Department for Transport

Britainthinks
Insight & Strategy

Service Alterations: Passenger Preferences Research report

Autumn 2021

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OFFICIAL-SENSITIVE DRAFT 1

Contents

1 Background and methodology

Background and objectives

BritainThinks were commissioned by the Department for Transport (DfT) in May 2021 to conduct qualitative research to explore passenger preferences and tolerances for disruption and service alterations during blockades. In particular, DfT were seeking to understand any impacts of COVID-19 on priorities around blockades.

Our specific research objectives were to:

1. Provide a detailed understanding of **passenger responses to different models of service alteration** during infrastructure projects, in order to uncover their **preferences and priorities** – and what is driving these.

2. Explore **how the current context of COVID-19 might have shifted passenger preferences**, as well as understanding the extent to which those who have stopped using rail during COVID-19 can make meaningful contributions to this conversation.

3. **Inform the development of a quantitative survey** and help to define the parameters of preferences that can be measured, as well as identifying any methodological challenges to assessing passenger preferences.

Sample and method

We used a deliberative approach to the research, meaning we took participants on a journey, educating them on a topic so they were making informed decisions.

Fieldwork was conducted between Monday 7th June and Monday 14th June 2021.

- One-week online community with 70 participants
- 6 activities in total

Participants split by traveller type:

- 29 commuters
- 29 leisure travellers
- 12 business travellers
- NB many were a mix of the three traveller types

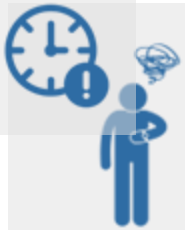
- 48 of these participants were then invited to take part in a focus group to explore some service alterations scenarios
- 7 90-minute focus groups of 6 participants, split by location
- 3 45-minute paired depths of participants from the same location

- 8 45-minute depths with rail industry stakeholders of interest for DfT
- This included a range of internal and external stakeholders, all with experience of blockades in a variety of different areas including:
  - Passenger services
  - Infrastructure
  - Investment

A note on qualitative research: While the qualitative sampling of this project aimed to reflect a spread of different types of rail travellers, the sample size involved means that it is not statistically representative of rail users in Great Britain. As such, the findings that follow should be interpreted as indicative rather than representative of rail users views nationally.

2 Key findings

Key findings
Perceptions and understanding



Top of mind associations with planned engineering works tend to be very negative, driven by past experiences of delays and disruption and negative issues like over-running works, lack of communication and uncomfortable rail replacement buses.

Passengers also lack understanding about the need for and the scale and requirements of works, which can lead to unrealistic expectations like 'all works should be done overnight' and a lack of spontaneous toleration for weekday disruption. Information about the amount of maintenance and 'out of sight' improvements was particularly surprising to participants.

Tolerance for more intensive, short-term disruption rose through the deliberative elements of the research, with passengers' acceptance increasing as they learnt more about the need for longer blockades (e.g. setting up machinery) and additional benefits (e.g. completing extra work to prevent future delays for maintenance).

Key findings
Preferences for service alterations

Most passengers prioritised service alterations that totalled the shortest duration overall, willing to trade off against more intensive short-term disruption for quicker project completion. This preference was driven in particular by the belief it would be easier to remember, keep track of and work around. There was a perception that works spread out over a longer period of time would result in poorer communication and also increase the likelihood of passengers forgetting when the works were taking place – resulting in the emotional impacts of dealing with unexpected disruption.

The pandemic has had some impact on preferences with many passengers more able to imagine dealing with longer blockades given their ability to adapt their routines throughout the pandemic. Many commuters also foresee workplaces being open to more flexible working arrangements (if not permanently then during rail closures).

Timing of works and service replacements featured less strongly in passenger trade-offs around alterations, as long as they were workable in principle. Exceptions to this were some parents, who prioritised works being done outside school holidays above all else.

Key findings
Factors influencing acceptability

After ability to work around disruption, communication was the core factor seen to influence the acceptability of works. There is a strong perception that running into unexpected works has a big emotional impact (causing stress and frustration).

Many passengers (particularly commuters) were willing to accept longer blockades in exchange for more certainty around timings, to avoid weekend work spilling into Monday unexpectedly – an idea which evoked strong negative reactions.

Other factors like compensation and cost are less front of mind than the actual impact on passengers, with them typically having a weaker link to the acceptability of works.

Stakeholders saw two key features as being important to all future works:

A passenger centered approach

- There is a sense that in the past, engineering works have **focused on engineering logistics instead of the passenger experience**.
- More recently, stakeholders note that there has been and is beginning to be a **better focus on current and future passenger experience at the start** of projects, including when thinking about **alternate routes** and services, **closure days and time periods**, **support staff and waiting areas**.

Communication strategy

- Stakeholders identified the link between **passenger frustrations and hearing about alterations too late**.
- Work is being done to ensure:
- There is **advance notice**, and **clear** route alternatives.
- Passengers understand the **reason** for works, rather than just hearing an apology for disruptions.
- Passenger groups are engaged to understand which **communication channels** are best to reach different kinds of users.

3 Perceptions and experience of disruption

Passengers have strong negative associations of planned engineering works with delays and disruption

What 3 words first come to mind when you think about planned engineering works?

By far the most common words relate to the **impact of works on journeys**, such as delays, disruption and inconvenience.

More evocative negative terms relate to emotional impacts were also common, such as annoyance, frustration, stress, anger and pain.

Whilst less common, **some have more accepting starting points** tending to come from the viewpoint of **seeing positives of the outcome** – for example, seeing works as needed, positive and progress.

There is also a lack of understanding of the need for planned engineering works

Participants were shown two Network Rail videos (each 1½ minutes long) explaining planned engineering works:

Looking after the railway:
Explained the day-to-day operations and maintenance carried out across Great Britain to ensure the safety and efficiency of the railway. *(Watch)*

The Railway Upgrade Plan:
Detailed the objectives of the plan to upgrade and improve travel across Great Britain and information on specific projects and what they have achieved (*Watch*)

- Whilst most passengers can easily remember experiences of delays and disruption, many struggle to recall specific reasons for past engineering works spontaneously.
- After watching a Network Rail video on works, passengers say they are surprised by how little they knew about planned works. In particular:
  - **The volume of work done each year** and level of 'bigger picture' planning and thinking around the whole network and meeting changing demands.
  - The **amount of less visible work and improvements,** such as work needed to simply maintain rail infrastructure or improve 'out of sight' elements like signaling and Victorian tunnels.
  - **Broader efficiency considerations** (outside of disruption) behind longer blockades.

