories. The justification for this is further explained in Section 4.



3. OPTIONS ASSESSED FOR CP7

In the third part of our study, we used the views gathered from our engagement with stakeholders to identify the strengths, weaknesses and other practical implementation matters of each of the three refined options; and to assess those options against criteria which we developed based on ORR's objectives.

The criteria assess whether the option:

- Provides increased granularity of reporting that enables analysis of trends and effective dialogue.
- Illuminates the key outcomes, even if it does not measure those outcomes directly.
- Enables stakeholders to assess whether they are receiving fair treatment in comparison to others.
- Focuses on aspect that are practical to measure in the short term; and
- Provides the potential for performance to be reported against targets/trajectories.

We assess each of the options in Sections 3.1 to 3.3 below.

3.1. OPTION 1 – RETAIN THE CP6 APPROACH

The first option we shortlisted retained the existing CP6 approach, which relies on the following two metrics:

- Late Notice Possession Changes, which captures the number of Network Rail driven changes that will
 impact passengers and freight customers, compared to what was published in the Confirmed Period
 Possession Plan¹³ at T-26; and
- The number of Access Disputes escalated to the Access Disputes Committee, which captures the number of formal access and/or timetabling disputes which the parties (usually NR and an operator) have been unable to resolve bilaterally through the development process for the relevant possession plan.

We noted a widespread view across the interviews that the current approach to monitoring network availability is insufficient and unsustainable going into CP7. There was broad agreement that it would not be reasonable to assume that Schedule 4 provides sufficient financial incentive to ensure the efficient planning and management of possessions.

- Granularity of reporting. ORR notes that the current reporting provides little insight to monitor and further investigate possessions management trends. Whilst there is a perception amongst some operators that the trend for late notice possession has deteriorated in recent years, others perceived a recent improvement. But it is not possible for ORR to explore this issue using the data currently provided. Freight stakeholders argued that more commentary could be provided to enable ORR to monitor the longer-running access disputes or those which were conceded shortly before the ADC hearing.
- Illuminates the key outcomes. Some of the passenger operators pointed out that the current measures do not directly capture the impact on the services they provide. They also expressed a view that NR has a tendency to behave like an engineering organisation rather than one which is sufficiently focused on passenger impacts. The freight operators argued that whilst these measures could be made more useful, there are other, more direct measures which would capture the impact on their businesses.
- Enables stakeholders to assess the fairness of treatment. Some operators and freight stakeholders were concerned that the current measures do not provide ORR with sufficient detail to monitor the

¹³ The Confirmed Period Possession Plan is produced 26 weeks prior to the start of each 4-week possession period, setting out the restrictions of use Network Rail will make in order to carry out each possession.



'fairness' of NR's engagement and planning with respect to freight and other non-DfT contracted operators. The freight operators particularly noted the future intention that GBR manage most of the industry farebox, thereby creating an incentive to minimize the impact of possessions on GBR-contracted operators. Transport Scotland noted that, in theory, the cross-border operators might have concerns that Scottish-focused operators receive preferential treatment. In our view, the way in which the current measures are reported does not provide a means for ORR to compare outcomes across operators to determine whether some are more impacted than others with respect to late changes and poor possessions management.

- **Implementation.** The main advantage of the current approach is that there are no concerns with practical implementation and developing the reporting requirements for the start of CP7.
- Potential for targeting. There was a lack of consensus amongst stakeholders on whether either measure in Option 1 could be targeted. Both GBRTT and NR noted that late notice possession changes were a reality of managing a large and complex asset, whilst other stakeholders observed that a significant number of late notice changes were made post the publication of the Informed Traveller timetable at T-12. NR also argued that operators had different approaches to responding and/or raising objections to the EAS, whilst our engagement with operators confirmed that some operators may be more likely than others to proceed to escalation of an Access Dispute (albeit these were avoided were possible).

In our view, neither measure would be suited to forecasting performance and reporting against a target.

Our assessment of Option 1 against the assessment criteria is summarised in Table 3.1 below.

Table 3.1: Assessment of Option 1 – continuation of the status quo

Criteria	RAG	Rationale
Improved granularity Red		No detail provided on relative lateness of late notice possession changes; what sort of change it was; what drove the late notice change; and which operators were affected.
Presents key outcomes	Amber	Does not measure network availability or extent of disruption caused by unavailability directly. Should bear some relation to it, but much improvement is possible. Access disputes before the ADC are not a good measure of the overall quality of engagement between NR and TOCs.
Comparison of treatment Red		Does not facilitate comparison of treatment between different operators or different groups of customers (e.g. passenger vs freight).
Practical in the short term Green Based		Based on continuation of CP6 approach.
Targetable Red		Neither measure is well suited to setting targets.

Recommendation 1: We do not recommend Option 1, i.e. continuing with an unchanged CP6 approach. In our view, there would be insufficient incentive on NR (or other future infrastructure manager) to reduce the amount of disruption caused by planned possessions in the context of the wider trade-offs it must make to maintain and improve the network, whilst delivering on challenging efficiency targets.

We share the view expressed by ORR and other stakeholders in the operator community, that the current measures (as reported by NR) provide insufficient insight into (a) the possession planning process and whether NR's route businesses have developed reasonably stable possession plans which support customers travel needs (including being able to book travel 12 weeks in advance); and (b) whether stakeholders have been adequately consulted on engineering access plans to minimise the necessary level of disruption.



3.2. Option 2 – Building on the CP6 approach

Enhanced reporting of Late Notice Possession Changes to provide additional supporting information on:

• Number of late notice possession changes after T-26 reported by date, location (including route and region), type of change¹⁴, categorised as disruptive/non-disruptive, possession length, type of work and asset type/activity¹⁵, project/programme reference and affected operators.

Extended reporting of Access Disputes escalated to the ADC and additional reporting on the number of disputed possessions in the EAS¹⁶ and CPPP to provide additional information on:

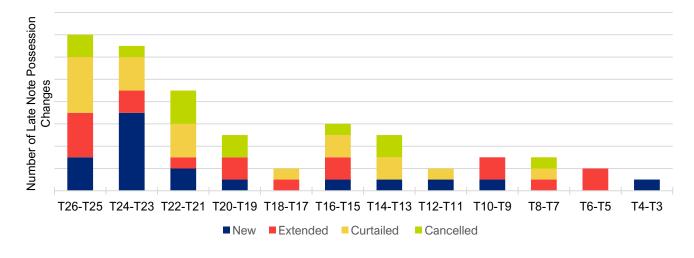
- The number of disputes open/closed per operator, and the length of time each dispute was open.
- The number of individual disputed possessions by operator, by location (including route and region), type of work and asset type/activity, and project/programme reference.

