OFFICE OF RAIL AND ROAD

PR18: Fixed costs - Final impact assessment on options for fixed costs

June 2017

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Summary Sheet

Summary

Which charging/incentive regime is this impact assessment looking at?

This final impact assessment appraises options for developing an improved charging framework to recover Network Rail's fixed costs in control period 6 (CP6).

This impact assessment supports conclusions following our December 2016 consultation 'Improving incentives on Network Rail and train operators: A consultation on changes to charges and contractual incentives' (http://www.orr.gov.uk/rail/consultations/pr18-consultations/consultation-on-changes-to-charges-and-contractual-incentives) (henceforth referred to as the "consultation"). The assessment of the options contained within this document has been updated to reflect points raised in response to the consultation.

Which of the PR18 outcomes does this charge/incentive deliver against?

High level PR18 outcomes	**Description of outcomes**
Efficient	We are getting as much out of the network as we can, given what it costs
Better used	The existing capacity is put to the best use, delivering highest value for money

What can ORR do to deliver the intended outcomes?

Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*
We are getting as much out of the network as we can, given what it costs	Provide Network Rail with accurate incentives to lower cost
	Provide Network Rail with effective incentives to lower cost
	Ensure that Network Rail can recover its total costs
The existing capacity is put to the best use, delivering highest value for money	Provide accurate incentives for Network Rail to add traffic to the network
	Provide effective incentives for Network Rail to add traffic to the network
	Ensure operators take costs of service into account when using the network
	Ensure capacity is allocated on the basis of the cost of provision and value of use

How does the current charge/incentive achieve its objectives?

The fixed cost charges currently in place (FTAC, FSC, FOL and SLTC - more detail provided in the description of the "Do nothing" option) allow Network Rail to recover the total costs of running the network (i.e. Network Rail's revenue requirement), since they cover costs which are not otherwise recovered through short run variable charges, the network grant or other sources of income.

The fixed costs are allocated broadly to the operators that cause these costs, for instance only freight operators pay for the fixed costs on freight only lines. This helps ensure operators take account of the costs they cause to be incurred on the network and provides information to help allocate capacity on the basis of cost of provision. However, the allocation between franchised passenger operators is based on simple traffic metrics, rather than underlying cost drivers. Additionally, some types of operators (i.e. open access operators) do not currently have any costs allocated to them (even notionally, as is the case for freight through the freight avoidable costs analysis that underpins the FOL and the FSC).

What is the current problem under consideration?

There is currently a relatively low level of understanding around the drivers of Network Rail's fixed costs. Additionally, the methodology used to calculate the FTAC which franchised operators pay lacks cost-reflectivity (i.e. is not based on accurate drivers of costs, but rather on simple traffic metrics). Both of these factors limit the accuracy and effectiveness of the information available and the incentives that Network Rail has to lower fixed costs. This limited accuracy also influences the ability of Network Rail, operators and funders to make decisions in terms of the provision and use of capacity on the network.

Additionally, non-franchised passenger operators currently do not contribute to the fixed costs of the network, and at the same time can only access the network on a limited basis (because of the ORR's access policy and specifically the NPA test which determines the proportion of revenue that new passenger services should generate, rather than abstract from existing services, in order for ORR to approve them) which limits the scope for competition in the provision of passenger services.

What options have been considered? Please justify preferred option (further details in Evidence Base)

Option 0 ('do nothing'):	Under the current structure of charges Network Rail recovers a proportion of the fixed costs of running the rail network (i.e. those costs that are fixed or vary only in the medium to long-run) through four charges: the freight only line charge (FOL), the freight specific charge (FSC), the fixed track access charge (FTAC) and the stations long term charge (SLTC). Each of these charges are intended to recover different types of fixed costs. Some of these charges are only paid by some types of operators (e.g. FTAC is only paid by franchised passenger operators). The network grant recovers the fixed costs not covered by these charges (or other sources of income).
Option 1:	Revise the methodology for allocating the FTAC to franchised passenger operators. This option involves replacing the current FTAC allocation methodology for franchised passenger operators with the new methodology developed by Network Rail (henceforth referred to as the "new cost allocation methodology"), subject to ORR reviewing of the robustness of the methodology and understanding its impacts in practice on the charges faced by different operators. The new methodology would make the fixed costs attributable to freight and open access operators more transparent. However, no fixed costs would be recovered from open access operators (as is currently the case under the do nothing option). Freight operators would continue to pay the freight mark-ups (FSC and FOL) on the same basis as they have been in CP5 (i.e. based on the LEK avoidable costs analysis); and after an assessment of what the market can bear (the market can bear test).
Option 2:	This option involves applying fixed cost charges to all operators, including open access operators (i.e. operators who do not have a franchise agreement). The approach to levying fixed cost charges on passenger operators would be based on a market can bear test. The approach for recovering fixed costs from freight operators would not change (the existing approach is already based on a market can bear test which identifies commodity types that are able to bear mark-ups above short-run variable costs). The new cost allocation methodology described in option 1 would be implemented alongside this option, subject to understanding its impact on charges and customers in practice, and determining that it is technically robust.
Option 3:	Recovery of fixed costs would be linked to a measure / definition of capacity utilisation. Essentially, fixed cost mark-ups would be levied on all operators based on the capacity utilisation of the areas of the network that they use. The new cost allocation methodology described in option 1 would be implemented alongside this option, subject to ORR concluding the methodology is robust (as described under the assessment of option1).
Option 4:	Link fixed cost recovery to the holding of 'long-term' access rights. Fixed cost charges would be levied on all operators based on the type of access rights they hold. Fixed cost charges would only be levied on operators who hold 'long-term' rights. Operators with 'short-term' rights would only pay variable charges. This option could be implemented alongside a residual FTAC paid by core franchise specification services (to provide income stability for Network Rail). There would also likely still be a role for the network grant. The new cost allocation methodology described in option 1 would be implemented alongside this option, subject to ORR concluding the methodology is robust (as described under the asessment of option 1).

Preferred option under each state of the world

State of the world	Best option under each state of the world	Reason it is the best option under this state of the world
Baseline	Option 2	Option 2 is our recommended option as it would improve transparency and cost reflectivity of fixed cost charges and could also help facilitate greater competition in the passenger services market. We think the costs associated with this option are proportional with the benefits.
Greater on-rail competition	Option 2	Several of the benefits of option 2 are expected to be larger with greater on-rail competition. It is, therefore, also our recommended option under this state of the world.
Reduction in franchise protection	Option 2	The benefits of option 2 from the increased transparency and cost-reflectivity of fixed cost charges are likely to be greater in a state of the world with reduced franchise protection. Therefore option 2 is also our recommended option in this state of the world.
Greater/lesser freight protection	Option 2	There is no change to the assessment of the options under this state of the world.
Any other change to the current state of the world	Option 2	Possible changes to REBS, or the introduction of a new risk-sharing mechanism, are expected to increase the benefits provided by the new cost allocation methodology. As a result, option 2 remains our recommended option.

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'Do nothing'

'Do Nothing'

Summary of the current arrangements

Under the current structure of charges Network Rail recovers a proportion of the fixed costs of running the rail network (i.e. those costs that are fixed or vary only in the medium to long-run) through four charges: the freight only line charge (FOL), the freight specific charge (FSC), the fixed track access charge (FTAC) and the stations long term charge (SLTC). Each of these charges are intended to recover different types of fixed costs. Some of these charges are only paid by some types of operators (e.g. FTAC is only paid by franchised passenger operators). The network grant recovers the fixed costs not covered by these charges (or other sources of income).

Description of the 'do nothing' option

When we talk about fixed costs we mean the costs of operating, maintaining, renewing and enhancing the rail network which do not vary in the short-run. The current structure of charges recovers these types of costs mainly through charges and the network grant. The fixed cost charges are: the freight only line charge (FOL); the freight specific charge (FSC); the fixed track access charge (FTAC); and the stations long term charge (SLTC). The fixed costs that are not recovered through these charges are recovered through the network grant. The network grant accounts for around 60% of Network Rail's total revenue in CP5.

The FTAC is the largest fixed cost charge, accounting for approximately 7% of Network Rail's total income in CP5. The FTAC recovers Network Rail's net revenue requirement, which is the total revenue Network Rail needs to run its business (as per the ORR's final determination) after accounting for the income it receives from other regulated charges (including short run variable charges), other single till income and the network grant. The FTAC is only paid by franchised passenger operators. It is calculated at a route level by taking the net revenue requirement for each of Network Rail's operating routes, and allocating it between franchised train operators using a range of traffic metrics, (e.g. train kilometres, vehicle kilometres, tonne miles and electrified train kilometres). The FTAC allocated to each franchised operator is fixed for each year of the control period, and based on forecasts of each operators' traffic on each of Network Rail's operating routes.

The FOL charge recovers the fixed costs of the lines only used by freight operators. The FOL charge is only paid by freight operators carrying commodities which cannot easily be transported by road, because these market segments have been assessed to be able to bear mark-ups above short-run marginal cost, in line with the requirements of EU Directive 2012/34/EU, as transposed into UK legislation by The Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016 (The Regulations). In CP5, the FOL charge has been levied on Electrical Supply Industry (ESI) coal, spent nuclear fuel and iron ore. The FOL charge rate varies by commodity. The FOL charge paid by each operator is calculated by multiplying the rate for the relevant commodity by the distance they travel in 1,000 gross tonne miles (kgtm). The gross tonne mileage of a journey is the total weight of the train, including the weight of the locomotive and cars, multiplied by the number of miles that the train travels.

The FSC is set to recover 'freight avoidable costs' which are the costs which would no longer be incurred by Network Rail if freight services no longer used the network (above short-run marginal costs). As with the FOL charge, the FSC is only paid by freight operators and only levied on ESI coal, spent nuclear fuel and iron ore, based on the same reasoning. The rates paid under the FSC also vary by commodity. The FSC paid by an operator is also calculated by multiplying the FSC rate for the relevant commodity by the kgtm travelled by the operator.

The FOL charge and the FSC are both levied as mark-ups on short run variable charges, as per the relevant provisions in The Regulations. These provisions allow infrastructure managers to levy charges on operators to recover costs above those directly caused by track usage, known as mark-ups. Infrastructure managers are not allowed to levy mark-ups higher than what the market can bear.

The SLTC recovers the maintenance, repair and renewal (MRR) costs at stations for which Network Rail is responsible for MRR at. Both franchised and open access passenger operators pay the SLTC and the amount each operator pays is based on its proportion of

How does the current charge/incentive achieve its objectives?

The fixed cost charges currently in place (FTAC, FSC, FOL and SLTC - more detail provided in the description of the "Do nothing" option) allow Network Rail to recover the total costs of running the network (i.e. Network Rail's revenue requirement), since they cover costs which are not otherwise recovered through short run variable charges, the network grant or other sources of income.

The fixed costs are allocated broadly to the operators that cause these costs, for instance only freight operators pay for the fixed costs on freight only lines. This helps ensure operators take account of the costs they cause to be incurred on the network and provides information to help allocate capacity on the basis of cost of provision. However, the allocation between franchised passenger operators is based on simple traffic metrics, rather than underlying cost drivers. Additionally, some types of operators (i.e. open access operators) do not currently have any costs allocated to them (even notionally, as is the case for freight through the freight avoidable costs analysis that underpins the FOL and the FSC).

Assessment of 'do nothing' option

Assessment key

The existing regime does not meet our objectives	✘✘
The existing regime partially meets our objectives	✘
The existing regime does meet the objectives	✓

Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	**'Do nothing'**
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✘✘
	Provide Network Rail with effective incentives to lower cost	✘✘
	Ensure that Network Rail can recover its total costs	✓
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✘
	Provide effective incentives for Network Rail to add traffic to the network	✘✘
	Ensure operators take costs of service into account when using the network	✘✘
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✘

Summary of the problem under consideration

There is currently a relatively low level of understanding around the drivers of Network Rail's fixed costs. Additionally, the methodology used to calculate the FTAC which franchised operators pay lacks cost-reflectivity (i.e. is not based on accurate drivers of costs, but rather on simple traffic metrics). Both of these factors limit the accuracy and effectiveness of the information available and the incentives that Network Rail has to lower fixed costs. This limited accuracy also influences the ability of Network Rail, operators and funders to make decisions in terms of the provision and use of capacity on the network.

Additionally, non-franchised passenger operators currently do not contribute to the fixed costs of the network, and at the same time can only access the network on a limited basis (because of the ORR's access policy and specifically the NPA test which determines the proportion of revenue that new passenger services should generate, rather than abstract from existing services, in order for ORR to approve them) which limits the scope for competition in the provision of passenger services.

Problem under consideration with the current charge/incentive

The main issues associated with the way fixed network costs are currently recovered through charges are:
- there is a relatively low degree of understanding around the drivers of fixed network costs, particularly in terms of how different types of traffic and patterns of use affect costs in the medium- and long-term;
- the methodology used to allocate FTAC to operators lacks cost-reflectivity; and
- open access operators do not contribute to the fixed costs of the network.

These issues have implications for the incentives Network Rail has to lower fixed costs; Network Rail's incentives to add traffic to the network; decisions made around the allocation of capacity; and how operators use capacity.