"I was surprised that there had been such a significant increase in travellers in the last 20 years … [and] to know that this is the largest amount of work going on since Victorian times."
(OC participant, Commuter)

"I learnt the efficiency of working in blocks as opposed to separating the work and how much more efficient that was …knowing that made it more understandable why there might be more delays for a longer period of time."
(Focus group participant, South West)

"It sounds like there's a lot to do and with 15,000 projects going on at the moment, not everything might be achieved by purely working nights!"
(OC participant, Business traveller)

Many pointed to a negative experience during works, driven by lack of communication, discomfort and emotional impact

When reflecting on experiences, there were 3 negative themes:

A lack of communication

Almost all participants feel they have been 'caught unaware' by disruption from planned works at some point.

This lack of forewarning is strongly linked to negative emotional impacts like stress and anger, as participants feel out of control of their journeys, as well as to broader impacts like missing or being late to appointments/events or having to pay more for a taxi to make it on time.

'Worse' alternatives

Many also point to experiencing lower quality or less efficient services as a result of planned engineering works. For example, cold, 'run-down' buses instead of a train, and/or significant increases in journey time.

A sense delays happen 'all the time'

Across discussions (despite the focus on planned engineering works), there were frequent references to and conflation with broader rail delays and disruption.

This points to it being challenging for participants to differentiate between different causes for disruption and alter their expectations according to reasons why.

"Frustration…Even though I knew my journey would be impacted, it still adds stress to your journey due to longer time it took me to get back. It also meant I had more changes to make, not great when you have a million bags with you!"
(OC participant, Commuter)

"It feels like, be it New Years, Summer, or Easter, there have been planned works on the line…even though there was rail replacement services it made me angry to have to pay a train ticket price only to be put in an overheating or freezing coach."
(OC participant, Leisure traveller)

Although rarer, some participants have more positive experiences related to clear communication and improvements

- Only a handful of participants can recall more positive or satisfactory experiences of travelling during planned engineering works.
- In these cases, acceptability is driven by:

Clear, advanced warning, for example posters at the station with dates, times and the reason for works.

Having helpful station staff on hand to guide passengers to alternative services or help them plan new routes.

Visible improvements. These often impact perceptions retrospectively once participants have experienced the benefits (i.e. led to participants believing the works had been necessary and acceptable).

"I understood that it has to be done, unfortunately people cannot snap their fingers and fix things."
(OC participant, Commuter)

"[I was] happy and excited at the proposed upgrade…The upgraded facilities at the station were well worth the inconvenience."
(OC participant, Commuter)

Passenger case studies

These are anonymised (names changed) case studies of participants in the research that exemplify the broader insights about the strong influence of communication, ability to plan and availability alternative services on experiences of engineering works.

Case study: Positive experience

Jane travels for leisure regularly and has been impacted several times by service alterations, both planned and unplanned. She was impacted by the closure of several major routes in/out of London to repair the railway line at Dawlish after it was destroyed by winter storms.

On balance, she is happy with her experiences because:

- She felt she **received adequate warning (2 weeks).**
- She heard about the works **on different platforms**, acting as a reminder, including the local news and National Rail website.
- Advance notice means she was able to **change her planned dates** for travel as the journeys were made longer.
- There was still **opportunity to make her usual journeys** thanks to the rail replacement bus service.

Case study: Negative experience

Louisa is a business traveller and has been impacted on several occasions by planned engineering works lasting for several weeks at once when using the Crossrail services and travelling into Birmingham.

She was frustrated by her experiences, citing some key problems as:

- She found out about the engineering works **by word of mouth only 10 days in advance**, rather than through official communication materials leading her to believe service alterations are **disorganised and last minute.**
- **Bus replacement services were sporadic** and often **running late**, delaying her journeys and resulting in the need for taxis or relying on lifts from friends to be on time – which meant she had to **spend more than planned on travelling**.

Rail users' strong negative associations with works makes planning and communication challenging

- Stakeholders feel that rail passengers are likely to remember only their negative experiences of engineering works (causing them frustration or stress), and never the times it went well and journeys were smooth and less memorable.

- Other disruptions, especially last-minute changes to the timetable have attracted heavy media coverage which can colour people's associations in the long-term.
  - For example, the 'May 2018 timetabling issues' was often cited by stakeholders.

- Additionally, stakeholders felt passengers' lack of awareness of the benefits of 'invisible' improvements after disruption tends to lead to higher resistance towards future planned engineering works.

- These factors are seen to make announcing service alterations as a result of planned engineering works without attracting negativity challenging.

"Delivering your projects in a timely manner…efficiently and to the right quality is a success.. Throughout my career it's been probably 99% of the time that's been the case."
(Stakeholder)

"A lot of people don't see the direct benefits, particularly when you're having to do diversionary train routes, the disruption on the line that's not going to benefit from the works tends to be where the energy needs to be focused… I'm mindful that there will be a large group of people that won't see any of the benefit."
(Stakeholder)

4 Preferences and priorities for service alterations

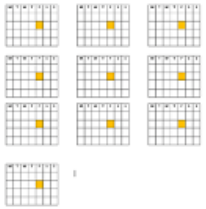
Participants were presented with a variety of different service alteration scenarios to trade off

Example online community activity

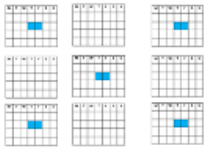
How the work could be achieved

The total time required can also be split up into different 'blocks' of work.