Whilst we find a widespread view that the existing approach to monitoring network availability is not sufficient or sustainable moving into CP7, we considered how the existing measures could be made more useful by enhancing the granularity of the information reported by NR, to allow more detailed interrogation of the data by ORR:

- **Date** to help ORR to explore how late changes are being made, e.g. whether the trend for disruptive changes being made after the Informed Traveller timetable is improving or deteriorating (see Figure 2.2).
- **Location** to explore whether late changes are affecting busy parts of the network, and to explore whether there is a regional or route-based dimension to emerging trends.
- **Disruptive or non-disruptive** NR currently reports only 'disruptive' changes which affect the train plan, but there would be value in exploring trends in the share of disruptive changes as a % of total late changes.
- Project / programme reference and possession length to help ORR focus its deeper dives on the highest value and/or longest and most disruptive possessions.

In relation to Late Notice Possession Changes, NR confirmed that the additional supporting information outlined in the box above can be provided. NR said that it would require some internal effort to change its data capture and reporting methods, and to implement a consistent approach across its route-based Access Planning Managers.

Figure 3.1: Illustrative example of how Late Notice Possession Changes could be reported by time band



¹⁴ New, extended, curtailed or cancelled possession.

¹⁵ Work type to include maintenance, renewal, enhancement; asset type to include track, signalling, structures, geotechnical etc. ¹⁶ In the first instance ORR should explore disputed possessions (or 'objections') to the latest version of the EAS (Version 4) so that, by this more advanced stage, it should be expected that the operators have engaged with the EAS in more detail. But ORR might also explore the value of monitoring disputed possessions in response to Version 2 of the EAS, recognising that the EAS is subject to further change and development at that point.



Alternative text for Figure 3.1: Stacked bar chart showing an illustrative example of how the frequency of Late Notice Possession Changes might vary depending on how many weeks remain before the possession start date. The chart also illustrates how this could be broken down by category of change, including new, extended curtailed or cancelled possession.

Simple analysis and comparison of the data will help ORR to identify where there may be issues, but it will not provide insight on what is driving these trends. The measures could be a starting point for regular engagement with NR on possessions management issues, although NR noted that it relies on information from the route businesses to capture and provide the reasoning for late change and the steps taken to mitigate late change, and that this information can be inconsistent in terms of detail. In practice, there may be a period of exploration and refinement between ORR and NR in terms of the supporting information that is requested, so that NR can better understand how ORR intends to use it and improve the reliability and consistency of reporting. This should be in the interest of both parties, as NR may also experience a benefit by improving the quality of data that it receives from the route businesses. In turn, this will better enable it to better coordinate possessions and balance the needs of passengers with the need to access the network to undertake engineering works.

With regards to the access disputes and individual disputed possessions data, NR noted that this was currently inconsistent across operators. Some operators object to the whole EAS or CPPP (a 'holding objection') whilst others engage with the plan in detail. This might reflect operator resources and the size/complexity of their areas. NR confirmed that in principle it could support the reporting of more granular data, but it would require a change in the data capture and operator agreement to adopt a more consistent approach. Since this would require operator buy-in, ORR might encourage the industry to work together on the practical implementation issues.

Therefore, our assessment of Option 2 is as follows:

Granularity of reporting. Provides additional information which most of the stakeholders we interviewed
(particularly Transport Scotland and the train operators) agreed would be useful to monitor. This should
strengthen the reputational incentive on Network Rail to engage with operators earlier and plan
possessions more efficiently. However, most stakeholders felt it would still be insufficient to drive a genuine
cultural change towards a more customer-focused approach.

We are sceptical of the value that the 'Access disputes escalated to the ADC' measure has previously provided, as our engagement suggests that the number of disputes reaching the ADC panel is low and may not reflect the overall quality of NR's planning and engagement with operators. But overall we concluded that it should continue to be reported, and that with more supporting information on the number of individual disputes open against the EAS and CPPP there is scope for this measure to become more useful in future.

The supplemental reporting of why late changes and disputed possessions arise could support NR's own understanding of the key themes and lessons learned and support their internal efforts to improve possessions planning in future.

- Illuminates the key outcomes. We do not consider this package to be a significant improvement on the existing approach in terms of a direct measure of the outcomes that passengers and funders value. But it would strengthen the incentive to achieve more stability in the possessions plan by the Informed Traveller milestone at T-12, and this enables operators to market train services to customers in advance.
 - However, as this option does not measure the actual impact of planned possessions and late notice changes on train operators in terms of cancellations and service amendments, it may not fully reflect the concerns of operators who feel the resulting commercial impact, i.e. freight and open access operators.
- Enables stakeholders to assess the fairness of treatment. Since the data can be provided on a peroperator basis, we consider that Option 2 supports this criterion and is an improvement on Option 1.
- **Implementation.** We understand that much of the additional information can be readily collected and reported by NR with minor changes to data capture for CP7. One exception is in relation to counting the total number of objections to individual possessions by operator (against either the EAS or CPPP, i.e. not



limited to those which reach the ADC panel)¹⁷, which will require more work with operators to secure their buy-in to reporting changes and achieve consistency of approach. This may take additional time to achieve. Whilst we think that the additional reporting burden on NR required by Option 2 would be proportionate to the value of ORR's monitoring activities, they may be a need for refinement in practice.

• **Potential for targeting.** As the high-level metrics are consistent with Option 1, we also find that none of the measures considered in Option 2 are suited to forecasting performance and reporting against a target.

Table 3.2: Assessment of Option 2 – building on the CP6 approach

Criteria	RAG	Rationale
Improved granularity	Amber	Improved granularity on relative lateness of late notice possession changes; what sort of change it was; and which operators were affected. Will help to illuminate negative and/or positive trends; but unlikely to reveal the underlying causes without deep-dive exploration.
Presents key outcomes	Amber	Does not measure network availability or extent of disruption caused by unavailability directly. Should bear some relation to it, but much improvement is possible.
Comparison of treatment	Green	With some reporting improvements, should facilitate comparison of late notice changes between different operators and customer groups.
Practical in the short term	Green	NR has confirmed that data could be provided with some reasonable improvements in reporting from the route businesses.
Targetable	Red	Neither measure is well suited to setting targets.