Although ORR does scrutinise all of Network Rail's costs at each periodic review, using methods such as top-down and bottom-up benchmarking, there is currently a weak understanding of the drivers of fixed costs on the network. This limits the information ORR and funders have with which with which to hold Network Rail to account for its expenditure. Therefore, under the current fixed charging regime Network Rail faces relatively little challenge on its fixed costs and as a result does not have accurate or effective incentives to lower them to the efficient level. For instance, more disaggregated information on fixed costs could be used to benchmark Network Rail's fixed costs across the network. Although in many cases there would be legitimate reasons for differences, in some areas it would provide Network Rail with much stronger incentives to lower fixed costs relative to the status-quo.

A low degree of understanding of the drivers of fixed costs also means that the bodies which can influence how capacity is used, such as funders, Network Rail and ORR, do not have good understanding of the costs caused by services and patterns of use in the long run. This makes it difficult for such bodies to ensure that capacity is allocated on the basis of the cost of provision and value of use. For example, if ORR had to make a decision on two competing access applications, it would not have all the necessary information to establish the costs caused by each service in the long-run.

As open access operators and many freight services do not pay any fixed cost charges, Network Rail only recovers the short-run marginal costs when such services are added to the network. This reduces Network Rail's incentives to add new traffic to the network, particularly on highly utilised parts of the network where new traffic can increase Network Rail's performance costs (due to the impact of reactionary delay). However, it is worth noting that the capacity charge is currently in place and aims to provide an incentive to Network Rail to add additional traffic (by compensating Network Rail for increased performance regime costs). There are a number of issues with the capacity charge (discussed in our consultation document and the associated impact assessment) that mean it might not be as effective as we want it to be at providing this incentive.

In addition, the current approach to charging means that the cost to funders of an equivalent (profitable) franchise and open access passenger service can differ significantly, as passengers on the former will contribute towards fixed costs whereas the latter will not. This creates a strong financial incentive on funders to prefer service delivery by franchise operators, even if open access operators might otherwise deliver larger benefits. Over time, this will tend to limit the role of open access and reduce competition, with consequent impacts on the services offered, innovation and efficiency.

The lack of cost reflectivity of the current FTAC means franchised operators are not necessarily paying for the fixed costs that their services cause. As a result, any changes that an operator makes to when or how they run their services, which would reduce the fixed costs that they cause, will not lead to a lower FTAC for the operator in the next control period. The lack of detailed information about fixed costs on the network makes it difficult for operators to understand how they could lower the fixed costs that they are responsible for. Therefore, the current FTAC provides no incentive for operators to take fixed costs into account when using the network. However, it should be noted that currently FTAC is fixed for each year of the control period and franchised operators are held neutral as part of their franchise to any changes to their charges during the term of their franchise. These two factors also reduce the incentive for franchised operators to take into account the fixed costs they impose when using the network.

Although the current fixed cost charges and network grant are not cost reflective, they are fixed for the control period which means Network Rail can recover its net revenue requirement with a high degree of predictability.

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Option 1

Option assessment - Option 1

Summary of Option 1

Revise the methodology for allocating the FTAC to franchised passenger operators. This option involves replacing the current FTAC allocation methodology for franchised passenger operators with the new methodology developed by Network Rail (henceforth referred to as the "new cost allocation methodology"), subject to ORR reviewing of the robustness of the methodology and understanding its impacts in practice on the charges faced by different operators. The new methodology would make the fixed costs attributable to freight and open access operators more transparent. However, no fixed costs would be recovered from open access operators (as is currently the case under the do nothing option). Freight operators would continue to pay the freight mark-ups (FSC and FOL) on the same basis as they have been in CP5 (i.e. based on the LEK avoidable costs analysis); and after an assessment of what the market can bear (the market can bear test).

Description of Option 1

Network Rail has conducted a fixed cost allocation pilot study on the Wales operating route. The purpose of this analysis is to improve the understanding around the drivers of fixed costs on the network and to develop a methodology for allocating fixed costs between all operators based on cost-causation. Network Rail is currently rolling out the new cost allocation methodology to the rest of the network and is expected to complete this work by the end of June 2017. Network Rail will then be consulting industry on the methdology over summer 2017. We have expressed our support for this work in principle, however we will be thoroughly reviewing the methodology when the analysis is completed and will take into account any issues raised by stakeholders when deciding whether the new cost allocation methodology is robust enough to attribute fixed costs to different operators. In making this decision we will also consider the impact of the methodology on charges and on customers in practice (i.e. checking that it does not result in large and unexplained changes).

Subject to establishing its robustness, under Option 1, the new cost allocation methodology being developed by Network Rail would replace the current methodology for allocating FTAC to franchised passenger operators. The new cost allocation methodology would also notionally allocate fixed costs to freight and open access operators, thus making the fixed costs allocated to these types of operators more transparent. However, this option would not involve recovering any fixed costs from open access operators. Freight operators would continue to pay FOL and FSC as they currently do, on the basis of the market can bear test. Separately we are also proposing to use the new cost allocation methodology to underpin the allocation of costs to freight operators for the purpose of calculating the FOL / FSC across freight operators but this is not being considered in this impact assessment. Other changes to the existing freight cost charges being considered include simplification and refreshing the market can bear test. These are also not considered in this impact assessment.

The network grant would continue to cover the fixed costs not recovered through fixed cost charges.

As part of it's review of charges (which was completed in November 2015), the Rail Delivery Group (RDG) also considered an option of replacing the methodlogy used to calculate the FTAC with an avoidable costs methodology. The option was assessed at a high level, and was also selected for further investigation. The option considered by RDG is broadly equivalent to our option 1. This is because an important element of the new cost allocation methodlogy Network Rail has developed (discussed above) is that some fixed costs would be allocated based on an avoidable cost approach. Our assessment of option 1 is consistent with the RDG's assessemnt of this option (on the criteria that are comparable), and we have reflected any relevant points from the RDG's assessment in our assessment of this option. The detailed RDG assessment also considered some of the issues that would be associated with implementing this avoidable

Assessment

Assessment key

Much worse than the do nothing	✖✖
Slightly worse than the do nothing	✖
No change relative to the do nothing	•
Meeting objectives / incremental improvement on the do nothing	✓
Meeting objectives / significant improvement on the do nothing	✓✓

Objectives specific to charge or incentive regime being assessed

Outcome: **Efficient**

Objective: **Provide Network Rail with accurate incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

The main financial incentive Network Rail has to lower costs (fixed and variable) is that it retains any efficiency gains made during a control period. Due to the current weak understanding of the drivers of fixed costs, Network Rail may be taking decisions to lower fixed costs that are based on inaccurate information. The new cost allocation methodology would improve Network Rail's knowledge of the drivers of fixed costs, which would improve the accuracy of Network Rail's incentive to lower fixed costs. However, it should be noted that a because a proportion of fixed costs are not linked to the operational behaviour of Network Rail, such as the return on the regulatory asset base (RAB), this option would not improve the accuracy of Network Rail's incentives in terms of all elements of its fixed costs.

Outcome: **Efficient**

Objective: **Provide Network Rail with effective incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓✓	✓	✓✓

Assessment under the baseline scenario

The new cost allocation methodology would improve Network Rail's knowledge of the drivers of fixed costs and make it easier for Network Rail to respond to its main financial incentive to lower fixed costs, i.e. its ability to retain any efficiency gains it makes during a control period. Network Rail could use the information to focus on areas of the network where long-run cost savings can be made. The analysis would also provide evidence to Network Rail and funders on which parts of the network have higher maintenance and renewal costs than the total economic benefits they provide.

The new cost allocation methodology would also improve the information available to ORR and funders, such as DfT and Transport Scotland, to hold Network Rail to account for the level of its fixed costs. ORR would have better evidence to challenge Network Rail on its fixed costs during the periodic review process. Funders could also use the new information to try and encourage Network Rail to lower fixed costs given they pay a significant proportion of fixed costs through the network grant. Funders could also use this information to inform decisions taken around franchise specification.

This improved information on fixed costs would also be available to operators. However, they are not likely to use it to put additional pressure on Network Rail to lower fixed costs. Firstly, although fixed costs caused by freight and open access operators would be transparent, these operators would not pay any additional fixed cost charges under this option. As a result, they would not have any additional incentives to use the information to challenge Network Rail on its fixed costs. Secondly, Schedule 9.1 of the franchise agreements holds franchised operators neutral to any changes to their charges that occur during the term of their franchise (as a result of ORR's periodic review). Therefore, although the new fixed cost allocation methodology would reallocate FTAC across franchised operators, which could lead to higher FTAC for some franchised operators (and lower FTAC for others), it would not incentivise existing franchised operators to challenge Network Rail on fixed costs. Additionally, Network Rail raised in its response to the consultation that operators' may have limited expertise in relation to infrastructure costs, prevening them form providing effective challenge to Network Rail.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Reduction in franchise protection	✓✓	This option would lead to changes in the FTAC that the franchised operators pay. If franchised operators were exposed to changes in charges, they would have greater incentives to hold Network Rail to account in terms of the level of fixed costs. Therefore in a state of the world with reduced franchise protection, Network Rail would have additional incentives / pressure to lower fixed costs. The RDG's assessment of the avoidable cost option also identified potential benefits in terms of value for money (i.e. increased cost efficiency) of this approach to cost allocation, in a scenario with additional franchise flexibility. This is a similar effect as under our 'reduction in franchise protection' state of the world (the two scenarios are different but related because they represent significant changes to the incentives of franchised operators).
Any other change to the current state of the world	✓✓	The PR18 review of charges and incentives could also lead to changes to the route-level benefit sharing mechanism (REBS) - see our main consultation document for more detail. This mechanism is designed to provide operators with an incentive to work more closely with Network Rail to help reduce its costs, through a risk-sharing approach. The improved information on fixed costs from the new cost allocation methodology could be useful in our revisiting of the REBS mechanism. So if this option is accompanied by changes to REBS that draw on this methodology, then Network Rail could be further encouraged to reduce its fixed costs through closer working with operators.

Outcome: **Efficient**

Objective: **Ensure that Network Rail can recover its total costs**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

Although the allocation of FTAC between franchised operators would change under this option, FTAC would still be fixed for the control period and levied as a lump sum charge (as currently). Also, the network grant would continue to recover fixed costs not recovered through other charges or revenue streams. Therefore, a large proportion of Network Rail's income would continue to be fixed and would provide a high level of certainty to Network Rail around the recovery of its revenue requirement.

Outcome:	**Better Used**
Objective:	**Provide accurate incentives for Network Rail to add traffic to the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

The new cost allocation methodology would improve Network Rail's understanding of the long-run costs of adding new traffic to the network. As a result, this option would improve the accuracy of Network Rail's incentives to add new traffic to the network. Although Network Rail would not recover any additional fixed costs from freight or open access operators under this option, it would continue to recover at least the short-run marginal costs of services added. However, when deciding, for example, between competing uses of the network, Network Rail would have a better understanding of the longer-term impact of services on its costs.

Outcome:	**Better Used**
Objective:	**Provide effective incentives for Network Rail to add traffic to the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

This option does not involve recovering fixed costs from open access services, and fixed cost mark-ups for freight operators would continue to be determined on the same basis as they have been for CP5. Therefore, any new open access services and any freight services that are not subject to the mark-ups that join the network would only pay short-run marginal cost charges. Therefore, holding everything else constant, Network Rail's incentives to add more traffic to the network would remain unchanged.

Outcome:	**Better Used**
Objective:	**Ensure operators take costs of service into account when using the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	✓✓	●	●

Assessment under the baseline scenario

The new cost allocation methodology would provide all operators with improved information on the fixed costs allocated to them. However, because franchised passenger operators are held neutral to any changes in charges and there would be no change to the fixed cost charges for freight and open access operators, it is not likely that this option would change the extent to which operators take the fixed costs they cause into account when using the network.

Franchise authorities could use the improved information from the new costs allocation methodology when setting franchise specifications and assessing franchise bids. Therefore, when new franchises are tendered, franchised operators would have to take the actual fixed costs their services cause into account.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Reduction in franchise protection	✓✓	Franchised passenger operators would be more likely to take into account the fixed costs they cause if they were not held neutral to changes to FTAC. Therefore, under this state of the world they would be required to pay the more cost-reflective fixed cost charges calculated using the new cost allocation methodology immediately, not just when entering into a new franchise agreement. This would improve their incentives to take the cost of their services into account when using the network.

Outcome:	**Better Used**
Objective:	**Ensure capacity is allocated on the basis of the cost of provision and value of use**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

This option would provide bodies responsible for allocating capacity better information around the fixed costs associated with different types of services and patterns of use (through the avoidable cost element of the analysis but also potentially through the peak use methodology). This would help bodies, such as ORR, funders and Network Rail estimate the long-run costs that will be caused by any new services applying for access to the network, in turn helping them to ensure that capacity is consistently allocated on the basis of the cost of provision.

However, in response to the consultation Network Rail highlighted that capacity allocation decisions are currently largely driven by administrative mechanisms. These administrative mechanisms affect the way in which improved information from the new cost allocation methodology could affect capacity allocation decisions.

General objectives and criteria

Impact on operators

Group	How each group is affected
Franchised train operators	This option would change the allocation of FTAC for franchised operators. However, because of the provisions in Schedule 9.1 of franchise agreements, current franchised operators would continue to pay FTAC as per the level determined at the time when they entered into their franchise agreement, and held neutral from subsequent changes in the level of FTAC. Therefore, while the new cost allocation methodology would result in some changes in the level of FTAC determined for different operators, in practice this would not impact them financially.
Open access operators	There would be no impact on open access operators under this option, as it would not involve any fixed cost charges being levied on these operators. There would be transparency on the fixed costs that they are allocated through the new cost allocation methodology.
Freight operators	Charges for freight operators would not change under this option. Separately, we are considering incremental changes (simplification and recalibration of the market can bear test) to the existing freight fixed cost charges (FSC and FOL). The impacts of those changes are considered separately, and not in this impact assessment.
Charter operators	There would be no change to the fixed cost charges faced by charter operators (currently they do not pay fixed cost charges). The Network Rail cost allocation methodology would also provide information on the fixed costs attributable to charter operators, on parts of the network they use.