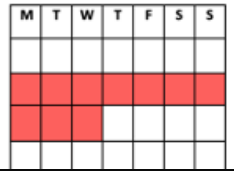
For example, for works which require a total of 240 hours of line closure like this one, this could be split as:



- **Option A: A lot of short line closures.** 10 x 24-hour closures (e.g., closing the line one day per week ten times, over 10 months (closures of 24 hours roughly once a month)



- **Option B: Fewer slightly longer line closures.** 5 x 48-hour closures (e.g., closing for two days per week five times, over 10 months (closures of 48 hours roughly once every two months)



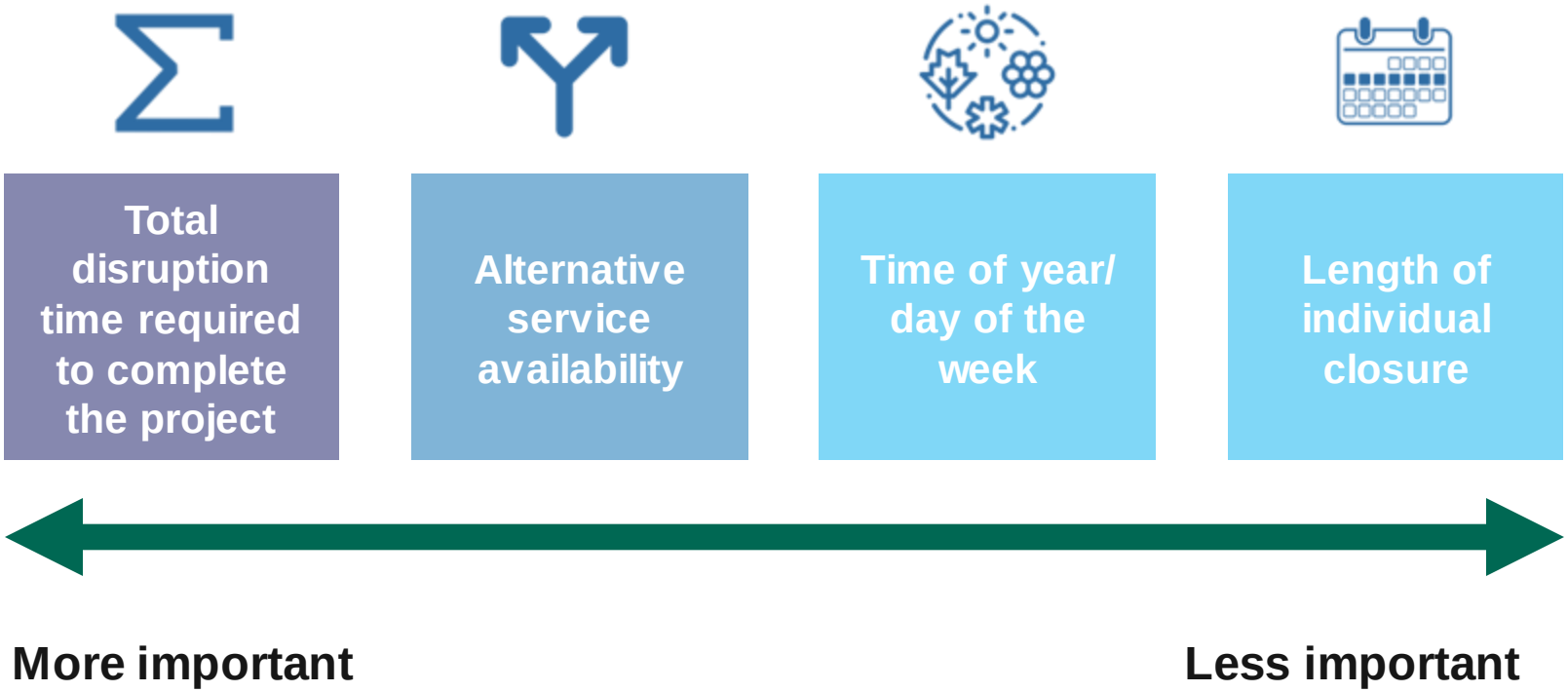
- **Option C: One long blockade.** 1 x 10-day blockade (e.g., closing the line for 10 days once)

Participants were presented with a variety of different service alteration scenarios to trade off

Example focus group activity

Option A	Option B
• Total time to complete project: **18 Months**	• Total time to complete project: **3 years**
How travel on your route will be affected:	
• **2 x long closure periods** affecting weekday and weekend travel (e.g. a 16 day closure every nine months – 2 in total) • **10 weekend closures**, (roughly once every 2 months for the 18 months) • **6 weeks** with **no** late-night services (after 10pm) *Total: c.52 days closed; 6 weeks no-late night service*	• **1 full week closure** affecting weekends and weekdays • **30 weekend closures** (once every month for 3 years) • **20 weeks** with **no** late-night services (after 10pm) *Total: c.69 days closed; 20 weeks no-late night service*
The alternative service provided will be:	
Replacement bus service which will travel direct to your destination station **without stopping**	Replacement bus service which **will stop at intermediate stations** between your departure and destination station.
Additional journey time:	
15 minutes (30 minute journey-> 45 mins)	**30 minutes** (30 minute journey -> 1 hour)

Participants were presented with a variety of different service alteration scenarios to trade off



Long term vs. short term alterations

Participants tended to opt for greater, more intensive disruption in exchange for quicker overall completion times

Preferences for completing 240 hours of engineering works

Number of participants selecting each as their first choice in the online community

Option C : 1 x 10 day closure (38)

Option A: 10 x 24 day closures (18)

Option B: 5 x 48 hour closures (13)

**Diagram shows frequency of each response out of 71 participants who provided an answer to this question. This is qualitative research therefore these numbers should be treated as indicative only.*

Preferences for completing different sized projects

Based on what most participants selected in online focus groups

	Option A	Option B
Large project *Option A selected by all participants* *[Most consensus]*	Completion: 18 months Disruption: 2 x 16-day closures 10 x weekend closures 6 weeks no late-night service	Completion: 3 years Disruption 1 x 7-day closure 30 x weekend closures 20 weeks no late-night service
Small project *Option B selected by most (but not all) participants*	Completion: 8 months Disruption: 9 weekend closures	Completion: 4 months Disruption: 1 x bank holiday closure 2 x weekend closure
Medium project *Option A selected by most (but not all) participants* *[Slightly less consensus]*	Completion: 6 months Disruption: 2 x 9 day closures (over school holidays) 4 x weekend closures	Completion: 12 months Disruption: 20 x weekend closures

Longer blockades where projects are completed more quickly are generally viewed as less 'disruptive' – in terms of actual and emotional impacts

This tended to be driven by 3 key assumptions about projects completed over a shorter period:

They are easier to work around

- Participants felt they would be able to avoid travelling or plan their trips around works.
- Some leisure travellers also thought works completed over shorter periods would be less likely to interfere with weekend trips in the first place.
- As a result, participants felt they would experience less disruption under these options.