3.3. OPTION 3 - PLANNING PLUS DISRUPTION MEASURES

Enhanced reporting of Late Notice Possession Changes to provide additional supporting information on:

Number of late notice possession changes after T-26 reported by date, location (including route and region), type of change, categorised as disruptive/non-disruptive, possession length, type of work and asset type/activity, project/programme reference and affected operators.

AND

The number of services 'cancelled' due to planned possessions, by operator, day and time – where 'cancelled' means the difference between the 'Plan of Day' 18. and the Corresponding Day Timetable. 19

Based on our engagement with operators, we built on Option 2 combining the reporting of late notice possession changes (a 'planning' measure) with a more direct focus on the outcome of disruptive possessions (a 'disruption' measure) – in this case a measure of 'cancellations due to planned possessions'.

Freight stakeholders were particularly keen to include a 'cancellation' measure. We suspect this is because, in part, many freight paths are organised for off-peak periods (from a passenger service perspective) which is also when NR will be looking to take possession of the network to carry out engineering works whilst minimising disruption to passenger services. Therefore, it may reflect a concern amongst freight operators that they are (or could be) relatively more affected by planned possessions, and that the appropriateness of this outcome should be monitored more closely.

Passenger operators were less interested in this measure, recognising that services may be able to run at least part of the journey (an amended service), or that other mitigating measures can be introduced, such as diversionary

¹⁷ ORR and NR will need to agree whether the same possession disputed by two separate operators counts once or twice.

¹⁸ The Plan of Day is the latest timetable planned for each day of operations which includes all planned, but no unplanned, disruption. See SNC Lavalin (2018) "Assessing Network Rail's delivery of Network Availability in CP6", p.21., available online.

¹⁹ A reference timetable which is provided by NR as a working timetable for that day with no planned possessions baked in.



routes and bus replacement services. However, the open access operator was more interested in the pattern of service cancellations and amendments across the week because weekend leisure travel is an increasingly important part of its business as the railway adjusts to changing travel patterns after Covid-19.

We decided to substitute the 'cancellations' measure for the access disputes measures partly to drive some differentiation across options, but also because we are not convinced that the number of access disputes and disputed possessions are (at present) a reliably accurate measure of the quality of engagement between the operators and NR's route businesses.

Therefore, our assessment of Option 3 is as follows:

- Granularity of reporting. As per Option 2 above, it provides additional information which most of the stakeholders we interviewed (particularly Transport Scotland and the train operators) agreed would be useful to monitor. It also provides additional value, in that it would allow ORR to explore the impact of planned possessions on actual service disruption (cancellations) across the week, and could be used to monitor the way in which NR is adapting (or not) to changing travel patterns which might create a demand for a different approach to possessions planning.
- Illuminates the key outcomes. Freight stakeholders were particularly interested in monitoring the impact of planned possessions in terms of cancelled services. As this is a more direct measure of disruption to customers, we think that Option 3 should score more favourably against this criterion, relative to Option 2.
- Enables stakeholders to assess the fairness of treatment. Monitoring the impact of planned disruption
 will enable ORR to identify whether there are any emerging concerns for operators who are experiencing
 unusually or comparatively high levels of cancellations. There is a concern among some stakeholders –
 particularly freight and open access operators that GBR may have less incentive to take into account the
 positions of those who sit outside its framework of contracted operators (i.e. currently contracted by DfT).
 - Aligned with the growing public policy interest in freight and its role in decarbonisation of transport which will take on increasing importance given the relatively slow progress in the transport sector over the past decade this option will also help ORR to gather intelligence and data which it might use to understand and monitor wider policy objectives which the industry is being funded to deliver.
- Implementation. None of the operators we interviewed raised any concerns or issues with the implementation of a cancellations-based measure. However, NR noted that it does not currently measure or report such a cancellations metric, and suggested that it would require significant effort to develop. More substantively, it also queried what the 'baseline' timetable should be, against which cancellations are measured. This query was raised in the context that there is often a substantial evolution in the train plans submitted by operators closer to the date of the possession period.
 - We recognise that the cancellations metric would be a new measure for this area, but ultimately we believe it relies on data and concepts with which the industry should already be familiar. The measure may not be perfect (e.g. there may be challenges associated with the construction and interpretation of a reference 'corresponding day timetable', and there may be practical differences between passenger and freight timetabling²⁰) but ORR's objective is to monitor trends in performance, rather than focusing excessively on performance at any given point in time (which might make the measure more vulnerable to debate on whether the measure is precisely right or wrong).

²⁰ We understand that there are different levels of freight access rights, and that utilisation of freight paths may be lower than passenger train paths in some cases, often due to the more variable nature of the freight business. This might mean, for example, that the cancellation affects a path that the operator does not currently intend to operate, e.g. because it has not (yet) secured a customer. The issue of freight cancellation measurement against a reference timetable is an issue that ORR will need to consider further. But as a starting point it might focus on more regular 'Level 1' and 'Level 2' access rights and develop from there. Given the government's wider environmental objective of decarbonising transport, we think ORR will need data on freight cancellations (even if it is imperfect to start with) as part of its evidence base.



We also recognise that NR would need to invest time and effort into the development of this measure, but this would be worthwhile if it helps ORR to monitor the fairness of possessions management across customers going forward. We suggest that this could be developed quickly – ORR and NR should aim to have this measure in place as soon as possible after the start of CP7.

Potential for targeting. It should be possible to forecast the cancellations measure and report
performance against it, and therefore it offers more potential for targeting in the longer term. But since the
cancellations measure may need trialling in the first instance (potentially starting with freight cancellations
before extending to open access services), we do not consider that either metric would be suitable for
forecasting or targeting at the present time. This is consistent with Options 1 and 2.