Objective:	**Promote positive impacts on funders/customers**
Criteria:	**Positive impact on the funds of Secretary of State and other funders**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

This option is likely to have a limited impact on the funds of the Secretary of State and other funders.

If the new cost allocation methodology is implemented, the FTAC values for franchised passenger operators would change. As operators are held neutral to such changes, the increases / reductions would be picked up by funders through franchise subsidy or premia. However, the impact should be neutral, as the total amount of FTAC recovered would be unchanged (assuming network grant would continue to be paid towards costs not recovered through other charges or income sources).

In the longer-term there may be some cost savings for the Secretary of State and other funders. As explained, the improved information on fixed costs could lead to greater pressure from ORR and funders on Network Rail to reduced fixed costs. In addition, it may improve decisions made about the long-run use of the network.

Objective:	Promote positive impacts on funders/customers
Criteria:	Passenger benefits

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

This option is unlikely to have any direct benefits for passengers, particularly in the short-term. In the long-term, if the information available through the new cost allocation methodology leads to better decisions and a reduction in network costs, passengers could expect lower fares or other benefits (e.g. service quality). However, these longer-term effects are more likely to benefit funders, rather than directly improving passenger outcomes.

Objective:	Promote positive impacts on funders/customers
Criteria:	Freight customer benefits

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

This option would not have any direct impact on freight customers.

Objective:	Promote competition on the railway
Criteria:	Likely to increase the number of suppliers in passenger services rail market

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

Under this option, open access operators would not contribute towards fixed network costs. This would mean that the costs of entering the passenger rail services market would be no higher than they currently are (holding all other things equal).

However, in the absence of other reforms (e.g. the introduction of a PSO levy on open access operators so that they can make a contribution towards socially and economically important, but ultimately unprofitable services delivered through franchises) it would not lead to changes to the access framework for non-franchised passenger operators (including the NPA test). This means that the access terms for non-franchised passenger operators would not change (i.e. would not allow for greater entry by open access operators). Therefore, overall this option is unlikely to have an impact on the number of suppliers in the passenger services rail market.

Objective:	Promote competition on the railway
Criteria:	Likely to increase the number of suppliers in freight rail market

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

As there would be no change to the approach to determining fixed cost charges for freight operators under this option, there would be no change to the cost of entering the freight rail market. Separately, we are considering incremental changes (simplification and recalibration of the market can bear test) to the existing freight fixed cost charges (FSC and FOL). The impacts of those changes are considered separately, and not in this impact assessment.

Objective:	Promote competition on the railway
Criteria:	Unlikely to threaten the sustainability of a sector

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

Under this option, there would be no change to the fixed cost charges faced by any type of operator in practice. Therefore, this option would not threaten the sustainability of any sector of the rail industry.

Other general objectives and criteria

Other general objectives and criteria	Assessment rating	Assessment under the baseline state of the world
Promote positive wider external impacts		
Benefits the environment	●	Compared to the do nothing option this option would have no impact on the environment.
Benefits for rural proofing	●	The new cost allocation methodology would make transparent the amount of fixed costs allocated to services running on rural parts of the network. However, as this option would not change the charges paid by any passenger operators, it should not change the services run in rural areas. The information available from the new cost allocation analysis could inform decisions by funders around provision of services on rural parts of the network. However, when making such decisions, funders would also need to consider the interests of rural people, communities and businesses.
Beneficial distributional impacts	●	Compared to the do nothing option this option would have no distributional impacts.
Improvements in safety	●	Compared to the do nothing option this option would have no impact on safety in the rail industry.
Limit transitional impacts (i.e. impact of change from "do nothing" to new option)		
Low information requirements	✘	To undertake an allocation of fixed costs to all operators across the whole network, this option requires the Wales cost allocation pilot methodology to be rolled out across the rest of the network (this work is nearly complete). Network Rail has been working with industry to develop the pilot analysis, and therefore industry has inputted into the specification of the analysis and many of the issues that may arise have already been addressed in the pilot study on the Wales route. Network Rail has drawn on internal data to develop this analysis. It was expected that Network Rail would need to use data from an exeternal provider to develop a peak cost attribution methodology, so far this has not been necessary. However, the calculations relating to peak cost attribution are complex from a modelling perspective and, while the information from this approach has been retained, the functionality has been removed from the final version of the cost allocation model. The RDG's assessment of the avoidable cost option highlighted some of the transaction costs and complexity associated with this option, and marked this as a significant cost of this option. However, at the time the RDG undertook its assessment, the Network Rail analysis was in the beginning phases. Based on the results of the Wales pilot study, we now know that most of the avoidable cost approach could be deployed using data that is available to Network Rail (see comment above regarding peak cost attribution methodology), which reduces some of the information requirements compared with the RDG's assessment.
Low transitional costs on operators (e.g. related to administrative change)	●	There would be no transitional costs for operators.
Low volatility for operators (i.e. avoiding large step changes in levels of charge)	●	There would be no change in the fixed cost charges faced by freight or open access operators. Franchised passenger operators would be held neutral to any changes through their franchise agreements.
Low implementation difficulties for operators	●	Operators would need to engage with Network Rail in the implementation of this option (to familiarise themselves with the methodology), but this is likely to impose minimal additional requirements.
Low transitional costs on Network Rail (including billing system costs)	●	FTAC would continue to be fixed for every year of the control period under this option, so Network Rail would not need to make any changes to the billing system.

Low implementation difficulties for Network Rail	✘	Network Rail is responsible for rolling out the new FTAC allocation methodology across the network, and would therefore incur some costs in implementing this methodology to its CP6 revenue requirement (once this value was calculated). These costs are not expected to be significant, and Network Rail would have to undertake a similar calculation under the do noting scenario as well (to determine FTAC levels).
Low transitional costs on franchise authorities and funders (including billing system costs)	●	There would be no additional transitional costs for franchised authorities and funders (compared with the do nothing scenario). There would be some costs related to assessing the level of change in charges and the changes in franchise premia and subsidy. However, this is work franchise authorities have to undertake at the time of the periodic review regardless (and in relation to changes made to other charges).
Limit transaction costs (i.e. cost of operating the new option)		
Low transaction costs for operators of administration/participation in the charge or incentive	●	There would be no change in the transaction costs of the regime for operators.
Low transaction costs for Network Rail of administration/participation in the charge or incentive	●	As FTAC would continue to be levied on a fixed basis for each year of the control period this option would not change the transaction costs for Network Rail.
Low transaction costs for funders of administration/participation in the charge or incentive	●	There would be no change to the transaction costs of the regime for funders.
Ensure that the regulatory framework complies with the law		
The option can be implemented under existing legislation	●	This option is consistent with existing legislation.
The option is consistent with any expected changes to legislation	●	This option is consistent with any expected changes to legislation.

Option assessment summary - Option 1

Outcomes and objectives specific to charge or incentive regime being assessed						
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	✓	✓	✓
	Provide Network Rail with effective incentives to lower cost	✓	✓	✓✓	✓	✓✓
	Ensure that Network Rail can recover its total costs	●	●	●	●	●
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✓	✓	✓	✓	✓
	Provide effective incentives for Network Rail to add traffic to the network	●	●	●	●	●
	Ensure operators take costs of service into account when using the network	●	●	✓✓	●	●
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	✓	✓	✓

General charging and incentive objectives						
Objectives	**Criteria**	Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	●	●	●	●	●
	Passenger benefits	●	●	●	●	●
	Freight customer benefits	●	●	●	●	●
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	●	●	●	●	●
	Likely to increase the number of suppliers in freight rail market	●	●	●	●	●
	Unlikely to threaten the sustainability of a sector	●	●	●	●	●
Promote positive wider external impacts	Benefits the environment	●				
	Benefits for rural proofing	●				
	Beneficial distributional impacts	●				
	Improvements in safety	●				
Limit transitional impacts	Low information requirements	✘				
	Low transitional costs on operators (e.g. related to administrative change)	●				
	Low volatility for operators (i.e. avoiding large step changes in levels of charge)	●				
	Low implementation difficulties for operators	●				
	Low transitional costs on Network Rail (including billing system costs)	●				
	Low implementation difficulties for Network Rail	✘				
	Low transitional costs on franchise authorities and funders (including billing system costs)	●				
Limit transaction costs (i.e. cost of operating the new option)	Low transaction costs for operators of administration/participation in the charge or incentive	●				
	Low transaction costs for Network Rail of administration/participation in the charge or incentive	●				
	Low transaction costs for funders of administration/participation in the charge or incentive	●				
Ensure that the regulatory framework complies with the law	The option can be implemented under existing legislation	●				
	The option is consistent with any expected changes to legislation	●				

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Option 2

Option assessment - Option 2

Summary of Option 2

This option involves applying fixed cost charges to all operators, including open access operators (i.e. operators who do not have a franchise agreement). The approach to levying fixed cost charges on passenger operators would be based on a market can bear test. The approach for recovering fixed costs from freight operators would not change (the existing approach is already based on a market can bear test which identifies commodity types that are able to bear mark-ups above short-run variable costs). The new cost allocation methodology described in option 1 would be implemented alongside this option, subject to understanding its impact on charges and customers in practice, and determining that it is technically robust.

Description of Option 2

This option would involve levying fixed cost charges on all passenger operators, including open access operators.

The new cost allocation methodology developed by Network Rail (described in option 1) would be used to determine the level of fixed costs allocated to each passenger operator (or each service / group of services). As discussed in the assessment of option 1, we will review the new cost allocation methodology in detail when the analysis is completed and take into account the responses to Network Rail's consultation on the methdology before deciding whether to use it to allocate fixed costs to operators. If it is determined that the new cost allocation is not robust, option 2 could still be implemented using the current FTAC allocation methodology. The actual level of fixed costs each passenger market segment is required to pay (with the costs allocated to them under the new cost allocation methodology forming an upper bound on this value) would then be determined using a market can bear test.

In terms of implementation, we see this option working as follows: the results of the market can bear test would be used to calculate a rate per vehicle, passenger, train or tonne kilometre for each market segment (for some this would be zero - if that particular market segment was not deemed to be able to bear any costs above short-run variable costs). Any new services that are added during the control period would pay the rate associated with the market segment they are in. Any fixed costs not recovered through fixed cost mark-ups, other fixed cost charges or other income sources would continue to be covered by the network grant, consistent with the existing approach.

The rates calculated would use forecasts of traffic growth in each market segment over the control period. If traffic growth exceeded the forecast for a market segment, Network Rail would experience a revenue gain, but it would have a revenue shortfall if traffic growth was below the forecast. This is the same risk that Network Rail currently faces in relation to FOL and FSC (the freight fixed cost mark-up charges). This may also require changes to the volume incentive, which are not considered in this initial impact assessment.

To apply the market can bear test we will need to develop a market segmentation approach for passenger operators in line with the requirements of The Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016. This requires us to consider, at a minimum, the following segments: services within the framework of a public service contract, other passenger services and freight services. We would want to ensure that the approach to the market can bear test is consistent across all operators. Therefore, we would use a similar approach for passenger operators as we currently use for freight: mark-ups are levied on particular market segments assessed as being able to bear the higher charges. For passenger operators, this could, for example, mean services run by franchised operators would represent one market segment (potentially distinguishing between services run under the core franchise specification, and additional services run), and services run by open access operators another segment (with further segmentation to be undertaken within the latter, for example based on the nature of demand for intercity or peak services versus rural or off-peak services). We have now appointed expert consultants to develop a market segmentation for passenger services, and assess ability to bear in the different market segments identified. This work will be a key input into our final proposals for mark-ups for passenger services.

It should also be noted that DfT has consulted on the principles for introducing a Public Service Obligation (PSO) levy - its consultation closed in April 2017. The purpose of this PSO levy would to recover a proportion of the revenue additional services extract from franchised services to help fund unprofitable but socially desirable services, and mitigate the impact of commercial entry on funders, reducing barriers to increasing on-rail competition. The calculation of the PSO levy will interact with our market can bear test for the passenger operator market segments. If the PSO levy rate for each passenger market segment is calculated before our market can bear test, our assessment will have to take into account the PSO levy rate for each market segment. Conversely if our market can bear test is undertaken before the calculation of the PSO levy rate, DfT would be expected to factor in the level of mark-ups that different passenger market segments are subject to. At this time it appears likely that our market can bear assessment will be undertaken prior to the calculation of the PSO levy rate.

For freight operators, there is already a methodology in place to recover fixed costs, based on a market segmentation by commodity type, and a market can bear test. This option does not involve any changes to that approach. Separately, we are considering incremental changes (simplification and refresh of the market can bear test) for the existing freight fixed cost charges (FSC and FOL). The impacts of those changes are not considered in this impact assessment. This option does not involve a change of approach for freight operators. Therefore, the rest of this assessment focuses on implementation for passenger operators.