They are easier to remember

- Participants also felt it would be easier to remember when blocks of works were happening over a more condensed period – rather than more sporadic weekends and times over a longer period.
- As a result, there would be less risk of running into forgotten or unexpected works and so they would be less stressful and emotionally impactful.

Communication for shorter periods would be better

- Participants assumed that ensuring passengers had been warned about works adequately in advance would be easier for less spread out works – and that service providers are more likely to be able to do this well.
- Again, leading to less fundamental lifestyle/time and emotional impacts.

There was some divergence of opinion from frequent travellers who felt they would be more impacted by longer blockades

Whilst preference for completing works quickly with more short-term disruption was generally preferred across sub-groups, a small number opted for more spread-out alterations:

Some frequent commuters

- Some of these participants anticipated struggling to work around long blockades during the week – as they expected to need to attend meetings and so have to travel and experience disruption.
- Typically, these participants opted for more spread out, shorter short-term blockades which they believed had less possibility of 'bleeding over' into the week (e.g. 10 x 24-hour blockades over weekends).

"I just think the shorter closures are easier to deal with and I can see them being easier to work around for me personally".
(OC participant, Commuter)

Some frequent lleisure travellers

- Similarly, some of those who travel most frequently for leisure (e.g. weekly) and feel they lack other options (e.g. have limited bus routes and no car) saw longer blockades as very challenging to work around and so opted for shorter closures.

"It's so hard to plan around anything for a long period, I can plan around my life for this one and keep a routine.".
(OC participant, Leisure traveller)

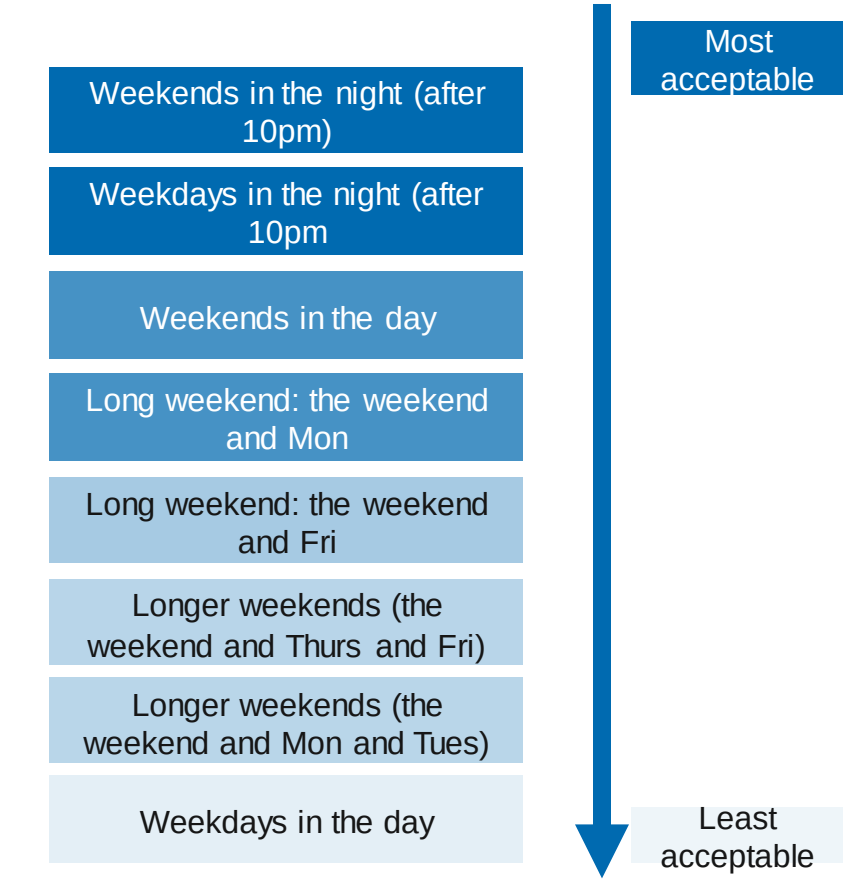
Timing of works

When considering the timing of works in isolation, participants have strong preferences linked to level of impact

There is a strong preference for night-time work with many participants not understanding spontaneously why it might not be feasible to complete all work this way (e.g. lack of awareness of set-up and safety requirements)

Followed by weekends, in order of number of days impacted (i.e. 2-4)

With weekdays ranked least acceptable on this activity, despite change in working patterns and increased flexibility as a result of COVID-19



N.B. ratings made when looking at timing options in isolation do not reflect the realities of the trade-offs participants made later in the research after learning more about engineering works (shown earlier on slide 21 (shown earlier on slide 21)

There is less consensus on preferred seasonal timings of works, although some feel strongly about avoiding summer holidays and Christmas

Acceptability of works taking place at the following times…

Time of engineering works	Totally or somewhat Acceptable	Not that or not at all acceptable
Spring (March – May)	46	20
Easter	48	21
Summer (June – August)	35	32
School holidays	39	29
Autumn (September – November)	47	19
Winter (December – February)	38	29
Christmas	42	27
Bank holidays	38	31

Numbers show frequency of each response **out of 69 participants who provided an answer to this question. This is qualitative research therefore these numbers should be treated as indicative only*

There were strong preferences against summer holidays and Christmas for:

- Some **parents**, especially those with **young children** and only one car in the household, who felt reliant on the train during school holidays for day trips. This travel held emotional importance as an opportunity to entertain and bond with their children.
- Some participants were also concerned more broadly from a 'citizen' point of view, thinking about **risks to tourism and the economy** when others' ability to travel was impacted.
- Additionally, Christmas and Summer were also seen as already being **busy and stressful times to travel** (personally or for others) – so works during these times were seen to have a greater potential emotional impact.

Rail industry stakeholder views

Some stakeholders felt that scheduling blockades during school holidays can be beneficial to planning and running a smooth alteration service as it is easier to find replacement buses during half term when the fleet isn't being used so heavily for school buses.

Having a feasible travel alternative service was seen as a core requirement and there are some entrenched negative views of rail replacement bus services

- Generally, there was a strong preference for reduced rail services over replacement buses – driven by negative experiences of slower, less comfortable journeys (and a sense buses are less 'premium'). Although a small number of participants voiced a preference for a less crowded bus over a crowded train with fewer carriages
  - However, there was also a sense of resignation around rail replacement buses.