Table 3.3: Assessment of Option 3 – planning and disruption measures

Criteria	RAG	Rationale	
Improved granularity	Amber	Potential to improve upon Option 2 by linking cancellations impact to impact of late notice possessions – relevant for freight operators.	
outcomes Green disruption		bes not measure network availability but improves upon extent of sruption caused by unavailability. Not as valuable as e.g. Lost ustomer Hours, but an improvement on Option 2.	
Comparison of treatment	Green	With some reporting improvements, should facilitate comparison of late notice changes and cancellations between different operators and customer groups. Important for freight and open access operators.	
Practical in the short term	Amber	NR has raised concerns about practicality of measuring cancellations, especially in current context of late train cancellations by operators. However, we do not think this should be a barrier to ORR increasing the granularity of its monitoring. ORR could explore how cancellations data can be stabilized and trial with freight operators in the first instance.	
Targetable	Amber/Red	Neither measure is well suited to setting targets at the current time, but the cancellations measure might be targeted by the start of CP8.	

3.4. CONCLUSIONS AND RECOMMENDATIONS

We consider that the current approach to monitoring network availability in CP6 has several shortcomings which make it difficult for ORR to monitor network availability effectively.

- It primarily relies on Schedule 4 to incentivise NR to plan possessions so as to minimise passenger and freight disruption. But it is widely accepted that Schedule 4 is not a key driver of NR's behaviour. Even where it has some marginal incentive effect, operators may opt out of Schedule 4 in future.
- The industry appears to have become accustomed to accepting late notice possession changes after the
 Informed Traveller timetable has been published. ORR currently receives insufficient information to explore
 the causes of late notice changes and investigate whether there is more that NR could reasonably do to
 improve the stability of the possession plan.
- The number of access disputes escalated to the ADC is not a reliably accurate measure of the quality of engagement between the operators and NR's route businesses. A lack of supporting information leaves ORR uninformed about any concerns that the operators have about NR's approach to possession planning. But with more granular reporting on individual disputed possessions by operator, we think that this measure can be retained for CP7 as a means of facilitating discussion and debate, and resolution of issues.

Despite the limitations of the existing CP6 measures, we find that NR can provide additional granularity of reporting that would support ORR's monitoring and help it to identify possession trends that require deeper investigation. We also find that there is limited scope to transform NR's internal data capture and reporting systems to permit a more radical approach to measuring network availability in time for the start of CP7. Whilst the need for investment and



improvement in NR's ability to gather and report the necessary data should not discourage ORR from adopting those measures which it thinks are most meaningful and effective, a pragmatic solution may need to be adopted with more radical approaches scheduled for implementation later in CP7 or even CP8.

We also note that NR has a shared interest in exploring possession management trends and understanding the impact of its planning processes on customers (as well as costs). It is also closest to the data and the route businesses which create it, and is therefore well placed to adopt the responsibility for ensuring that its future reporting provides ORR with the granular evidence it needs to assure itself that network availability is being managed effectively across the business.

Therefore, we suggest that ORR considers one of the two alternative options presented which represent an evolution of the existing CP6 approach: "Option 2" or "Option 3". Both options scored similarly against our qualitative assessment criteria, as shown in Table 3.4 below. The only differences between them are that:

- Option 2 scores better than Option 3 against the implementation criterion. This is because the proposed 'cancellations due to planned possessions' measure would require more development effort and there is a risk that NR may be unable to develop it in time for the start of CP7.
- Option 2 scores worse than Option 3 against the key outcomes criterion. This is because the combination
 of 'late notice possession changes' and the 'cancellations due to planned possessions' measures provide a
 more holistic view of outcomes that affect customers indirectly (the efficiency of NR's possession planning)
 and more directly (the disruptive impact of planned possessions).

Table 3.4: Comparison of qualitative assessment of options against assessment criteria

Criteria	Option 1	Option 2	Option 3
Improved granularity	Red	Amber	Amber
Presents key outcomes	Amber	Amber	Green
Comparison of treatment	Red	Green	Green
Practical in the short term	Green	Green	Amber
Targetable	Red	Red	Red (CP7)/Amber (CP8)

On balance, we recommend that ORR adopts Option 2 for the start of CP7. But we further recommend that it works with NR to develop a 'cancellations due to planned possessions' measure to be introduced as soon as possible after the start of CP7. Although we were made aware of several challenges associated with more granular data collection and new reporting requirements, we do not think these should act as a barrier to ORR requesting this information. This is because the management of network availability is an outcome of increasing interest in CP7. Therefore, to demonstrate its application and value with respect to monitoring outcomes across different customer groups, we also suggest that ORR explores an initial pilot for freight cancellations which might then be extended to open access operators.

The recommended package is as follows:



Enhanced reporting of Late Notice Possession Changes to provide additional supporting information on:

 Number of late notice possession changes after T-26 reported by date, location (including route and region), type of change, categorised as disruptive/non-disruptive, possession length, type of work and asset type/activity, project/programme reference and affected operators.

AND

Extended reporting of Access Disputes escalated to the ADC and additional reporting on the number of disputed possessions in the EAS and CPPP to provide additional information on:

- The number of disputes open/closed per operator, and the length of time each dispute was open.
- The number of individual disputed possessions by operator, by location (including route and region), type of work and asset type/activity, and project/programme reference.

PLUS, an initial pilot for freight operators and open access operators with respect to:

• The number of services 'cancelled' due to planned possessions, by operator, day and time – where 'cancelled' means the difference between the 'Plan of Day' and the Corresponding Day Timetable.



4. STATUS OF NETWORK AVAILABILITY WITHIN THE PROPOSED OUTCOMES FRAMEWORK

In this section we consider whether any of the measures assessed in Section 3 should be presented as "success measures" or "supporting measures" under ORR's new approach to the outcomes framework for CP7. This influences the importance attached to these measures in ORR's overall monitoring of NR's performance and, in turn, the potential incentive effect on NR to manage possessions efficiently.

<u>Summary</u>: None of the 'Late Notice Possession Changes', 'Access Disputes' or 'Cancellations due to planned possessions' measures should have Tier 1 status. This is because they do not capture all the dimensions of 'success' as measures of network availability. But the decision between Tier 2 and Tier 3 status is a more finely balanced. We recommend that ORR considers whether there is a middle ground that would enable public reporting of these measures without setting a target or trajectory.