As part of it's review of charges, the RDG also considered an option of replacing the methodology used to calculate the FTAC with an avoidable costs methodology. This option is broadly equivalent to our option 1 (with the new cost allocation methodology developed by Network Rail including an avoidable cost element). The detained RDG assessment of this option also considered some of the issues that might be associated with implementing this avoidable cost allocation methodology in mark-ups for freight and open access operators. We have reflected any relevant point (where consistency of evaluation criteria allowed us to) in this assessment. The RDG's review of charges also assessed at a high level an option to implement ability to pay mark-ups, in accordance with relevant legislation. Again, our assessment of option 2 reflects any relevant points from the RDG's assessment.

Assessment

Assessment key

Much worse than the do nothing	✖✖
Slightly worse than the do nothing	✖
No change relative to the do nothing	•
Meeting objectives / incremental improvement on the do nothing	✓
Meeting objectives / significant improvement on the do nothing	✓✓

Objectives specific to charge or incentive regime being assessed

Outcome: **Efficient**

Objective: **Provide Network Rail with accurate incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

As the new cost allocation methodology would also be implemented under this option, subject to concluding that the methodology is robust, Network Rail would have improved information on the drivers of fixed costs. Therefore, as with option 1, this option would provide Network Rail with more accurate information to use in order to drive down fixed costs, improving the accuracy of Network Rail's incentives.

Extending fixed cost charges to open access operators, based on a market can bear test, would not improve the accuracy of incentives that Network Rail has to lower fixed costs further.

It should also be noted that because a proportion of fixed costs are not linked to the operational behaviour of Network Rail, such as the return on the regulatory asset base (RAB), the new cost allocation methodology would not improve the accuracy of Network Rail's incentives on all elements of its fixed costs.

Outcome: **Efficient**

Objective: **Provide Network Rail with effective incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓✓	✓✓	✓	✓✓

Assessment under the baseline scenario

If the new cost allocation methodology was implemented alongside this option, it would improve the information available to Network Rail around the causes of fixed costs. As with option 1, this would help Network Rail to respond to its main incentive to lower fixed costs, i.e. its ability to keep any efficiency gains made in a control period. The improved information would help Network Rail identify areas where fixed costs could be lowered and support Network Rail and funders in understanding whether the costs of maintaining and renewing a part of the network exceed the total economic benefits it provides.

As with option 1, the new cost allocation methodology that would be implemented alongside this option would provide ORR and funders with improved information to challenge Network Rail on its fixed costs.

Under this option, fixed cost charges would also be levied on open access services to the extent that they can bear them. Therefore, operators running services in market segments that could bear mark-ups would also have an incentive to use the information in the new cost allocation methodology to challenge Network Rail to lower its fixed costs. Open access operators are exposed to changes in the level of charges made as part of a periodic review, and this means they would have a stronger incentive compared with franchised passenger operators to encourage Network Rail to lower its fixed costs.

However, the strength of the incentives on open access operators to hold Network Rail to account on fixed costs would depend on the market segmentation that is used in the market can bear test and the level of aggregation applied to when setting mark-up rates based on the new cost allocation methodology. If a very high level market segmentation and cost allocation is developed, the fixed cost charges open access operators pay will not reflect accurately how fixed costs vary across the network, reducing the incentive open access operators have to hold Network Rail to account. The more disaggregated the market segmentation and cost allocation, potentially the greater the link between open access operators' fixed cost charges and the fixed costs allocated to them. However, a highly disaggregated market segmentation would increase the complexity of the market can bear test and require more information.

Franchised passenger operators, who currently run the majority of passenger services on the network, would have limited incentives to put pressure on Network Rail to lower fixed costs. This is because these operators are currently held neutral to any changes to their charges during the term of their franchise. Therefore, the complexity of the market segmentation is not likely to have a significant impact on these operators.

In addition, as described in the assessment of option 1, Network Rail highlighted in their consultation response that the extent to which operators can hold Network Rail to account on their fixed costs will also depend on operators' engineering expertise in relation to infrastructure costs.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	✓✓	Being faced with fixed cost mark-ups for services in some market segments, open access operators would have stronger incentives to hold Network Rail to account for fixed costs under this option. Under this state of the world, open access operators would account for a higher proportion of services running on the network and, in turn, a higher proportion of Network Rail's income from charges. Therefore, under this state of the world, this option would be more likely to provide Network Rail with an additional incentive to lower fixed costs, compared with the baseline scenario. However, whether open access operators would challenge Network Rail on fixed costs in this state of the world would still depend on the complexity and accuracy of the market segmentation used for passenger operators and their understanding of the drivers of infrastructure costs.
Reduction in franchise protection	✓✓	This option would lead to changes in the level of fixed cost charges (FTAC or a new variable mark-up) that franchised passenger operators pay. If franchised operators were exposed to these changes, they would have significantly greater incentives to hold Network Rail to account on fixed costs. Therefore, in a world with reduced franchise protection there would be significantly more pressure on Network Rail to lower fixed costs, and therefore more effective incentives.
Any other change to the current state of the world	✓✓	In a state of the world where changes are made to the REBS mechanism, or it is replaced with an alternative risk-sharing mechanism between Network Rail and operators, operators could be able to use the information from the new cost allocation methodology to pressure Network Rail to lower fixed costs. Therefore, in a state of the world with a modified version of REBS or a new risk-sharing mechanism, this option would lead to Network Rail having greater challenge from operators to lower fixed costs.

Outcome: **Efficient**

Objective: **Ensure that Network Rail can recover its total costs**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	✘	●	●	●

Assessment under the baseline scenario

This option would result in a change in the way Network Rail recovers its fixed costs (i.e. some open access services would also contribute towards them) but would not change Network Rail's ability to recover its total costs with a reasonable degree of predictability. Network Rail would recover a portion of its fixed costs from open access operators and franchised operators, subject to a market can bear test. This would be on an incremental rather than lump-sum basis (i.e. the mark-up would be levied on a per unit of traffic rate). Therefore, while a greater proportion of Network Rail's income would vary with the level of traffic compared to now, due to the low percentage of open access services running on the network currently (less than 1%), this will likely not increase volatility in Network Rail's income significantly. In addition, changes to the volume incentive (or another mechanism) could offset these effects.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	✘	With greater on-rail competition, a higher proportion of passenger services would be provided by open access operators. Therefore, a higher proportion of Network Rail's income would come through charges which are levied on a per unit of traffic rate (rather than as an annual lump sum charge). This would mean a lower level of predictability in Network Rail's income and potential short-falls in the case of significant market exit (which could occur due to factors outside of Network Rail's control). However, these impacts could be mitigated by other changes to the regulatory framework.

Outcome: **Better Used**

Objective: **Provide accurate incentives for Network Rail to add traffic to the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

Network Rail would recover some portion of fixed costs from open access services, meaning Network Rail would receive more revenue than it currently does when new franchise and/or open access passenger services are added to the network. In addition, because the charge would be levied on open access operators (and potentially franchised passenger services) as a mark up per unit of traffic (e.g. train miles), Network Rail's decision to add traffic to the network would be based on the revenue associated with these additional services (including the fixed cost mark-up for services within market segments that can bear the mark-up).

However because the level of the charge paid by each passenger market segment would be based on a market can bear test and the new cost allocation methodology, the additional revenue Network Rail would receive from new passenger services would not necessarily equal the costs that the new services cause, either in terms of their short- or long-term cost impacts. As a result, for market segments that are assessed as being able pay less than their full fixed cost allocation, Network Rail would take into account the level of revenue they actually receive when deciding to allow those services onto the network, rather than the costs of provision (in the long-term). The accuracy of Network Rail's incentives depends on the results of the market can bear analysis, which places a signfiicant amount of weight on the data and the methodology used in the analysis. The results of this work are not yet available.

Network Rail's incentives to add traffic to the network are also affected by other charges and incentives - for example the capacity charge and the volume incentive, and the accuracy of those incentives. Therefore, consequential changes might be needed to the volume incentive to adjust for any shortfall in revenue created by the application of the market can bear test. These mitigations are not reflected in the above assessment ratings.

Outcome:	Better Used
Objective:	Provide effective incentives for Network Rail to add traffic to the network

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

Network Rail would recover both short-run marginal costs and possibly some fixed costs when new open access services are added to the network. Also fixed cost mark-ups would be levied on a variable basis on these services (and possibly on franchised services) meaning Network Rail would make decisions on the marginal impact of additional services on its costs. Therefore, this option would provide Network Rail with a more effective incentive to add traffic to the network (in some instances). This assessment was supported by Network Rail in their consultation response: Network Rail agreed that levying fixed cost charges on services as a per unit of traffic rate would improve their financial incentives to add traffic to the network.

The effectiveness of the incentive for Network Rail in relation to each passenger operator market segment would depend on the proportion of their fixed cost allocation they are assessed as being able to bear. Network Rail would have a greater incentive to add traffic from market segments that are able to bear a relatively high proportion of their allocated fixed costs, compared to market segments that can bear only a very small amount or none at all. However, this option may require consequential changes to the volume incentive to adjust for any shortfall created by the application of the market can bear test. These mitigations are not reflected in the above assessment ratings.

In cases where applications were made by operators in market segments that are not subject to a mark-up (as they are not able to pay), the ORR would continue to provide an appeal function to ensure those operators are not turned away by Network Rail due to concerns around risk to performance. Where competing applications were made for services in market segments that pay a mark-up and services in market segments that do not, the ORR would continue to decide on capacity allocation and safeguard against any discrimination.

The RDG's assessment of the ability to bear mark-up option also highlighted the potential for this option to promote efficient use of network capacity through better signals for efficient use (while taking account of the need for socially necessary services).

Outcome:	Better Used
Objective:	Ensure operators take costs of service into account when using the network

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	✓✓	●	●

Assessment under the baseline scenario

Under this option, there would be improved information available on the causes of fixed costs across the network. The level of segmentation in the market can bear test, and the level of aggregation in the cost allocation, would affect the extent to which passenger operators would take this information into account when taking decisions on how they use the network. If very few market segments are defined under the market can bear assessment, the charges for each market segment would be based on highly averaged information in relation to the ability of services within that segment to bear additional costs. Therefore, the resulting level of charges would not accurately reflect how fixed costs vary across the network and passenger operators would not have an incentive to take all these costs of services into account when using the network.

In addition, even if a highly disaggregated market segmentation is used for the market can bear test, this may show that some market segments cannot bear any fixed costs. This would mean that any passenger operators in these segments would bear no additional charges and, therefore, would have no additional incentives to consider the fixed costs allocated to them under the new cost allocation methodology, reducing the benefits under this option for those operators.

Franchised passenger operators would also have no additional incentive to consider the costs imposed by the services they run. The new costs allocation methodology would improve the information they have on the long-run costs they cause but, as they are held neutral to any changes in their charges, they would not have an incentive to use the information to make efforts to reduce the fixed costs allocated to them.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Reduction in franchise protection	✓✓	If franchised operators were no longer held neutral to changes to their fixed charges, they would have a stronger incentive to consider the actual fixed costs they impose on the network, determined using the cost allocation methodology and implemented in fixed cost charges (either the FTAC or a new variable mark-up type charge).

Outcome: **Better Used**

Objective: **Ensure capacity is allocated on the basis of the cost of provision and value of use**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

The new cost allocation methodology would provide bodies responsible for allocating capacity with improved information on the fixed costs associated with each type of service. This would help these bodies to ensure that capacity allocation is informed by the long-run cost of provision. Extending fixed cost charges to open access and additional franchised services that can bear them would not in itself improve the degree to which capacity is allocated on the basis of cost of provision and value of use.

As discussed in the assessment of option 1, Network Rail raised the point in their response to the consultation that capacity allocation decisions are currently largely driven by administrative mechanisms, which may frustrate the impact that the new cost allocation methodology has on capacity allocation decisions.

General objectives and criteria

Impact on operators

Group	How each group is affected
Franchised train operators	The level of FTAC for each franchised passenger operator would change based on the new cost allocation methodology implemented under this option. However, franchised passenger operators are currently held neutral to any changes to FTAC made by ORR at the time of the periodic review, so there would be no financial impact on these operators in practice.
Open access operators	Open access operators would be most materially affected by this option. Subject to a market can bear test, some open access services would face fixed cost mark-ups under this option. However, the overall financial impact will depend on the results of the cost allocation work and of the market segmentation and market can bear analysis. There could be a case for transitional and / or different treatment for those open access operators already operating, and who entered the market before changes to the fixed cost charges were contemplated (to allow them to vary their service provision in light of the revised ORR access policy).
Freight operators	We are not considering any changes to the framework for recovering fixed costs from freight operators under this option. As explained previously, we are separately considering incremental changes (simplification and refresh of the market can bear test) for the existing freight fixed cost charges (FSC and FOL). The impacts of those changes are not considered in this impact assessment, but have been evaluated separately.
Charter operators	As with freight operators, the new cost allocation methodology would allocate fixed costs caused by charter operators but there would not be a change to the fixed cost charges they face (they currently do not pay towards fixed costs). There would, however, be an updated assessment under the market can bear test, in line with all operators.

Objective:	**Promote positive impacts on funders/customers**
Criteria:	**Positive impact on the funds of Secretary of State and other funders**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓✓	✓	✓	✓

Assessment under the baseline scenario

Under this option some open access services would contribute towards Network Rail's fixed costs, which would have a positive impact on the funds of the Secretary of State and other funders. However, open access services currently represent a small proportion of traffic on the network, and the amount these services contribute would be determined by a market can bear test. Therefore, it is possible the test would show that at least some passenger operator market segments cannot bear any fixed costs.

As the network grant would continue to cover fixed costs not recovered through charges, the fixed costs of new services that join the network which are in market segments that cannot bear all of their fixed costs would continue to be covered by the network grant.