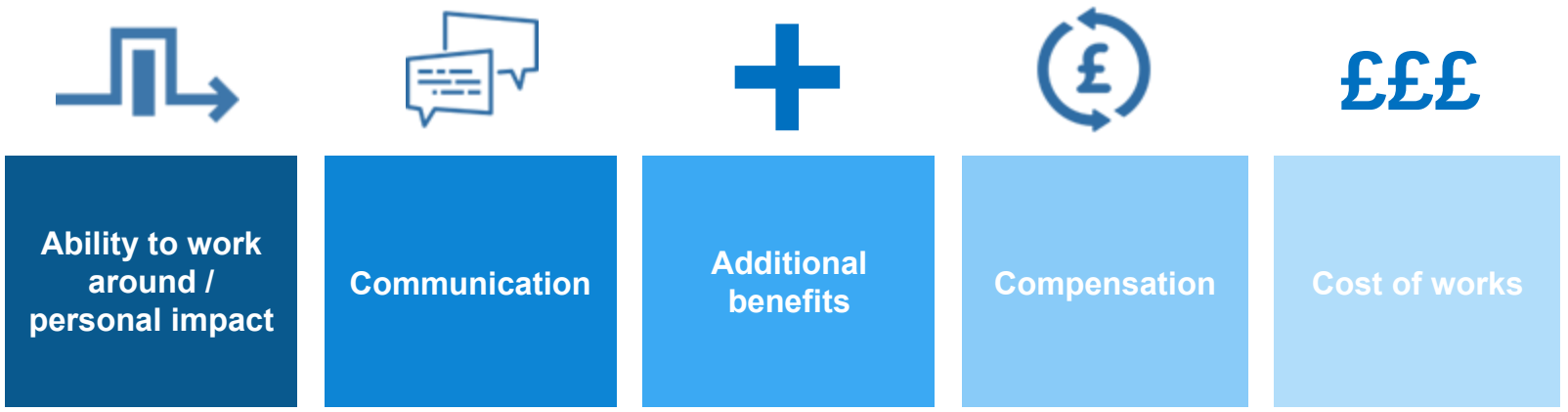
"For me, the train is just a much more comfortable experience than a bus and that's why I use it. So I'd say a reduced train is better, I always get car sick on those big coaches.."
(Paired depth, South West)

- When looking at rail alteration scenarios as a whole, the mode of service alteration was less important in trade-offs than the overall length of the disruption to most participants.
  - The only exceptions were when participants felt alterations would be overly limiting or unfeasible for them to use – for example if all replacement buses were direct rather than stopping along the route (which caused them to pick options with stopper services).

"I wouldn't be able to travel [on direct replacement buses] if there were no stopper services, as I don't have a car or many local buses. So I'd have to pick Option B purely on that."
(Focus group, North)

5 Factors impacting the acceptability of disruption

Participants' ability to work around disruption, linked closely with communication, were most strongly linked to acceptability



The pandemic has had a significant impact in how passengers (particularly commuters) think they will be able to work around disruption

Passengers have experienced extensive disruption to their travel habits recently, and many commuters expect longer-term change

Pre-pandemic	During pandemic	Post-pandemic (anticipated
• The sample contained a mix of **frequent commuters** travelling by train who are required to be in the office most days and smaller numbers working more flexibly and going in just for specific work meetings or training sessions. • Using rail largely for convenience and speed	• Many commuters stopped making regular trips by train at some point during the pandemic • Some began to commute again when restrictions were lifted (i.e. summer 2020) but did so far less frequently and avoided peak times. A small number switched to taking taxis or their car for work journeys	• Most expect to resume commuting but less frequently. There is an idea that there will be much more flexible working. • A smaller number anticipate their travel habits to return to pre pandemic norms, as their workplace returns to full-time in office.
• This sample contained a mix of frequent **leisure travellers**, making rail trips regularly to go out in local towns/cities or visit friends and infrequent, making longer journeys infrequently for holidays. • Train was the preferred method for these trips for speed, avoiding parking costs and feasibility (e.g. when drinking alcohol, if unable to drive/don't have a car)	• All leisure travellers stopped travelling completely at some point over the pandemic • A handful had made an occasional trip whilst restrictions were lifted e.g. travelled by train to meet friends or celebrate special occasions once or twice in the last year	• Most **leisure travellers** in our sample expected their train travel to increase this year, in particular to make more trips/holidays in the UK (whilst travelling abroad is more difficult) and to make more day trips over the weekends. • However, some have developed new travel habits for shorter leisure trips including walking, cycling and driving.

There is some indication that the impact of the pandemic on work and travel patterns has introduced some level of tolerance for longer blockades if projects can be completed quicker

Increased flexibility in working arrangement amongst many commuters means they are no longer as resistant to weekday closures.

Even amongst those who expect to commute into work more often in the future, there tends to be the sense workplaces will be more open to working from home as an option during rail closures.

Time lost during the pandemic and challenges going abroad mean some leisure travellers are more resistant to weekend work.

Resulting in a stronger preference to complete works quickly using longer blockades, rather than impact more weekends/days sporadically over a long period

Rail industry stakeholder views

But stakeholders note caution on oversimplifying the picture – seeing the need for greater consideration of:

- **The realities of new working patterns long-term:** they suggest the industry must closely monitor passenger data over the next few months in the return to 'normal', assessing how demand for trains is/isn't changing in response to new working patterns.
- **Key workers:** they suggest key workers are core customers, perhaps more so than previously acknowledged. Stakeholders feel it is vital they are considered specifically as longer blockades can have a more disruptive effect compared to those with the option for work from home.