- Late Notice Possession Changes: there is a clearer argument for making this a Tier 2 'supporting' measure but it is a finely balanced decision. Given that the industry appears to have become accustomed to late changes well after the T-12 "informed traveller" timetable publication, Tier 2 status would help to demonstrate that improved timetable stability is an important outcome to be delivered in CP7.
- Access Disputes: the argument for making this a Tier 2 measure is weaker. The process of objecting to the
 developing EAS and appealing against NR's access decisions is an important part of timetable development. It
 is also a useful 'leading indicator'. But the measure has notable drawbacks that make it more difficult to justify
 as a direct measure of the desired outcome for passengers and funders.
- Cancellations due to planned possessions: not currently used to monitor outcomes in this area, so will need to be developed and then trialled in the first instance perhaps starting with freight cancellations and then extending to open access services. This suggests Tier 2 status, if the data proves reliable, stable, and there are no major issues to overcome in the development of a reasonably reflective 'baseline' timetable.

4.1. CONTEXT TO THE OUTCOMES FRAMEWORK FOR CP7

In its consultation on the PR23 policy framework, ORR proposed a new approach to the outcome measures and targets which it intends to use to monitor Network Rail's performance in CP7. Specifically, it proposed a tiered outcomes framework, where:

- Tier 1 will include a small number of "success measures" which will be the headline indicators that ORR
 uses to hold the infrastructure manager to account.
- Tier 2 will include a basket of "supporting measures" which are intended to provide a more holistic view of performance, and which the infrastructure manager will report publicly; and
- Tier 3 which captures additional information that ORR intends will provide it with additional assurance during the control period and will help to hold the infrastructure manager to account.²¹

From our discussions with ORR, we also understand that it will set Network Rail trajectories for each success measure in its PR23 determination against which it will monitor and publicly report NR's performance. For the Tier 2 supporting measures, we understand that ORR expects NR to produce and publish its own forecasts and report against these.

²¹ ORR (2022) "PR23 policy framework: a consultation on outcomes, infrastructure performance and managing change", p.31., available online.



As we noted earlier in this report, ORR's initial consultation position was not to propose any network availability and possession management measures in either Tier 1 or Tier 2.²² But reflecting on the responses to its consultation, the ORR subsequently decided to commission our advice on this issue and consider further.²³

4.2. CEPA'S VIEW ON THE STATUS OF NETWORK AVAILABILITY IN CP7

There are three key criteria which should inform ORR's decision on the status of the proposed network availability measures: (i) the benefit of public reporting; (ii) the practical and incentive issues around target setting; and (iii) how close it is to a direct measure of an outcome that passengers and funders value as a priority requirement. A metric which performs well against all three of these criteria would be a candidate for a Tier 1 success measure. But metrics which perform less well against these criteria would be more appropriate as Tier 2 or 3 measures.

The benefit of public reporting.

It is clear from the responses to ORR's July 2022 consultation paper and our own engagement with industry that there is interest in greater visibility of NR's performance in this area. Most operators had an interest in understanding whether NR's management of network availability was improving or deteriorating over time, noting that the freight operators expressed a particularly keen interest. Both passenger and freight operators noticed that timely access to that information would support their ability to hold NR to account. Transport Scotland was interested in public reporting of measures which can improve upon Schedule 4 and Schedule 8 as a means to encourage effective possession planning and timetable stability, but recognised that the train operators were also partly responsible for the service disruption issues (particularly train cancellations) that have increased in 2022 and early 2023.

None of the stakeholders we interviewed raised substantive disadvantages to reporting these measures publicly.

Therefore, we agree that ORR should consider publishing these measures on a regular basis. In particular, publishing the data on Late Notice Possession Changes would strengthen the reputational incentives on NR's regional business units to develop stable possessions plans (in the CPPP) that are mature enough to ensure efficient delivery and satisfy the Informed Traveller timetable processes set out in the Network Code, whilst recognising that late notice changes may emerge for safety and other business critical reasons.

Publishing more information on Access Disputes and objections to the EAS may help operators to assess and compare their treatment to other operators but, given the considerable effort required to develop the EAS, we think that publication is unlikely to drive a significant change in the behaviour of NR's regional business units.²⁴

Target setting

In our view, it would be difficult for NR and/or ORR to set targets for either the Late Notice Possession Changes or the Access Disputes measures.

However, we consider that ORR might use the more granular reporting of Late Notice information to explore the key points in the timetable development process. The measure could be used to assess whether the industry is achieving the right balance between providing customers with accurate information in advance of travel and delivering efficient interventions on the infrastructure which might require late adjustments to the plan. We did not find consensus amongst stakeholders on when one might expect stability in the possession plan to be achieved.

²² ORR (2022) "PR23 policy framework: a technical consultation on the measures in our proposed CP7 outcomes framework", p.27., available online.

²³ ORR (2022) "PR23 policy framework: conclusions on the measures in our CP7 outcomes framework", p.38., available online.

²⁴ Publication might improve the incentives on NR's regional businesses in specific circumstances. For example, one of the freight stakeholder argued that NR would occasionally accept a specific objection to the EAS and agree to change its possession plan, only to repeat the same booking in a subsequent EAS (i.e. it did not always appear to learn from the feedback process).



As a transitional step, ORR could explore the data to monitor NR's plans to reduce and then stabilise the number (and %) of late notice changes which occur after the Informed Traveller timetable milestone at T-12. This could evolve into an area where targets are set in future years. But we also recognise that operators need advance visibility and stability in the possession plan to bid for, and then deliver on, their optimal train service plans. We consider that it is in passengers' interests that the CPPP at T-26 is mature and stable, so that operators can plan based on reliable information – and that ORR might consider how this measure could support this objective.²⁵

We are not convinced that the number of Access Disputes will be a reliably accurate measure of the quality of engagement between the operators and NR's route businesses. Several operators told us that they would not routinely escalate an access dispute to the ADC unless they felt there was significant benefit in doing so. As a result, ADC disputes are infrequent and the number of objections to the EAS and (later) the CPPP which evolve into full ADC disputes are small. NR told us that operators took different approaches to registering their objections to the EAS and the CPPP, where some operators object to the plan as a whole and others raise specific objections. It was implied that the measure would be 'noisy' and could not be an accurate performance measure unless investment is made in the consistency of operator responses, and operators are required to withdraw closed objections in a more timely fashion.

Whilst it might be possible to forecast the Cancellations measure in the longer term, it would be a newly developed metric for this area which needs trialling in the first instance. Therefore, we do not consider that it would be suitable for forecasting or targeting at the start of CP7.