Overall, therefore, the likely financial size of the impact on the Secretary of State's and other funders' funds is likely to be small relative to the total taxpayer funding of the railway. However, as recent access decisions have illustrated, there can be significant impacts of these changes in terms of the funds available. These changes may also have material impacts on decision making by funders.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	✓✓	In this state of the world, where a higher proportion of passenger services are provided by open access operators, this option could lead to a significant increase (compared with the baseline scenario) in the amount of fixed costs recovered from open access operators, which in turn would mean a larger positive impact on the funds available to the Secretary of State and other funders. However, it should be noted that this option itself could be key in facilitating an increase in the proportion of passenger services run by open access operators (as per the CMA's on-rail competition report).

Objective:	Promote positive impacts on funders/customers
Criteria:	Passenger benefits

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓✓	✓	✓	✓

Assessment under the baseline scenario

This option is expected to facilitate greater on-rail competition. Open access operators would contribute towards fixed costs and at the same time the ORR would make changes to its access policy (e.g. including the NPA test) that could result in greater on-rail competition.

Greater competition in the passenger services rail market could bring benefits to passengers. In their 2016 report on 'Competition in passenger rail services in Great Britain' the Competition and Markets Authority (CMA) identified a range of benefits for passengers that could arise from greater on-rail competition. The potential passenger benefits identified by the CMA included; lower ticket prices, increased service frequency, service quality improvements and increased service innovations.

The ultimate fares paid by passengers are influenced by a number of factors including strength of demand, government fares policy, number of services (which in turn is addected by the marginal cost of adding a service). Our market can bear test might result in marginal charges increasing for some market segments (through the introduction of a mark-up). Therefore, this could in turn affect fares (and potentially lead to increases). However, the market can bear test will take account of the strength of demand in different market segments and therefore we do not expect any impacts on fares to be significant.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	✓✓	Under this state of the world, a higher proportion of passenger services would be provided by open access operators, in competition with franchised passenger operators. Therefore, all other things being equal, the passenger benefits described above would be greater than under the baseline state of the world.

Objective:	Promote positive impacts on funders/customers
Criteria:	Freight customer benefits

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

This option would not have any direct impact on freight customers.

Objective:	Promote competition on the railway
Criteria:	Likely to increase the number of suppliers in passenger services rail market

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
✓	✓	✓	✓	✓

Assessment under the baseline scenario

As explained above, with open access operators contributing towards fixed costs, they could potentially have greater access to capacity on the network, which would increase the number of suppliers in the passenger services rail market. To fully realise these benefits there would also need to be changes to the access framework for open access operators (i.e. the NPA test).

Although the costs to enter the market would be higher for open access operators (and some market segments specifically), our application of the market can bear test would ensure that those market segments are not priced off and efficient services within those segments can enter the market, despite the higher charges.

Objective:	Promote competition on the railway
Criteria:	Likely to increase the number of suppliers in freight rail market

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

Under this option, there would no changes to the approach for recovering fixed costs from freight operators. Therefore, this option would have no impact on the number of suppliers in the freight rail market.

Objective:	Promote competition on the railway
Criteria:	Unlikely to threaten the sustainability of a sector

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
●	●	●	●	●

Assessment under the baseline scenario

Although open access and potentially additional franchised services would be subject to fixed cost mark-ups, the market can bear test would ensure that the fixed cost charges levied on specific market segments are not above the level they can bear. Overall this option would not threaten the sustainability of any sector in the rail industry.

Other general objectives and criteria

Other general objectives and criteria	Assessment rating	Assessment under the baseline state of the world
Promote positive wider external impacts		
Benefits the environment	●	This option would have no impact on the environment.
Benefits for rural proofing	●	In response to the consultation several stakeholders raised the concern that the new cost allocation methodology may increase the amount of fixed costs allocated to rural parts of the network. Although this may be the case the market can bear test would help ensure that overall, services within market segments running in rural areas are not priced off the network if they cannot bear higher charges.
Beneficial distributional impacts	●	This option would have no distributional impacts.
Improvements in safety	●	This option would have no impact on safety in the rail industry.
Limit transitional impacts (i.e. impact of change from "do nothing" to new option)		
Low information requirements	✘✘	This option would require a market can bear test for all passenger operators to be developed and undertaken. This market can bear test would require significant information around different passenger markets, characteristics of demand, forecasts of growth etc. The new cost allocation methodology would also need to be rolled out across the rest of the network, although this is nearly complete and many of the issues that are likely to arise have already been explored as part of the Wales pilot study. The RDG's assessment of the ability to pay mark-ups option also highlighted some of the complexity associated with calculating such mark-ups compared to the do nothing option. This is reflected in the score for this criterion.
Low transitional costs on operators (e.g. related to administrative change)	✘	There would be some transitional costs for passenger operators in terms of information ORR might require to undertake the market can bear assessment.
Low volatility for operators (i.e. avoiding large step changes in levels of charge)	✘	Open access services in some market segments would face fixed cost charges for the first time. The market can bear test should ensure the increase is manageable (including through the possible phasing in of charges to allow operators to plan their business with a reasonable degree of certainty). Additionally, transitional arrangements might be needed for existing open access operators, to allow them to vary their services before possibly being subject to fixed cost mark-ups.
Low implementation difficulties for operators	●	Some open access operator would need to start paying fixed cost mark-ups. However, there should not be any implementation difficulties associated with this change (in terms of their billing requirements).
Low transitional costs on Network Rail (including billing system costs)	✘✘	This option might require changes to Network Rail's billing system, particularly if charges for franchised services are different depending on whether the service is part of the core franchise specification or not. Currently, variable charges do not differ based on this. In response to the consultation Network Rail also explained that if the fixed cost charges were to be levied on a per unit of traffic basis this would also require changes to Network Rail's billing system. However, if charges were levied on the basis of an existing charging approach (e.g. by service code), these changes are not likely to be substantial.
Low implementation difficulties for Network Rail	✘	The main challenge for Network Rail to implement this option is to roll out the pilot methodology to the rest of the network and possibly update the billing system. The market can bear test would be undertaken by ORR.
Low transitional costs on franchise authorities and funders (including billing system costs)	●	There would not be any transitional costs for franchise authorities and funders.
Limit transaction costs (i.e. cost of operating the new option)		
Low transaction costs for operators of administration/participation in the charge or incentive	●	There would not be any changes to the transaction costs for passenger or freight operators to participate in the fixed charges regime.
Low transaction costs for Network Rail of administration/participation in the charge or incentive	●	Some open access services (in particular market segments), would be charged fixed costs but this would not represent any material change to how Network Rail administers the charging regime.
Low transaction costs for funders of administration/participation in the charge or incentive	●	There would not be any additional transaction costs for franchise authorities and funders.

Ensure that the regulatory framework complies with the law		
The option can be implemented under existing legislation	●	As this option would apply a market can bear test to determine the level of fixed cost charges passenger operators could bear, this option would be compliant with EU Directive 2012/34/EU.
The option is consistent with any expected changes to legislation	●	This option is consistent with any expected changes to legislation.

Option assessment summary - Option 2

Outcomes and objectives specific to charge or incentive regime being assessed						
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	✓	✓	✓
	Provide Network Rail with effective incentives to lower cost	✓	✓✓	✓✓	✓	✓✓
	Ensure that Network Rail can recover its total costs	●	✗	●	●	●
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	●	●	●	●	●
	Provide effective incentives for Network Rail to add traffic to the network	✓	✓	✓	✓	✓
	Ensure operators take costs of service into account when using the network	●	●	✓✓	●	●
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	✓	✓	✓

General charging and incentive objectives						
Objectives	**Criteria**	Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	✓	✓✓	✓	✓	✓
	Passenger benefits	✓	✓✓	✓	✓	✓
	Freight customer benefits	●	●	●	●	●
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	✓	✓	✓	✓	✓
	Likely to increase the number of suppliers in freight rail market	●	●	●	●	●
	Unlikely to threaten the sustainability of a sector	●	●	●	●	●
Promote positive wider external impacts	Benefits the environment	●				
	Benefits for rural proofing	●				
	Beneficial distributional impacts	●				
	Improvements in safety	●				
Limit transitional impacts	Low information requirements	✗✗				
	Low transitional costs on operators (e.g. related to administrative change)	✗				
	Low volatility for operators (i.e. avoiding large step changes in levels of charge)	✗				
	Low implementation difficulties for operators	●				
	Low transitional costs on Network Rail (including billing system costs)	✗✗				
	Low implementation difficulties for Network Rail	✗				
	Low transitional costs on franchise authorities and funders (including billing system costs)	●				
Limit transaction costs (i.e. cost of operating the new option)	Low transaction costs for operators of administration/participation in the charge or incentive	●				
	Low transaction costs for Network Rail of administration/participation in the charge or incentive	●				
	Low transaction costs for funders of administration/participation in the charge or incentive	●				
Ensure that the regulatory framework complies with the law	The option can be implemented under existing legislation	●				
	The option is consistent with any expected changes to legislation	●				

OFFICE OF RAIL AND ROAD

Option 3

Option assessment - Option 3

Summary of Option 3

Recovery of fixed costs would be linked to a measure / definition of capacity utilisation. Essentially, fixed cost mark-ups would be levied on all operators based on the capacity utilisation of the areas of the network that they use. The new cost allocation methodology described in option 1 would be implemented alongside this option, subject to ORR concluding the methodology is robust (as described under the assessment of option1).

Description of Option 3

This option would link the recovery of fixed costs on the network to a measure, or definition, of network utilisation. Alongside this, the new cost allocation methodology described under option 1 would be implemented. We would thoroughly review the robustness of the new cost allocation methodology before implementing it and consider the responses to Network Rail's consultation on the methodology over summer 2017. If the new cost allocation methodology was not deemed robust enough this option could use the current FTAC methodology to allocate costs to operators. This option could work in several ways: one approach would be to allocate fixed costs to operators proportionally based on the utilisation of the areas of the network they use. Operators running on highly utilised parts of the network would pay a higher proportion of the total fixed costs attributed to them using the new methodology. Another possible approach would be to only levy fixed cost charges on operators that use highly utilised parts of the network, operators that do not use such parts of the network would only pay variable charges.

Fixed cost charges under this option would be levied on all types of operators, including freight and open access operators. To avoid pricing any operators off the network the amount paid by freight and open access operators would be determined by a market can bear test. A market can bear test for freight operators could continue to be based on market segmentation by commodity type. For passenger operators a market can bear test would have to be developed that is based on an appropriate market segmentation. As mentioned under the assessment of option 2 we have appointed expert consultants to start developing an appropriate market segmentation for passenger services.

Currently, fixed cost charges are levied as lump sum annual payments from franchised passenger operators (FTAC), and on a (variable) per service basis for freight operators. Under this option, fixed cost mark-ups would be levied, at least for some operators, on a variable basis likely using a metric of network use, such as train kilometres. Levying fixed cost charges on a variable basis would allow operators to reduce their fixed cost charges by changing the areas of the network they plan to run services on.

As this option is at a relatively early stage of development, there are several aspects of the design of this option that have not been finalised and would need to be considered further if it was taken forward. In particular, an administrative process or metric would have to be developed to allow Network Rail and / or ORR to determine if a part of the network is highly utilised. One possible measure that could be used is the Capacity Utilisation Index (CUI). The CUI is a measure of how much planning capacity of a section of railway is being utilised by the current timetable. All parts of the network with a CUI above a certain threshold could be defined as attracting fixed charges.

Another aspect of this option that would have to be considered is the granularity of the charge. Although the new FTAC methodology allocates fixed costs to each operator at the constant traffic section it is likely to be charged at a less disaggregate level, such as at the service group level for each strategic route section.

Reflecting the uncertainty around the implementation of this option, in the assessment below we have described potential impacts qualitatively based on the high level specification of the option. However, we have reflected the uncertainty that exists at this stage around this option through the scoring of the impacts (all scored as question marks).

Assessment

Assessment key

Much worse than the do nothing	✘✘
Slightly worse than the do nothing	✘
No change relative to the do nothing	•
Meeting objectives / incremental improvement on the do nothing	✓
Meeting objectives / significant improvement on the do nothing	✓✓

Objectives specific to charge or incentive regime being assessed

Outcome: **Efficient**

Objective: **Provide Network Rail with accurate incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

As the new cost allocation methodology would also be implemented under this option, subject to concluding that methodology is robust, Network Rail would have improved information on the drivers of fixed costs. Therefore, as with options 1 and 2, this option would provide Network Rail with more accurate information on fixed costs, improving the accuracy of Network Rail's incentives to drive down these costs.

Linking fixed cost charges paid by operators to the level of utilisation of the area of the network a service uses would not be expected to further improve the accuracy of Network Rail's incentive to lower fixed costs. Network Rail would likely still only use the information from the new cost allocation methodology, rather than the actual charges operators pay when making decisions on how to lower fixed costs.

It should also be noted also that a because a proportion of fixed costs are not linked to the operational behaviour of Network Rail, such as the return on the regulatory asset base (RAB), the new cost allocation methodology would not improve Network Rail's information on all elements of its fixed costs.

Outcome: **Efficient**

Objective: **Provide Network Rail with effective incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

If the new cost allocation methodology was implemented alongside this option it would improve Network Rail's information on fixed costs. This would improve Network Rail's ability to respond to it's primary incentive to reduce costs, which is its ability to retain any efficiency gains it makes during the control period and also the additional pressure ORR, funders and operators on highly utilised parts of the network would be likely to exert on Network Rail to lower fixed costs.