"It's all about looking at the data, if we look at passenger data from the pandemic, we were serving more key workers than people would imagine. Usually, we think of a commuter in a suit and tie.." (Stakeholder)

Good communications and forewarning about disruption was strongly linked to acceptability

Passengers emphasised the importance of good communication for planned service alterations

Core elements of communication that **increase acceptability** of closures and disruption are:

Advanced notice	Multi-channel	Reminders	Impact on current journeys	Impact on future journeys
Passengers across all traveller types emphasise the importance of advance notice ion planning around service alterations. Some note not only the frustration, but the disruption that comes from finding out about service alterations last minute.	Considered vital, particularly for those who travel less frequently and therefore will not be at the station as regularly. Mixed channels are said to be important for meeting all ages, with social media thought to exclude some. Many want to find details on alterations on booking websites before purchasing (where possible).	Passengers, particularly less frequent travellers are likely to consider the need for reminders. Either through contacting them directly or on booking websites or train timetable websites.	Passengers call for clarity on how long the service alterations are going to take. They especially want to be told about route alternatives to be able to make an informed decision about their travel.	Details on why the service alterations are taking place and what will be the consequences are also considered important, especially after deliberation in this research. Passengers noted how this had changed their perception towards the need for service alterations.
"The main thing is getting plenty of notice, when I look at any of the options, that's what I always come back to.." (Focus group, Midlands)	*"It has to be everywhere: billboards, notifications on the TfL apps so texts and whatsapp alerts would be great in advance."* (Focus groups, South East)	*"I think seeing something up front, say an annual calendar is useful, but then you do need reminders if you have that much notice."* (Focus group, North)	*"The quality of the information is paramount. Be very clear about which trains are in service. Publish a timetable of all the trains that will work."* (Focus group, North)	*"At the beginning of a scheme, tell people what to expect, both in terms of benefits and disruptions. We want to know why they're doing the work."* (Focus group, North)

Most passengers were willing to have more disruption to avoid unplanned, overrunning works

Preferences for contingency

Option A : 6 weekend closures Guarantee the following Monday will be unaffected	Option B: 4 weekend closures Greater risk of works overrunning and Monday being unaffected
Preferred by a majority (47) of participants	Preferred by a significant minority (21) of participants

Numbers show frequency of each response **out of 68 participants who provided an answer to this question. This is qualitative research therefore these numbers should be treated as indicative only*

Option A was selected by most participants, especially commuters, as:

- There was a high value assigned to having good communication and forewarning about disruption, to make it easier to plan and work around closures
- Past experience or perceptions meant passengers saw overrunning into Monday having a large-emotional impact – causing stress and frustration and 'getting the week off on the wrong foot'

A smaller number, largely leisure travellers, opted for B as:

- They were unlikely to be personally affected by Monday delays and disruption
- They prioritised having less weekend disruption to enable them to be able to travel more easily and postpone/alter less plans

Good communication is seen as one of the keys to success in smooth running works

Brighton Main Line Improvement Project, 2019

In 2019 Network Rail carried out a 9-day closure alongside 15 weekends to improve the reliability and performance of the route, one of the busiest in the country. However, there is no diversion on this route, and with a 9-day closure, this would impact both commuters and leisure travellers. Picking a time such as February meant that this line was not as busy as the summer months, and therefore impacted fewer people.

Communicating the engineering works as far in advance as possible, **using multiple channel**s is instrumental in the success of blockades, demonstrated in this example. Working together with passenger groups and local authority representatives, as well as communicating on **social media and in station** meant that passengers were able to make other arrangements.

During this blockade, Three Bridges served as **a hub between train and bus** with information for passengers as well as amenities such as coffee vouchers provided. This prepared passengers for their onward travel and was a little 'something extra' for the inconvenience. In addition to this, **having staff at stations** who were on-hand to give advice improved the passenger experience. Whilst the works were ongoing, passengers were shown images and videos of progress and improvements to their stations, making the project more tangible and easier to see the real benefits.

Finally, adding in **sufficient contingency** time, and monitoring this on an ongoing basis meant that passengers would not be impacted for longer than necessary, and if there was a delay in works, passengers would know in advance.

Making sure that the passenger was well-informed, both before and during any possible journey, was instrumental in the success of this project, alongside acknowledging the inconvenience towards the passenger, and helping to alleviate this where possible.

Despite improvements there are still prevailing communication challenges

Stakeholders suggest passenger communication is now considered integral during the planning stages for service alterations, especially when compared with past plans. However, key challenges remain:

Reaching the audience

As with passengers, stakeholders acknowledge the challenge in reaching the full range of travellers, particularly those who travel less frequently, who may be less 'live' to changes in the rail timetable.

"Leisure travellers might not get the same information as commuters, one thing on the communication team's mind is how we reach everyone."
(Stakeholder)

Saturated communication

While communication must be consistent and timely, some express concern about over-saturating passengers, who can then become so accustom to announcements, they ignore it. One stated regularly commuters can ignore announcements, given they can be regular and on a range of different topics, that don't always feel relevant.

"We can saturate comms if we're not careful. We have closed travel into Kings Cross on work days on the east coast. Some people said they never saw the comms. How do we get their attention?"
(Stakeholder)

Communicating complex information

Stakeholders recognise the value in explaining changes that come from service alterations to passengers, knowing it increases acceptability towards disruption. However, they acknowledge this can be difficult to achieve especially where changes are not always immediately tangible to the train user.

"We shouldn't just be saying sorry to passengers for disruptions. It always makes it look like we're failing, we should be tagging on with what we're doing and how it will ultimately benefit them."
(Stakeholder)

Emergency communication

While trying to avoid overrunning, stakeholders understand that in reality, works can overrun. Communicating where planned service alterations cause unplanned disruptions can be difficult last minute and stakeholders acknowledge this can have a detrimental effect on tolerance for **planned** works.

"Our comms has to be active and responding. If we have a risk of overrun, how do we tell people?"
(Stakeholder)

And examples of learnings around from other less smooth projects

Kings Cross, 2015

Closures along the Kings Cross route impacted many passengers both commuters and leisure travellers. On this occasion, **communications with passengers** became extremely saturated, leaving many unaware of the changes and disruption ahead.

In addition to this, disruption which followed made it difficult to **manage consumer demand** – many of whom were unaware of the works – whilst also completing the job.

"Some people said they never saw the comms, how do we get their attention. This will give more confidence for doing things differently."

(Stakeholder)

Liverpool Street, 2012

The multidisciplinary project at Liverpool Street in 2012 ran beyond the deadline, therefore disrupting passengers for longer than expected.