Overall, whilst we note that there was fairly broad agreement amongst the passenger and freight operators for the principle that a target was needed in this area, none of the stakeholders we interviewed clearly articulated what a targeted measure would consist of, both from the perspective of articulating a realistic but stretching performance challenge for NR, and to avoid introducing perverse incentives to (for example) use possessions less productively.²⁶

Direct relationship with the outcomes that passengers and funders value

Neither Late Notice Possession Changes nor Access Disputes are a direct measure of the outcome that passengers or funders value, i.e. a service which is reliably available, known reasonably in advance, at an efficient cost. They provide supporting information that helps ORR and other industry stakeholders to identify signals that there are emerging or actual issues with the possession planning process, such as a growing number of disruptive late changes to possessions. But the data does not lead to a simple identification of 'good' or 'bad' reasons for late notice changes or access disputes – as in some cases there may be several contributing factors. Instead, these measures are a starting point from which ORR would target deeper-dive investigations into the causes of late notice disruptive change trends, or whether there might be systemic or region-specific issues resulting in repeated access dispute patterns.

Cancellations due to planned possessions offers a slightly more direct measure of the impact of network availability. But it is not a complete measure either, in that operators may partially cancel services or run amended services, and journey times may be extended as a direct result of network unavailability. This is not captured.

²⁵ GBRTT noted that there is a balance to be struck between the interests of passengers and funders. It argued that in practice work planned for specific possessions is unlikely to be firm at the publication of the CPPP, and that late changes to possessions might be required to reduce project costs and therefore the total costs of the railway. We agree that there may be circumstances where late notice possession changes make economic sense from a project cost perspective. But we also note that efficiency would be supported more generally by ensuring that NR's workplans are more stable and mature at an earlier stage.

²⁶ Both NR and GBRTT raised concerns that targeting these measures could introduce perverse incentives on the route businesses. One example was the incentive to 'shoehorn' plans to hit earlier development milestones (e.g. CPPP publication), but where the apparent maturity is not 'real' and stores up problems for closer to the possession date, potentially leading to increased possession cancellations and other negative outcomes. But in our view, greater emphasis needs to be placed on better planning of possessions in advance to achieve a more stable Informed Traveller timetable. ORR should work with NR and GBRTT to understand potential perverse incentive issues, but the responsibility should be on NR to prevent perverse practices.



4.3. RECOMMENDATIONS ON STATUS AND TARGETING IN CP7

Network availability is an important outcome for operators, customers and funders, but it is also a complicated issue. There must be periods where NR takes possession of the network to deliver maintenance, renewals and improvements works; and the reality of managing a complex infrastructure network means that a degree unanticipated disruption at short notice is inevitable, although it should be the exception and not the norm. We do not think that there is a single existing measure which can be implemented for the start of CP7, that captures comprehensively the trade-offs between network availability, duration and frequency of disruption to customers, asset sustainability and the cost of managing the network successfully. For that reason, we do not recommend a Tier 1 network availability measure.

Additionally, we are not persuaded that it is possible to set a target for any of the proposed measures in an evidence-based way, beyond setting an ambition or expected trajectory that the number and regularity of Late Notice Possession Changes after T-12 should decrease over the course of CP7.

Nonetheless, we recognise that the current levels of service disruption (at the time of writing) have substantial detrimental impacts on customers and are not sustainable for the railway longer term. The currently elevated levels of disruption are due, in part, to industrial relations issues which affects by NR and the train operators, but are not primarily a possessions or access planning issue. But there is also a perceived issue with the stability of possession plans in some regions which is both an efficiency issue and a potential problem for customers trying to plan advance journeys. Funders and operators alike would likely agree that the situation should improve from its current position and that requires greater discipline from NR and the wider rail industry.

Whether the network availability measures we recommend in Section 3.4 should be categorised as 'Tier 2' or 'Tier 3' measures is a finely balanced decision. There is clear interest in transparency and public reporting for the reasons given above – particularly for Late Notice Possession Changes, where Tier 2 status would help to demonstrate that improved timetable stability is an important outcome to be delivered in CP7.

Public reporting and transparency is not an explicit objective of ORR's proposed Tier 3 'additional assurance' measures; whereas ORR has expressed to us its intention that NR should provide forecasts for the Tier 2 'supporting measures' against which the company reports (and therefore acting as a de facto internal target).

Therefore, we recommend that ORR considers whether there is scope for a middle-ground:

- Late Notice Possession Changes would be an untargeted Tier 2 'supporting' measure against which NR reports and provides commentary to explain its performance. Given that the industry appears to have become accustomed to late changes well after the T-12 "informed traveller" timetable publication, Tier 2 status would help to signal that improved timetable stability is an important outcome to be delivered in CP7. However, we do not think that it would be appropriate for NR to provide a forecast for Late Notice Possession Changes, because this would imply that this is an outcome it actively plans to achieve (as opposed to something which is an occasionally unavoidable aspect of capital project management).²⁷
- Cancellations due to planned possessions would be a Tier 3 measure whilst it is being piloted, but with the intention of elevating it to Tier 2 status and exploring the potential for NR to produce a regular forecast.
- Access Disputes would be a Tier 3 additional assurance measure, but the data should also be published.

²⁷ ORR might consider whether it is more appropriate for NR to report against a long-term (i.e. more than 12 month) historical late notice average. This might form the basis of a declining trajectory in future, to incentivise improved planning performance.



5. LONGER-TERM MONITORING OF NETWORK AVAILABILITY

The metrics recommended in Section 3.4 provide ORR with a valuable first step in understanding how it can best monitor network availability and possessions management. But none of the existing measures are perfect. ORR should endeavor to enhance its monitoring capabilities in the longer-term. During the course of CP7, ORR may wish to consider how it uses these measures to understand the key challenges affecting network availability, and then consider how these (or new) measures might evolve longer term to capture the key issues with NR's performance.

In this report our remit was to focus on measures which could be introduced in time for, or shortly after, the start of CP7. But we also find that there is a longer-term opportunity to develop more direct and meaningful measures of network availability, in the context of anticipated reform of the rail industry including, but not limited to, the creation of GBR with a new culture and customer focus. This was echoed by many of the stakeholders we interviewed, including passenger operators, freight companies and NR.