Subject to a market can bear test, this option would mean fixed cost charges would be levied on all operators that use highly utilised sections of the network. This is likely to include some services (e.g. open access passenger or freight services not subject to mark-ups) that currently do not pay fixed charges. As a result, a wider range of operators should be motivated to engage with Network Rail to lower its fixed costs, compared to now. The new cost allocation methodology would also provide ORR, funders and operators with improved information on fixed network costs. Therefore, relative to the do nothing, this option would provide Network Rail with an additional incentive to lower its fixed costs.

It could be an incremental improvement on the do nothing because operators using less utilised parts of the network would have lower fixed cost charges. Therefore, franchised operators running on such areas of the network that currently pay FTAC would have less reason than they do now to hold Network Rail to account for fixed costs. Furthermore, all franchised operators (including those running on highly utilised parts of the network) would be held neutral to changes to their fixed cost charges due to their franchise agreements. Operators running non-franchised passenger services and freight operators assessed as being able to bear additional fixed cost charges would have increased incentives to challenge Network Rail on fixed costs. Although, as highlighted by Network Rail in response to the consultation, the challenge any operator provides to Network Rail may be limited by their engineering expertise in relation to fixed costs.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Reduction in franchise protection	?	This option would lead to changes in the fixed charges paid by franchised operators. Therefore, if franchised operators were exposed to these changes, depending on the detailed implementation issues surrounding this option, they should have significantly greater incentives to hold Network Rail to account for their fixed costs. Therefore in a world with reduced franchise protection Network Rail would have another incentive to lower fixed costs.

Outcome: **Efficient**

Objective: **Ensure that Network Rail can recover its total costs**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

As this option would involve levying fixed cost charges on a variable, per unit of traffic, basis for a larger proportion of services than currently, there is an associated risk that there could be revenue increases or shortfalls for Network Rail, creating uncertainty in terms of its funding. For instance, if an operator running on a highly utilised part of the network decides to change its services and move to a less utilised part of the network, they would no longer pay fixed cost charges (or would pay lower fixed cost charges) and Network Rail's income would decrease. Conversely, Network Rail's income would increase if an operator moved to a highly utilised part of the network (or increased its service frequency on a highly utilised part of the network).

In addition, consideration would have to be given to how fixed costs on less utilised parts of the network are recovered, as they would not be directly recovered from the operators that use such parts of the network (under one of the implementaton options we have set out for this option). One approach would be to recover these costs through the network grant. There is also the potential that a residual FTAC could remain in place for services which are part of the core franchise specification.

The extent of the income uncertainty for Network Rail depends on the empirical results of the market can bear test and the utilisation baseline set, and could be mitigated by having a sensible approach to dealing with significant fluctuations (e.g. a re-opener). However, this risk is enhanced to some extent by the existence of a fixed borrowing limit for Network Rail since its reclassification.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	?	Open access operators are more likely, and have greater ability, to change the services that they run compared to franchised operators. Under this option, they may choose to change their services to reduce their fixed cost charges. Therefore, with greater open access competition on the network there could be more volatility to Network Rail's income than under the baseline scenario.

Outcome: **Better Used**

Objective: **Provide accurate incentives for Network Rail to add traffic to the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Under this option, Network Rail would recover some proportion of fixed costs from franchised, open access and freight operators when new services are added to the network, especially in highly utilised areas of the network. This means Network Rail would receive more revenue than it currently does when any new services are added to the network. In addition, because the charge would be levied on at least some operators on a variable basis, such as per vehicle mile, Network Rail's decision to add traffic to the network would be based on the revenue associated with these additional services (including the fixed cost mark-up for services within market segments that can bear the mark-up).

However, because the charge paid by each market segment would be based on a market can bear test; the new cost allocation methodology; and the level of utilisation of the relevant area of the network, Network Rail's additional revenue from new services would not necessarily equal the costs that the new services cause (either in terms of their short- or long-term cost impacts). As a result, Network Rail would take into account the level of revenue they actually receive when deciding to allow those services onto the network, rather than the costs of provision (in the long-term).

Network Rail's incentives to add traffic to the network are also affected by other charges and incentives - for example, the capacity charge and the volume incentive - and the accuracy of those incentives. Therefore, consequential changes might be needed to the volume incentive to adjust for any shortfall in revenue created by the application of the market can bear test and any utilisation metric or definition.

Outcome:	**Better Used**
Objective:	**Provide effective incentives for Network Rail to add traffic to the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Recovering more fixed costs as mark-ups from market segments that can bear such costs would mean that some new open access and freight services would pay some fixed cost charges in addition to the current short-run marginal cost charges. Therefore, this option could provide stronger incentives for Network Rail to add more services to the network, particularly on highly utilised parts of the network where operators would pay higher fixed cost charges.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	?	With more competition in passenger services, the incentives for Network Rail might be even stronger.

Outcome:	**Better Used**
Objective:	**Ensure operators take costs of service into account when using the network**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

This option would improve the extent to which operators take the costs of their services into account when using the network.

Firstly, if the revised FTAC methodology was implemented alongside this option, it would significantly improve the knowledge operators have of the costs they are causing, even if for some services this did not match what they actually pay. Also, as operators would pay more to run on highly utilised areas of the network, this would help ensure operators take into account the additional costs they cause when they use such sections of the network.

Secondly, regardless of the detailed design of this option, it would be clear to operators that by running services on less utilised sections of the network they can reduce their fixed cost charges. Also, because of the considerable size of fixed costs on the network, it is likely operators would face a significant difference in charges depending on the area of the network that they run on. This would increase the likelihood that operators would respond to the incentive to run on less utilised sections of the network when it is efficient to do so.

Outcome:	**Better Used**
Objective:	**Ensure capacity is allocated on the basis of the cost of provision and value of use**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

If the new cost allocation methodology that was implemented alongside this option it would improve ORR's and Network Rail's understanding of fixed costs and could improve their decision making in terms of the allocation of capacity. This charging option in itself would not improve the information and knowledge available to the bodies that allocate capacity (further to the cost allocation methodology itself).

General objectives and criteria

Impact on operators

Group	How each group is affected
Franchised train operators	The fixed cost charges of franchised operators would change under this option. Whether a franchised operator would be better or worse off under this option would depend on the results of the new cost allocation methodology and the capacity utilisation of the areas where they run services. However, it is important to note that franchised operators would not be immediately affected by any changes due to the fact that they are held neutral to changes in charges as part of their franchise agreements.
Open access operators	As this option would involve levying fixed cost charges on some open access services, these services would face higher costs than they currently do, especially if they choose to run services in highly utilised areas. However, a market can bear test would be applied to ensure that open access operators are not priced off the network in market segments where new and existing operators operate (and changes might be required to ORR's access policy for open access operators). There could be a case for transitional and / or different treatment for those open access operators already operating, and who entered the market before changes to the fixed cost charges were considered.
Freight operators	This option would also involve levying fixed charges on freight operators. However, as with the current FOL and FSC charges, a market can bear test would be applied based on market segmentation by commodity type.
Charter operators	This option would also involve levying fixed charges on charter operators. A market can bear test would be applied to determine the level of fixed cost charges levied on charter operators.

Objective: **Promote positive impacts on funders/customers**

Criteria: **Positive impact on the funds of Secretary of State and other funders**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

The impact of this option on the funds of the Secretary of State and other funders is unclear at this stage.

On one side open access and freight operators on highly utilised parts of the network would pay fixed cost charges if they can bear them, thus reducing the proportion of fixed costs caused by these operators that would have to be covered by the network grant. However, at the same time fixed costs on less utilised parts of the network would have to be recovered, which might be done through the network grant and, therefore, the net impact depends on the results of the cost allocation analysis and the utilisation threshold set to recover fixed charges.

Objective: **Promote positive impacts on funders/customers**

Criteria: **Passenger benefits**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Some open access services would contribute to fixed costs under this option, which, if accompanied by changes to the access framework for open access operators (i.e. the NPA test), could increase their access to the network. As a result, this option could facilitate greater competition for passenger services. If there is greater competition for passenger services, this could deliver a range of benefits for passengers. As explained under option 2, this could include lower ticket prices, increased service frequency, service quality improvements and increased service innovations.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	?	Under this state of the world, a higher proportion of passenger services would be provided by open access operators, in competition with franchised passenger operators. Therefore, all other things being equal, the passenger benefits described above would be greater than under the baseline state of the world.

Objective: **Promote positive impacts on funders/customers**

Criteria: **Freight customer benefits**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

This option would not have any direct impact on freight customers.

Objective: **Promote competition on the railway**

Criteria: **Likely to increase the number of suppliers in passenger services rail market**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

As fixed cost charges would be zero, or at least lower, on less utilised parts of the network, it would cost less for operators to enter the market and provide passenger services on these sections of the network.

On highly utilised parts of the network the fixed cost charges may be levied in full, but this would likely coincide with locations where demand for services is higher, meaning that efficient operators would still be able to enter (where capacity is available).

As this option would likely and necessarily be accompanied by changes to the access framework for open access operators (i.e. the NPA test), it would likely enable open access operators to access more capacity on the network and, therefore, facilitate more competition.

Objective: **Promote competition on the railway**

Criteria: **Likely to increase the number of suppliers in freight rail market**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Although fixed cost charges would be levied on freight operators running on highly utilised parts of the network, the market can bear test would ensure that it does not price any freight market segments off, or discourage new entrants.

Objective: **Promote competition on the railway**

Criteria: **Unlikely to threaten the sustainability of a sector**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

This option would involve levying fixed cost charges on some services which do not currently pay them. However, as explained above the charge for any market segment would be subject to a market can bear test. This would help ensure that this option does not threaten the sustainability of any sector of the rail industry.

Other general objectives and criteria

Other general objectives and criteria	Assessment rating	Assessment under the baseline state of the world
Promote positive wider external impacts		
Benefits the environment	?	This option would have no impact on the environment.
Benefits for rural proofing	?	In theory this option could attract more passenger services to enter lower-utilised areas of the network, which are likely to be more rural areas, and therefore provide an increased service in these area. However, there are other factors (e.g. demand) that would affect this as well.
Beneficial distributional impacts	?	This option would have no distributional impacts.
Improvements in safety	?	This option would have no impact on safety in the rail industry.
Limit transitional impacts (i.e. impact of change from "do nothing" to new option)		
Low information requirements	?	This option would require an accurate and reliable quantitative measure of capacity utilisation on the network. Although it should be noted that work currently being done by consultants TRL working for ORR may provide such a measure in the future, one is not available currently (which is widely accepted by industry). Under this option ORR would also need substantial information from operators to conduct a market can bear test.
Low transitional costs on operators (e.g. related to administrative change)	?	This option might involve administrative changes by operators, to enable billing of fixed charges on services running on highly utilised parts of the network (e.g. codification of such services under new service groups / codes). It is not clear at this stage what the scale of the changes required would be.
Low volatility for operators (i.e. avoiding large step changes in levels of charge)	?	There would be volatility in fixed cost charges for operators if they moved to operate on a part of the network that had a different level of capacity utilisation. However, this would be the choice of the operator so would not be an unexpected change. The level of the charge might also change between control periods if the level of utilisation on a part of the network changed in the meantime.
Low implementation difficulties for operators	?	Operators would have to provide some information and engage with the ORR when it undertook the market can bear test to help implement this option.
Low transitional costs on Network Rail (including billing system costs)	?	Fixed cost charges would be levied on a variable basis but, as FSC and FOL are already charged on a variable basis, Network Rail would not need to make significant changes to their billing system in this respect. However, changes might be needed to enable different rates to be applied on parts of the network with high utilisation and low utilisation.
Low implementation difficulties for Network Rail	?	Network Rail would have to use a capacity utilisation measure (that would need to be developed) to implement this option (i.e. to assess the level of utilisation on each part of the network). This could be time consuming and costly if it is decided capacity utilisation should be measured at a highly disaggregated level, such as constant traffic sections (CTS).
Low transitional costs on franchise authorities and funders (including billing system costs)	?	Franchise authorities and funders would face some transitional costs due to the re-calculation of franchise premia / subsidy as a result of the move to this type of charging approach. This will depend on the approach implemented (whether a residual FTAC is in place or not).
Limit transaction costs (i.e. cost of operating the new option)		
Low transaction costs for operators of administration/participation in the charge or incentive	?	Moving fixed cost charges to a variable basis would increase transitional costs for operators to administer fixed cost charges.
Low transaction costs for Network Rail of administration/participation in the charge or incentive	?	Moving fixed cost charges to a variable basis would increase transitional costs for Network Rail to administer fixed cost charges.
Low transaction costs for funders of administration/participation in the charge or incentive	?	There would not be a change in transaction costs for franchised authorities and funders.
Ensure that the regulatory framework complies with the law		
The option can be implemented under existing legislation	?	As this option would include a market can bear test for all operators, it is compliant with EU Directive 2012/34/EU.
The option is consistent with any expected changes to legislation	?	This option is consistent with any expected changes to legislation.

OFFICE OF RAIL AND ROAD

Option 4

Option assessment - Option 4

Summary of Option 4

Link fixed cost recovery to the holding of 'long-term' access rights. Fixed cost charges would be levied on all operators based on the type of access rights they hold. Fixed cost charges would only be levied on operators who hold 'long-term' rights. Operators with 'short-term' rights would only pay variable charges. This option could be implemented alongside a residual FTAC paid by core franchise specification services (to provide income stability for Network Rail). There would also likely still be a role for the network grant. The new cost allocation methodology described in option 1 would be implemented alongside this option, subject to ORR concluding the methodology is robust (as described under the asessment of option 1).