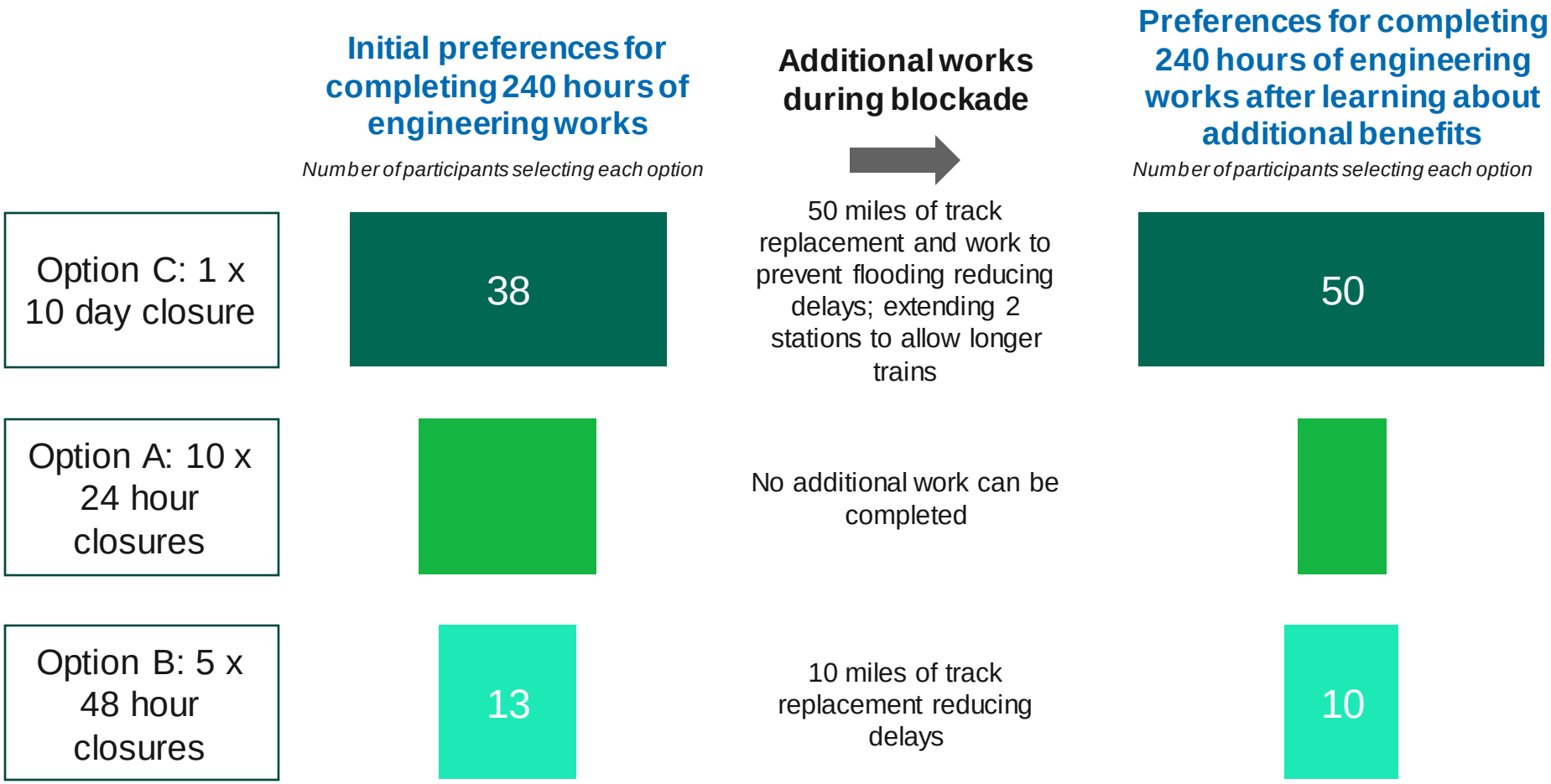
Building in **effective contingency plans** helps to reduce this.

"I think there was massive learning that came through that about contingency plans, how to deal with overrun and how to minimise passenger disruption"

(Stakeholder)

Additional benefits of infrastructure works had some impact on acceptability

Preference for longer line closures increased with the understanding of the possibilities for completing additional work during longer blockades



Numbers show frequency of each response **out of 68 participants who provided an answer to this question. This is qualitative research therefore these numbers should be treated as indicative only*

Preference for longer blockades increased with the understanding they could facilitate additional work, and therefore deliver better reliability

Option A/B

- A smaller number show a strong preference for less short-term disruption. These participants were largely those who thought they would struggle to work around longer blockades (particularly commuters less able to work from home or leisure travellers lacking car or bus alternatives) and so sought to reduce impact on their lives first and foremost.

Option C

- The idea of less long-term disruption and delays (particularly unplanned, uncommunicated delays more likely to catch passengers unawares) strengthened preference for Option A – enough to switch some participants' choice.
- Longer trains, a possible benefit of additional works, were also highly appealing across the board, with both commuters and leisure travellers having negative perceptions of overcrowding - a concern which has strengthened as a result of the pandemic.

No additional work can be completed

10 miles of track replacement reducing delays

50 miles of track replacement and work to prevent flooding reducing delays; extending 2 stations to allow longer trains

Compensation and cost were less commonly linked to acceptability spontaneously

Compensation was rarely spontaneously mentioned, although it was sometimes linked to less 'premium' replacement buses

- Passengers see trains as premium public transport – reflected in the cost of travel. As a result, compensation for service alterations is welcomed in principle, when prompted.
  - **Season ticket holders** were most likely to view compensation as more important compared to those travelling more sporadically.
- However, only one or two participants raised the issue spontaneously – with most reflecting they prioritise knowing about service alterations in advance, and being able to plan around works, rather than receiving compensation afterwards.
  - And these preferences hold for season ticket holders too.
- There is also a broader sense that compensation can be a hassle – reducing its attractiveness overall.

Rail industry stakeholder view

Stakeholders flag concerns with compensation, saying it can be costly for future planned works if it becomes a precedent.

- One also noted that compensation may be expected to increase should more alterations need to take place in the future, reflecting the value lost by passengers from continuous disruptions.
- Another suggested that instead of compensation for the journey, passengers may be offered more flexibility e.g. the option to use their ticket in the future or use on differing routes, satisfying the passenger without huge losses to the provider.

"You can often be told you don't get your money back or you have to use this route on x day, maybe they could be more flexible in terms of compensation, and that would be it's own form of compensation too."