We have identified two additional measures which we consider hold potential for longer-term development, but which are unlikely to be possible to implement before CP8. Therefore, we have not assessed these metrics in detail, but make suggestions for further exploration of:

- A more direct 'Network Availability' metric; and
- Lost Customer Hours, as used by TfL to measure the customer experience of service reliability on the London Underground.²⁸

5.1. NETWORK AVAILABILITY

The freight operators we interviewed expressed support for a new, more direct measure of network availability that might be expressed in simple terms as '% of track-km hours for which the network is available'. We noted a perception amongst the freight stakeholders that NR has substantial access to the network already, and a view that it should be challenged to fit its increasing disruptive access requirements into existing possession windows.

ORR asked us to consider whether such a measure would be practicable for CP7, noting that a similar measure is currently contained in the Performance Specification for National Highways ("Roadworks Network Impact").²⁹

Our engagement with NR during the study suggests that the data required to construct such a metric does not exist in a format that could be routinely gathered, extracted, calculated and reported. NR suggested to us that the calculation of such a measure would be further complicated by, for example, the multi-faceted challenges of availability and the data collection requirements and improvements that go along with that. For example:

- What counts as available? Access is lost to possessions which are planned and unplanned, but this might not always be straightforward to separate in the data.
- Which sections of the network are supposed to be available? E.g. would the measure extend to track in depots and sidings if this affects services; and time period is covered e.g. is availability really lost if a section is taken out for short periods when no trains are scheduled to run?

NR explained to us that the investment required in changing reporting systems to create such a metric would be a substantial task. Based on NR's response, it seems unlikely that such a metric could be fully developed, tested and rolled out across the routes within the next 2-3 years. But whilst NR identified some of the challenges around the

²⁸ TfL (accessed February 2023) "Underground services performance" available online.

²⁹ National Highways (2022) "Operational Metric Manual", p.21., available <u>online</u>. We note that previous work commissioned by ORR suggested a 'critical freight infrastructure availability' measure, but such a measures has not been developed for CP7. See SNC Lavalin (2018) "Assessing Network Rail's delivery of Network Availability in CP6", p.25., available <u>online</u>.



interpretation of the measure and its meaningfulness as a measure of performance, it did not state any firm opposition to such a measure in principle.

In our view, whilst this more direct network availability measure has a simplistic appeal, it does not merit the effort that would be required to gather, measure and report it for the following reasons. A significant drawback is that it would fail to capture the varying intensity of usage across the network. For example, we would expect the availability of the main line approaches into London and other UK cities to be more valuable than that of many rural branch lines. But when reported at a national, regional or route level, the measure is unlikely to offer much insight into how effectively NR is managing network availability from the perspective of passenger usage. Only by drilling down to more granular data would the metric become useful – although comparability across lines would be complicated by the nature and intensity of usage, age of the infrastructure, and a range of other factors. At such granular levels, performance will also be sensitive to the impact of lumpy enhancement or renewal schemes.

We also note that ORR would need to overcome challenges related to setting stretching but achievable targets for the route-level businesses, and potentially NR at a national level. Our engagement with both NR and operators has highlighted the possession stability challenge that NR must overcome before it might confidently forecast network availability more than six months ahead. Additionally, since the measure may be sensitive to the impact of enhancement projects, NR would need to regularly update its network availability forecast to account for recent changes to the committed pipeline of enhancement projects.

In conclusion, we do not make any recommendations for or against further exploration of this measure since it is not formally within the remit of this study. But, if NR and/or its successor as infrastructure manager is to invest in the effort of developing a new network availability metric, we suggest that there might be other measures which are more informative and useful for a range of purposes that extend beyond possessions management. A useful example of this is the Lost Customer Hours approach discussed below.

5.2. Lost customer hours

It has long been recognised that the railway industry must become more passenger focused, and this is reinforced by the commitments in the Plan for Rail. In that context, our engagement with industry finds that the measures which are currently available overlook the impact of network availability on the outcomes that matter to customers. Those outcomes extend beyond disruption and into the efficient use of 'engineering' time.

Previous work commissioned by ORR recommended that a 'Lost Customer Hours' (LCH) metric should be developed for CP7, like that employed by TfL to measure the reliability of London Underground services. That recommendation was seen positively by DfT at the time³⁰, but the development of an LCH metric has not happened.

LCH measures the amount of customer hours lost due to disruption – in this case due to the unavailability of the network through planned possessions, although TfL has used it to cover any form of disruptive access (i.e. including unplanned disruption). The LCH approach is credited with driving cultural change at London Underground around the planning of infrastructure interventions by measuring the expected disruption to passengers, converting this into a monetary value, and supporting the development of a business case. It also enables different types of customer disbenefits (e.g. delay due to diverted service, bus replacement etc) to be incorporated into the monetised calculation. For example, under the London Underground PPP regime, the use of LCH and associated financial penalties drove a detailed understanding of likely failure points on the network and led to a redistribution of staff close to oft failing assets, to ensure that failures could be fixed quickly.

But the investment needed to develop such a measure would be substantial. It would almost certainly require additional data and modelling on journeys made around the network at a level of granularity that is not presently available from the National Rail ticketing database, LENNON. The methodology used by TfL would need to be adapted to the more complex and heterogenous national rail network. Modelling the impact of bus replacement

³⁰ SNC Lavalin (2018) "Assessing Network Rail's delivery of Network Availability in CP6", p.35. and p.51., available <u>online</u>. Work commissioned to support the Gibb Report on the performance of the Southern network in 2016 recommended a similar measure. See LEK (2016) "Southern performance project", p.112., available <u>online</u>.



services and other mitigation measure would also be a significant undertaking. In our view, it may take more than one control period to develop national rail LCH to a state where it is useful across most of the network. But the benefits could be substantial and extend far beyond possessions planning.

In readiness for the transition to GBR and a more customer focused industry structure, we suggest that ORR might consider ways to encourage NR, GBRTT and other industry partners to collectively explore the feasibility of moving to a LCH based approach for CP8 and beyond.