Description of Option 4

Under this option, the fixed cost charges that operators pay would be linked the type of access rights that they hold. Fixed cost charges would be levied on all operators that hold 'long-term' rights, including freight and open access passenger operators. Operators with 'short-term' rights would only pay variable charges. Alongside this option the new cost allocation methodology described under option 1 would be implemented. As with the other three options we would thorougly review the robustness of the new cost allocation methodology before implementing it and consider the responses to Network Rail's consultation on the methodology over summer 2017. If the new cost allocation methodology was not deemed robust enough this option could use the current FTAC methodology to allocate costs to operators.

The fixed cost charges would be levied on a variable basis as opposed to being levied as a lump sum charge fixed at the start of the control period. The level of fixed costs allocated to each operator with long-term rights could be based on a measure of use, such as train kilometres.

This option would require significant changes to the existing access rights framework. This would include the creation of distinct 'long-term' and 'short-term' access rights and changes to how access rights are allocated. The exact length of long-term and short-term rights would need to be considered as part of the implementation of this option. Priority for access rights would be given to operators who apply for long-term rights, short-term rights would only be approved once all long-term rights had been satisfied. The process Network Rail uses to make decisions on which services to include in the timetable could remain the same (i.e. timetable all approved firm rights before including any contingent rights).

It is expected that under this option operators would only choose long-term rights in areas of the network that have high levels of capacity utilisation and competing demands for rights. Reflecting this, the market can bear test could rely on the process of choosing between long-term and short-term rights rather than it being an additional analytical step (as under options 2 and 3).

Reflecting the uncertainty around the implementation of this option, in the assessment below we have described potential impacts qualitatively based on the high level specification of the option. However, we have reflected the uncertainty that exists at this stage around this option through the scoring of the impacts (all scored as question marks).

Assessment

Assessment key

Much worse than the do nothing	✖✖
Slightly worse than the do nothing	✖
No change relative to the do nothing	•
Meeting objectives / incremental improvement on the do nothing	✓
Meeting objectives / significant improvement on the do nothing	✓✓

Objectives specific to charge or incentive regime being assessed

Outcome: **Efficient**

Objective: **Provide Network Rail with accurate incentives to lower cost**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

If the new cost allocation methodology was implemented alongside this option, Network Rail would have improved information on the drivers of fixed costs that would improve the accuracy of the information it has available when making decisions that could enable it to drive down fixed costs. Therefore, implementing the cost allocation work as part of this option could improve the accuracy of the incentives Network Rail has to lower fixed costs.

Levying fixed cost charges on operators based on the type of access rights that they hold would not in itself improve the accuracy of Network Rail's incentives to lower fixed costs. Network Rail would likely still only use the information from the new cost allocation methodology, rather than the actual charges operators pay when making decisions on how to lower fixed costs.

It should also be noted also that a because a proportion of fixed costs are not linked to the operational behaviour of Network Rail, such as the return on the regulatory asset base (RAB), the new cost allocation methodology would not improve Network Rail's information on all elements of its fixed costs.

Outcome:	Efficient
Objective:	Provide Network Rail with effective incentives to lower cost

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

If the new cost allocation methodology was deemed robust the improved information on fixed costs it would provide Network Rail would improve its ability to respond to its incentives to lower fixed costs. This includes the incentive it has from having a fixed revenue cap for each control period, and therefore being able to retain any efficiency savings until the next periodic review.

This option would involve levying fixed cost charges on all operators that hold long-term access rights. This would likely increase the range of operators that pay fixed cost charges, which, in turn, would increase the range of operators that have an incentive to encourage Network Rail to lower its fixed costs. As the new cost allocation methodology would be implemented alongside this option, ORR, funders and operators would also have better information on Network Rail's fixed costs. Therefore, relative to the do nothing, this option would provide Network Rail with a greater incentive to lower its fixed costs.

It has the potential to be an incremental improvement on the do nothing because some operators that currently pay fixed cost charges would become exempt if they choose to hold short-term access rights. In addition, any franchised operators that choose long-term rights would be held neutral to any changes in their fixed cost charges through their franchise agreements. Additionally, operators that are exposed to changes in fixed cost charges may lack the necessary engineering expertise to hold Network Rail to account for its fixed costs, as raised by Network Rail in response to the consultation.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Reduction in franchise protection	?	This option would lead to changes in the fixed cost charges that the franchised operators pay. If franchised operators were exposed to these changes, they would have greater incentives to hold Network Rail to account for their fixed costs. Therefore, in this state of the world Network Rail would have another incentive to lower fixed costs.

Outcome:	Efficient
Objective:	Ensure that Network Rail can recover its total costs

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

This option would involve levying the fixed cost charges on a variable basis (i.e. per unit of traffic) which would increase uncertainty around Network Rail's income compared with the do nothing (as currently most of Network Rail's income is through lump sum grant and FTAC). An operator may unexpectedly choose to move from long-term to short-term rights, and therefore stop paying fixed cost charges, which would result in a reduction in Network Rail's income. Alternatively, an operator could choose to move from short-term to long-term access rights, which would result in an increase in Network Rail's income.

Fixed costs in areas where operators only hold short-term rights would still need to be recovered. It is not expected that these costs would be directly recovered from operators holding long-term rights. Alternative options include recovering these fixed costs through the network grant or retaining a residual FTAC paid by franchised operators.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	?	With greater on-rail competition, operators may enter and exit the market a lot more than they currently do and in a fluid market they may be more inclined to change the type of access rights that they hold. This would make Network Rail's income for fixed cost charges more volatile than under the baseline scenario.

Outcome: Better Used

Objective: Provide accurate incentives for Network Rail to add traffic to the network

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Network Rail would recover fixed costs from all operators that choose to hold long-term access rights, including freight and open access operators. This means that for any new services with long-term access rights, Network Rail would receive more revenue than it currently does when adding such services to the network. Also, because the fixed cost charge would be levied on a variable basis, such as per vehicle mile, Network Rail's decision to add traffic to the network would be based on the revenue associated with additional services that hold long-term access rights.

However, because operators with short-term rights would not pay the fixed cost charges, and the charges paid by operators with long-term rights would be based on the new cost allocation methodology. The additional revenue Network Rail would receive from new services would not necessarily equal the costs that the new services cause, either in terms of their short- or long-term cost impacts. As a result, Network Rail would take into account the level of revenue they actually receive when deciding to allow those services onto the network, rather than the costs of provision (in the long-term).

Network Rail's incentives to add traffic to the network are also affected by other charges and incentives - for example the capacity charge and the volume incentive - and the accuracy of those incentives. Therefore, consequential changes might be needed to the volume incentive to adjust for any shortfall in revenue created by the implementation of this option.

Outcome: Better Used

Objective: Provide effective incentives for Network Rail to add traffic to the network

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

As this option would involve levying fixed costs on all operators that hold long-term rights, Network Rail would recover fixed costs in addition to short-run marginal cost charges from new services that choose long-term access rights. This increase in income from new services would increase Network Rail's incentives to add new traffic to the network. This incentive would be stronger on busy parts of the network as those areas are where operators would be most likely to want to hold long-term rights.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	?	With more competition in passenger services, the incentives for Network Rail would be even stronger.

Outcome: Better Used

Objective: Ensure operators take costs of service into account when using the network

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

If implemented the new cost allocation methodology would significantly improve the knowledge operators have of the fixed costs they are causing, even if for some operators this did not match what they actually pay (because they hold short-term access rights). It is expected that, under this option, operators would only apply for long-term rights to run on highly utilised sections of the network as in these areas there is higher demand for rights. Therefore, as fixed cost charges would be levied for holding long-term rights, operators would be paying more to run on highly utilised areas of the network, helping to ensure operators take into account the additional fixed costs they cause when they use such sections of the network, ultiamtely leading to more efficient use of capacity.

Also it would be clear to operators that they can influence their fixed cost charges by changing the type of access rights that they hold. Finally it is likely that operators would respond to the incentive to hold short-term rights when appropriate because of the cost savings they would make by doing so.

Outcome:	**Better Used**
Objective:	**Ensure capacity is allocated on the basis of the cost of provision and value of use**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

If the new cost allocation methodology was implemented alongside this option it would greatly improve ORR's and Network Rail's understanding of fixed costs, which could improve their decision making in terms of the allocation of capacity. This option on its own would not improve the information and knowledge available to the bodies that allocate capacity.

General objectives and criteria

Impact on operators

Group	How each group is affected
Franchised train operators	Franchised operators' fixed cost charges would change under this option. Operators that run services on low utilised parts of the network may only require short-term rights that would reduce their fixed cost charges. Operators that run on highly utilised parts of the network are likely to require long-term rights and, therefore, would pay the fixed cost charges that are attributed to them under the new cost allocation methodology. However Schedule 9.1 of the franchise agreements would hold franchised operators neutral to any changes in their fixed cost charges that occur in the middle of their franchise term.
Open access operators	This option would involve levying fixed cost charges on open access operators that hold long-term access rights. Therefore for some existing open access operators their costs would increase under this option. Any new open access operators that choose long-term rights would be worse off than they would be if they entered the market now. However, this option would likely also involve changes to the ORR's access policy for open access operators (i.e. the NPA test). As under the other options, there could be a case for transitional and / or different treatment for existing open access operators, and those who entered the market before changes to the fixed cost charges were considered. These transitional arrangments could, for example, involve a period when they were able to vary their service provision / access rights they already hold.
Freight operators	Freight operators that choose long-term access rights would face the total fixed costs that are allocated to them, either by the new cost allocation methodology or the existing FTAC methodology. Therefore, all operators with long-term rights would be financially worse off, especially operators in market segments that are not currently subject to FOL and FSC. However, freight operators that currently pay FOL and FSC and choose short-term access rights would be financially better off under this option. In response to the consultation it was also raised that this option would make it more difficult for freight operators to compete against road freight by creating uncertainty and deter freight operators from making investments.
Charter operators	The impact on charter operators would depend on the type of access rights that they choose.

Objective:	**Promote positive impacts on funders/customers**
Criteria:	**Positive impact on the funds of Secretary of State and other funders**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

As with option 3, this option would have both positive and negative impacts on the funds of the Secretary of State and other funders; the overall net impact is unclear at this stage.

Fixed cost charges would be levied on all operators that have long-term access rights, increasing the amount Network Rail recovers from operators for fixed costs, and, in turn, reducing the amount of funding Network Rail would require from the Secretary of State and other funders. However, fixed costs caused by operators holding short-term rights would still need to be recovered, which could be through the network grant, with a negative impact on the funds of the Secretary of State and other funders.

Objective:	Promote positive impacts on funders/customers
Criteria:	Passenger benefits

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Open access operators that choose to hold long-term access rights would contribute to fixed costs under this option, which, if accompanied by changes to the access framework for open access operators (i.e. the NPA test), could increase their access to the network. As a result, this option could facilitate greater competition for passenger services. If there is greater competition for passenger rail services, this could deliver a range of benefits for passengers as identified by the CMA, such as lower ticket prices, increased service frequency, service quality improvements and increased service innovations.

States of the World sensitivities

State of the world	Assessment under each state of the world	Why this state of the world would change the assessment of this option against this objective compared to the assessment under the baseline scenario
Greater on-rail competition	?	Under this state of the world, a higher proportion of passenger services would be provided by open access operators, in competition with franchised passenger operators. Therefore, all other things being equal, the passenger benefits described above would be greater than under the baseline state of the world.

Objective:	Promote positive impacts on funders/customers
Criteria:	Freight customer benefits

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

There may be instances where operators are not able to pay fixed charges to secure long-term access rights, but there is not enough capacity for them to be able to secure short-term access rights either. Additionally, alternative routes might not be available for them to use. This could be an issue for freight services. If this situation arose, it would have a negative impact on freight customers (although some of this could likely be mitigated through the implementation of this approach).

Objective:	Promote competition on the railway
Criteria:	Likely to increase the number of suppliers in passenger services rail market

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

The creation of distinct short-term access rights would increase the flexibility of the passenger services rail market as it could create more opportunities for new suppliers to enter the market. Currently, the majority of passenger operators have access rights for a relatively long period, typically 10 years.

In addition, it would provide operators with opportunities to run services with short-term access rights that may not currently be profitable because they would be required to pay FTAC. Also, operators may be more willing to enter the market than they currently are if they have the option of only committing to running services for a relatively short period and will not have to pay fixed cost charges. As highlighted by one respondent to our consultation, in implementing this option, it would be improtant to consider the impact on operators who run services in the same downstream market but are facing different levels of access charges (because they hold rights of diffferent duration).

This option would also likely and necessarily be accompanied by changes to the access framework for open access operators (i.e. the NPA test). It would likely enable open access operators to access more capacity on the network and, therefore, facilitate more competition.

Objective:	**Promote competition on the railway**
Criteria:	**Likely to increase the number of suppliers in freight rail market**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

Fixed cost charges would be levied on freight operators under this option, increasing the costs for freight operators to run on the network. However, the overall impact on the number of suppliers in the rail freight market would not be significant since freight operators would have the choice of not paying fixed cost charges by holding short-term access rights.

Objective:	**Promote competition on the railway**
Criteria:	**Unlikely to threaten the sustainability of a sector**

Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
?	?	?	?	?