Appendix A **DETAILED STAKEHOLDER COMMENTS**

Table A.5.1: Summary of stakeholder views on initial options

Option	Passenger operators	Freight operators	NR, GBRTT, and funders
Option 1 – Retain the status quo	All passenger TOCs consider that Schedule 4 has not worked as an incentive mechanism for possession planning, although some were more positive than others. There was mixed feedback on Access Disputes. Some TOCs spoke about regularly considering raising disputes, whereas others described a good relationship with NR where disputes are rarely raised. Open Access Operators are only entitled to Schedule 4 compensation for Type 3 works (works that exceed 120 hours). Whilst these contractual terms were agreed to by both NR and OAOs, one OAO spoke of a 'lack of protection' and potential for 'unequal treatment'.	There was an overall sentiment that Schedule 4 is not a sufficient cost incentive for NR as the compensation is so small relative to the overall cost of a possession that it doesn't influence NR's behaviour. Also expressed that Schedule 4 doesn't present NR with an incentive to divert trains, and rates should be set to encourage diversions.	NR thought that Schedule 4 doesn't provide a cost incentive for major projects as the Schedule 4 compensation cost is easier to absorb, but it still provides a cost incentive for more modest maintenance works. It was NR's view that ultimately route finance teams are still accountable for costs and have an objective to plan possessions efficiently. GBRTT did not believe Schedule 4 was a useful incentive mechanism, and any effective replacement should look to encourage collaboration and a common objective between NR and the TOCs. Transport Scotland did not believe Schedule 4 has had a material effect on Possessions Management.
Option 2 – Extension of status quo	All TOCs agreed that the additional supporting information outlined in Option 2 would be useful when monitoring network availability – especially metrics associated with Late Notice Possession Changes.	Expressed support for reporting on the narrative around disputes, as a lot of industry resource is wasted contesting disputes that are withdrawn shortly before the ADC hearing. More granular reporting on disputes would capture cases that do not reach the ADC. Preference for this option.	NR said that most aspects of Option 2 were possible from a reporting perspective, but data completeness might prevent an end-to-end picture being reported for each possession. NR agreed with the suggested timelines for monitoring more information on Late Notice Changes; and expressed particular interest in monitoring the number of possession disputes. But it noted that TOCs also delay closing disputes, i.e. the process is a "two-way street". GBRTT suggested that poor possession planning stems from the T-26 deadline, where an inaccurate plan is forced through to meet a 'scorecard', with late changes following after the fact. It stressed that the current access dispute



Option	Passenger operators	Freight operators	NR, GBRTT, and funders
			process is counter to integrated working and collaboration between TOCs and NR.
			Transport Scotland thought that in general, the collection of more information is useful, but thought that the timelines offered were slightly arbitrary and doesn't offer much insight when viewing network availability through a customerfocused lens. On the access dispute side, they emphasised that Transport Scotland and Network Rail have a great working relationship, and disputes were rare as a result.
Option 3 – Planning plus disruption	TOCs were largely indifferent to this option. There was a general sentiment expressed that possession overruns do not happen frequently	Freight operators were less concerned about possession overruns. The Section 8 regime monitors overruns and compensates them financially. There is a belief that too much emphasis on overruns may create perverse incentives for NR to be more conservative with possession planning, causing productivity to fall – i.e. completing the same amount of work in more possessions.	NR thought that measuring the effects of disruption from a timetable view would be difficult.
measures	enough that they should be considered a systematic issue, and therefore monitoring possession overruns isn't particularly valuable. As passenger numbers continue to recover as the effects of the pandemic subside, there has been a particularly large increase in weekend travel, which has become more important to TOCs as a result. Because of this, several TOCs expressed an interest in weekend timetable compliance as a monitoring metric. But most TOCs were indifferent to rail replacement bus hours, as in some contexts passengers might prefer a longer bus journey if		The granularity of information needed for these measures would have to be standardised across routes and regions before monitoring is realistic.
			GBRTT considered that some of these measures were relevant. But it disagreed with the use of possession overrun measures as it may encourage risk aversion in planning, and thought rail replacement bus hours were 'controversial' as some people prefer rail replacement buses to diverted trains and some prefer the opposite.
			Overall, it concluded that the context within how these measures are used will determine whether they are useful for monitoring.
	overall it reduced the number of changes.		Transport Scotland was more receptive to the measures offered in our planning plus disruption option, as they appear more customer-focussed and could be easily digested a wider range of stakeholders.



Option	Passenger operators	Freight operators	NR, GBRTT, and funders
Option 4 – Targeted measures	There was general recognition amongst TOCs that if most operators opt out of Schedule 4, there needs to be some sort of performance regime to hold NR to account. Despite this, not all TOCs agreed that targeted measures would be beneficial. For example, one suggested that targets could create a perverse incentive where important possessions that contribute to other objectives such as safety or decarbonisation could be discouraged in order to meet a network availability target.	Freight stakeholders expressed support for targets, alongside the assessment of performance against these targets. They suggested assessing targets against certain dates such as T-20, as that is two weeks before the train bidding process, as well as T-12.	NR disagreed with Option 4, not necessarily because it is against targets, but because it would be difficult for everyone to agree on what constitutes an appropriate target. It thought the effectiveness of targeting would be limited as ultimately the criticality of work would take priority over meeting whatever target is set. It questioned what would be an appropriate baseline for any target, given that the last few years has seen disruption across the network due to industrial action and COVID.
	Amongst the TOCs that did express an interest in targeted measures, the biggest challenge identified was finding a targeted measure that works for everyone. There was no consensus on which measure would be most appropriate.		GBRTT was strongly against targets, as in its opinion targets would set the wrong incentives and discourage the completion of important works. Transport Scotland had no particular view on targets.
Other measures raised – Direct network availability measure	One TOC believed that a direct measure of how available the network is would be valuable. In particular, they thought the measure would be useful if it captured how many passengers are being disrupted per day, and are particular groups being disproportionately disrupted. Another thought that creating a direct network availability measure would also create a similar perverse incentive where important possession works are foregone to keep the network	Suggested targeting how available the Strategic Freight Network is over time.	NR said that it would need to confirm that the data needed for such a measure currently exists. We expect that it does in some form, but we will follow up with NR to understand how easily it is gathered and reported. GBRTT was strongly against such a measure as the prime target should be safety over availability, and previous network availability measures were not useful in their opinion. Transport Scotland did not think the direct
	available.		network availability measure would be beneficial, as the percentage of different parts of the network that is available only matters to the extent that customers want to use it. A direct network availability measure is too blunt, failing to capture this nuance.



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