Assessment under the baseline scenario

This option would support the sustainability of the passenger services sector of the rail market by helping to promote competition. Although it would levy fixed cost charges on freight operators and open access operators that hold long-term access rights, operators could avoid fixed costs charges by holding short-term access rights. There might be sustainablity issues, for example, if particular operators were not able to pay fixed charges to secure long-term access rights, but there was not enough capacity for them to be able to secure short-term access rights, and alternative routes would not be available (for example for freight services). This would have to be considered as part of the implementation of such an option.

Other general objectives and criteria

Other general objectives and criteria	Assessment rating	Assessment under the baseline state of the world
Promote positive wider external impacts		
Benefits the environment	?	This option would have no impact on the environment.
Benefits for rural proofing	?	Passenger operators are likely to only require short-term access rights on lower utilised areas of the network, which are likely to be more rural areas. Therefore, the zero fixed cost charges for short-term access rights may encourage operators to run more passengers services in rural areas. The actual impact would also depend on other factors (e.g. demand for services in these areas).
Beneficial distributional impacts	?	This option would have no distributional impacts.
Improvements in safety	?	This option would have no impact on safety in the rail industry.
Limit transitional impacts (i.e. impact of change from "do nothing" to new option)		
Low information requirements	?	To create distinct long-term and short-term access rights, the length of each type of rights would need to be defined. This would require information on the minimum length of access rights operators would require to enable them to make the investments necessary to run a service. If the short-term rights were too short, there would be a risk to operators that they would not get a sufficient return on their investments, which may deter all operators from applying for them.
Low transitional costs on operators (e.g. related to administrative change)	?	Significant administrative costs would be required to change all access rights to reflect whether they are long- or short-term rights. Operators would be involved in this administrative change (which would require changes to their track access agreements).
Low volatility for operators (i.e. avoiding large step changes in levels of charge)	?	There would be volatility in an operator's fixed cost charges if they changed the type of access rights that they hold. However, this would be the choice of the operator so would not be an unexpected change. Volatility between control periods could change if in one area long-term access rights suddenly became more desirable (for example because capacity utilisation had increased).
Low implementation difficulties for operators	?	Operators would have to make decisions on what type of access rights they wanted to hold during the implementation of this option.
Low transitional costs on Network Rail (including billing system costs)	?	Significant changes would be required to the current track access framework. This may involve developing transitional arrangements which may be complicated and burdensome. There would likely need to be changes to the billing system and billing process, which could also be costly.
Low implementation difficulties for Network Rail	?	The main implementation difficulty for Network Rail would be to help develop the new track access framework and any transitional arrangements that are needed.
Low transitional costs on franchise authorities and funders (including billing system costs)	?	Franchise authorities and funders would face some transitional costs due to the re-calculation of franchise premia / subsidy as a result of the move to this type of charging approach. This will depend on the approach implemented (whether a residual FTAC is in place or not).
Limit transaction costs (i.e. cost of operating the new option)		
Low transaction costs for operators of administration/participation in the charge or incentive	?	Once implemented, operators would have to make decisions on the type of access rights they want to hold for different services. This would increase the administrative burden for operators compared to the status quo.
Low transaction costs for Network Rail of administration/participation in the charge or incentive	?	There would be the additional cost to Network Rail of having to administer the fixed cost charges on a variable basis. Also, more short-term access rights would lead to more frequent changes of track access contracts.
Low transaction costs for funders of administration/participation in the charge or incentive	?	There would not be a change in transaction costs for franchised authorities and funders.
Ensure that the regulatory framework complies with the law		
The option can be implemented under existing legislation	?	This option would have to be designed to be compliant with EU Directive 2012/34/EU. This could mean more extensive market can bear tests are required.
The option is consistent with any expected changes to legislation	?	This option is consistent with any expected changes to legislation.

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Summary of option assessments

Option assessment summary - Baseline

	Best option under this state of the world				
	'Do nothing'	Option 1	Option 2	Option 3	Option 4
Option 2 is our recommended option as it would improve transparency and cost reflectivity of fixed cost charges and could also help facilitate greater competition in the passenger services market. We think the costs associated with this option are proportional with the benefits.	○	○	◉	○	○

Outcomes and objectives specific to charge or incentive regime being assessed					
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Option 1	Option 2	Option 3	Option 4
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	?	?
	Provide Network Rail with effective incentives to lower cost	✓	✓	?	?
	Ensure that Network Rail can recover its total costs	•	•	?	?
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✓	•	?	?
	Provide effective incentives for Network Rail to add traffic to the network	•	✓	?	?
	Ensure operators take costs of service into account when using the network	•	•	?	?
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	?	?

General charging and incentive objectives					
Objectives	**Criteria**	Option 1	Option 2	Option 3	Option 4
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	•	✓	?	?
	Passenger benefits	•	✓	?	?
	Freight customer benefits	•	•	?	?
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	•	✓	?	?
	Likely to increase the number of suppliers in freight rail market	•	•	?	?
	Unlikely to threaten the sustainability of a sector	•	•	?	?
Promote positive wider external impacts	Benefits the environment	•	•	?	?
	Benefits for rural proofing	•	•	?	?
	Beneficial distributional impacts	•	•	?	?
	Improvements in safety	•	•	?	?
Limit transitional impacts	Low information requirements	✘	✘✘	?	?
	Low transitional costs on operators (e.g. related to administrative change)	•	✘	?	?
	Low volatility for operators (i.e. avoiding large step changes in levels of charge)	•	✘	?	?
	Low implementation difficulties for operators	•	•	?	?
	Low transitional costs on Network Rail (including billing system costs)	•	✘✘	?	?
	Low implementation difficulties for Network Rail	✘	✘	?	?
	Low transitional costs on franchise authorities and funders (including billing system costs)	•	•	?	?
Limit transaction costs (i.e. cost of operating the new option)	Low transaction costs for operators of administration/participation in the charge or incentive	•	•	?	?
	Low transaction costs for Network Rail of administration/participation in the charge or incentive	•	•	?	?
	Low transaction costs for funders of administration/participation in the charge or incentive	•	•	?	?
Ensure that the regulatory framework complies with the law	The option can be implemented under existing legislation	•	•	?	?
	The option is consistent with any expected changes to legislation	•	•	?	?

Option assessment summary - Greater on-rail competition

	Best option under this state of the world				
Several of the benefits of option 2 are expected to be larger with greater on-rail competition. It is, therefore, also our recommended option under this state of the world.	'Do nothing'	Option 1	Option 2	Option 3	Option 4
	○	○	◉	○	○

Outcomes and objectives specific to charge or incentive regime being assessed					
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Option 1	Option 2	Option 3	Option 4
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	?	?
	Provide Network Rail with effective incentives to lower cost	✓	✓✓	?	?
	Ensure that Network Rail can recover its total costs	•	✘	?	?
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✓	•	?	?
	Provide effective incentives for Network Rail to add traffic to the network	•	✓	?	?
	Ensure operators take costs of service into account when using the network	•	•	?	?
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	?	?

General charging and incentive objectives					
Objectives	**Criteria**	Option 1	Option 2	Option 3	Option 4
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	•	✓✓	?	?
	Passenger benefits	•	✓✓	?	?
	Freight customer benefits	•	•	?	?
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	•	✓	?	?
	Likely to increase the number of suppliers in freight rail market	•	•	?	?
	Unlikely to threaten the sustainability of a sector	•	•	?	?

Option assessment summary - Reduction in franchise protection

	Best option under this state of the world				
	'Do nothing'	Option 1	Option 2	Option 3	Option 4
The benefits of option 2 from the increased transparency and cost-reflectivity of fixed cost charges are likely to be greater in a state of the world with reduced franchise protection. Therefore option 2 is also our recommended option in this state of the world.	○	○	◉	○	○

Outcomes and objectives specific to charge or incentive regime being assessed					
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Option 1	Option 2	Option 3	Option 4
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	?	?
	Provide Network Rail with effective incentives to lower cost	✓✓	✓✓	?	?
	Ensure that Network Rail can recover its total costs	•	•	?	?
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✓	•	?	?
	Provide effective incentives for Network Rail to add traffic to the network	•	✓	?	?
	Ensure operators take costs of service into account when using the network	✓✓	✓✓	?	?
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	?	?

General charging and incentive objectives					
Objectives	**Criteria**	Option 1	Option 2	Option 3	Option 4
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	•	✓	?	?
	Passenger benefits	•	✓	?	?
	Freight customer benefits	•	•	?	?
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	•	✓	?	?
	Likely to increase the number of suppliers in freight rail market	•	•	?	?
	Unlikely to threaten the sustainability of a sector	•	•	?	?

Option assessment summary - Greater/lesser freight protection

	Best option under this state of the world				
There is no change to the assessment of the options under this state of the world.	'Do nothing'	Option 1	Option 2	Option 3	Option 4
	○	○	◉	○	○

Outcomes and objectives specific to charge or incentive regime being assessed					
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Option 1	Option 2	Option 3	Option 4
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	?	?
	Provide Network Rail with effective incentives to lower cost	✓	✓	?	?
	Ensure that Network Rail can recover its total costs	•	•	?	?
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✓	•	?	?
	Provide effective incentives for Network Rail to add traffic to the network	•	✓	?	?
	Ensure operators take costs of service into account when using the network	•	•	?	?
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	?	?

General charging and incentive objectives					
Objectives	**Criteria**	Option 1	Option 2	Option 3	Option 4
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	•	✓	?	?
	Passenger benefits	•	✓	?	?
	Freight customer benefits	•	•	?	?
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	•	✓	?	?
	Likely to increase the number of suppliers in freight rail market	•	•	?	?
	Unlikely to threaten the sustainability of a sector	•	•	?	?

Option assessment summary - Any other change to the current state of the world

	Best option under this state of the world				
Possible changes to REBS, or the introduction of a new risk-sharing mechanism, are expected to increase the benefits provided by the new cost allocation methodology. As a result, option 2 remains our recommended option.	'Do nothing'	Option 1	Option 2	Option 3	Option 4
	○	○	◉	○	○

Outcomes and objectives specific to charge or incentive regime being assessed					
Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Option 1	Option 2	Option 3	Option 4
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	?	?
	Provide Network Rail with effective incentives to lower cost	✓✓	✓✓	?	?
	Ensure that Network Rail can recover its total costs	•	•	?	?
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	✓	•	?	?
	Provide effective incentives for Network Rail to add traffic to the network	•	✓	?	?
	Ensure operators take costs of service into account when using the network	•	•	?	?
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	?	?

General charging and incentive objectives					
Objectives	**Criteria**	Option 1	Option 2	Option 3	Option 4
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	•	✓	?	?
	Passenger benefits	•	✓	?	?
	Freight customer benefits	•	•	?	?
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	•	✓	?	?
	Likely to increase the number of suppliers in freight rail market	•	•	?	?
	Unlikely to threaten the sustainability of a sector	•	•	?	?

Option assessment summary - Preferred option under each state of the world

Outcome *What does the outcome look like?*	**Objective** *What can ORR do to ensure delivery of this outcome?*	Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
	Best option under this state of the world	Option 2	Option 2	Option 2	Option 2	Option 2
The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance	Provide Network Rail with accurate incentives to lower cost	✓	✓	✓	✓	✓
	Provide Network Rail with effective incentives to lower cost	✓	✓✓	✓✓	✓	✓✓
	Ensure that Network Rail can recover its total costs	●	✘	●	●	●
Network Rail and operators find ways to improve network use and accommodate new services	Provide accurate incentives for Network Rail to add traffic to the network	●	●	●	●	●
	Provide effective incentives for Network Rail to add traffic to the network	✓	✓	✓	✓	✓
	Ensure operators take costs of service into account when using the network	●	●	✓✓	●	●
	Ensure capacity is allocated on the basis of the cost of provision and value of use	✓	✓	✓	✓	✓

General charging and incentive objectives						
Objectives	**Criteria**	Baseline	Greater on-rail competition	Reduction in franchise protection	Greater/lesser freight protection	Any other change to the current state of the world
Promote positive impacts on funders/customers	Positive impact on the funds of Secretary of State and other funders	✓	✓✓	✓	✓	✓
	Passenger benefits	✓	✓✓	✓	✓	✓
	Freight customer benefits	●	●	●	●	●
Promote competition on the railway	Likely to increase the number of suppliers in passenger services rail market	✓	✓	✓	✓	✓
	Likely to increase the number of suppliers in freight rail market	●	●	●	●	●
	Unlikely to threaten the sustainability of a sector	●	●	●	●	●
Promote positive wider external impacts	Benefits the environment	●				
	Benefits for rural proofing	●				
	Beneficial distributional impacts	●				
	Improvements in safety	●				
Limit transitional impacts	Low information requirements	✘✘				
	Low transitional costs on operators (e.g. related to administrative change)	✘				
	Low volatility for operators (i.e. avoiding large step changes in levels of charge)	✘				
	Low implementation difficulties for operators	●				
	Low transitional costs on Network Rail (including billing system costs)	✘✘				
	Low implementation difficulties for Network Rail	✘				
	Low transitional costs on franchise authorities and funders (including billing system costs)	●				
Limit transaction costs (i.e. cost of operating the new option)	Low transaction costs for operators of administration/participation in the charge or incentive	●				
	Low transaction costs for Network Rail of administration/participation in the charge or incentive	●				
	Low transaction costs for funders of administration/participation in the charge or incentive	●				
Ensure that the regulatory framework complies with the law	The option can be implemented under existing legislation	●				
	The option is consistent with any expected changes to legislation	●				