(Stakeholder)

Considering the cost of infrastructure works to tax-payers had little impact on the acceptability of service alterations for passengers

- Generally, passengers do not think the cost of the infrastructure works to the tax-payer impacts their preferences for service alteration plans.
- Most struggle to engage with this conceptually, feeling far removed from the costing of rail infrastructure projects.
- Amongst the most sceptical, there is a sense that Government can miscommunicate spending information for large projects, and are slow to believe they'd be told the true cost anyway, citing HS2 as an example
- A minority of passengers suggest that cheaper payment now could lead to more expenses in the longer term thinking of the truism: *buy cheap, buy twice*
  - However, this thinking did not extend to assumptions that cheaper rail works would be unsafe.
- Some assume works that are not completed during the blockade would be still be required in the future (i.e. cost savings in the short term could lead to additional costs to the tax-payer in the long term).
  - A minority also call to see any efficiency savings made from longer blockades reflected in the cost of their ticket prices where possible.

Learn from Crossrail, because that still has not finished. HS2 is still a pipedream. Fix what we have before you start new projects that are costly. These things cost money but it wouldn't change things anyway."
(Focus group, North)

"In the long run, if its cheaper [for the tax payer] then that would hopefully reflect in the train fare price [being lowered]."
(Focus group, London/SE)

Appendix

Detailed responses to the focus group scenarios

Passengers were shown 3 scenarios, with 2 options for delivery for each

In focus groups/paired depths with 48 participants, participants were presented with:

For a train route you use, there is going to be **an upgrade of the power supply** to prepare for the introduction of **new trains.**

Once completed, these new trains will provide **extra seating** space for passengers and **cut journey times** along the route.

The work requires some line closures, during which a replacement bus service will run.

For a train route you use, engineering work needs to be undertaken **to renew ageing infrastructure** (e.g. tracks, signals).
The project includes a range of works **including track replacement, signalling upgrade and repair of Victorian tunnels to improve drainage and prevent flooding on train line**s.

The result of the works will be to **improve the reliability and performance of train** journeys on this route – in other words fewer delays and cancelled services.
The work requires some line closures, during which a replacement bus service will run.

Work is needed at the station you travel from **to increase capacity**. **Station platforms will be extended** to accommodate longer trains and mean that **more seats are available for passengers**.

The work requires some line closures, during which a replacement bus service will run.

Scenario 1: Large-scale project

Participants strongly preferred Option A because the overall project would be completed more quickly and therefore train services disrupted over a shorter period

Most believed that Option A, with the shortest overall timeframe, would offer the least (unexpected) disruption overall

Option A

- Total time to complete project: **18 Months**

How travel on your route will be affected:

- **2 x long closure periods** affecting weekday and weekend travel (e.g. a 16 day closure every nine months – 2 in total)
- **10 weekend closures**, (roughly once every 2 months for the 18 months)
- **6 weeks** with **no** late-night services (after 10pm)

Total: c.52 days closed; 6 weeks no-late night service

The alternative service provided will be:

Replacement bus service which will travel direct to your destination station **without stopping**

Additional journey time:

15 minutes (30 minute journey-> 45 mins)

Advantages

- Felt to have lower levels of disruption on passengers as the bulk of the work is done in bigger stretches that would be easier to work and plan around (less chance for unexpected disruption).
- Having to put up with disruption for 18 months was considered preferable – and perceived as a reasonable timeframe for the works.

"It's like ripping a plaster off, you want it over and done with as soon as possible in my mind."
(Focus group, South West)

Disadvantages

- Some travelling from smaller stations questioned whether they would have a feasible alternative if there were only direct buses.
- A small handful of commuters felt this option would unfairly impact those unable to work from home given the long closure lengths.

Most felt the higher number of disrupted days in Option B meant a higher likelihood they would be impacted – and 'caught off guard'

Option B
- Total time to complete project: **3 years**

- **1 full week closure** affecting weekends and weekdays
- **30 weekend closures** (once every month for 3 years)
- **20 weeks** with **no** late-night services (after 10pm)

Total: c.69 days closed; 20 weeks no-late night service

Replacement bus service which **will stop at intermediate stations** between your departure and destination station.

30 minutes (30 minute journey -> 1 hour)

Advantages

- Serving numerous locations via replacement bus was important to some.

"The main advantage of option B is the bus stopping at more stops, that's better for people along the way."
(Focus group, Midlands)

Disadvantages

- The volume of weekend and no-late night services felt particularly stark vs. option A in this large-scale scenario.
- The regularity of weekend and no-late disruptions was felt to be more likely to disrupt more passengers.
- Some expressed concern that passengers would find it challenging to keep up to date with service alterations over such a long period and leisure travellers could be 'caught off guard'

Participants were also presented with some additional information and alternatives:

Option A	Option B
Opportunities for other work:	
• **Enhancements** to the stations and rail track along the route during the 2 x 16-day closures; meaning **improved accessibility and facilities** at stations and a **more reliable** train service. • No line closures for **planned** works for a further 2 years after the project has completed. (Line closures would only be needed if unexpected maintenance is required.)	• **Some, but more limited** improvement and maintenance works will be possible during the weekend closures. • Some **additional weekend closures** will be needed for other planned maintenance after the project has completed.
A journey to visit a friend/commute to work is usually 1 hour long…	
30 minutes additional journey time **Total journey time : 1hr and 30 mins**	**1 hour additional journey time** **Total journey time: 2 hours**
Your journey to visit family or commute to work is usually 1 hour and 30 minutes long…	
45 minutes additional journey time **Total journey time : 2 hours and 15 mins**	**1 hour and 15 minutes additional journey time** **Total journey time: 2 hours and 45 minutes**

As most participants in the sample opted for Option A, the additional information only served to strengthen preferences

Preferences for option A were strengthened because:

- Having no additional line closures for 2 years for planned maintenance was the more compelling benefit, felt to further increase the 'pay off' for the longer blockade.
- The concept that additional work could be completed during longer closures felt intuitive and logical (as observed in the online community).
    - This was seen as an additional benefit to participants, although not as important a driver as the overall delivery time.
- By comparison 'increasing accessibility' was seen as more of a 'nice to have'. Some also wanted more detail about what it means in practise.
    - For example, some passengers identified installing a lift as a clear accessibility improvement but wanted to have other concrete examples when assessing this measure.

Overall, this suggests ensuring a sound understanding of the benefits of the works can impact the level of acceptance felt by passengers.

2nd and 3rd journey times options strengthened existing support for option A, as both were shorter than option B.

"We need to know what accessibility is, everyone is behind that obviously, but is it big things like a lift? They need to be clear so people can understand the changes."

(Focus group, South East)

N.B. Participants had gone through a deliberative process whereby they were presented with more information throughout the research, and became more informed on the topic

Scenario 2: Medium project

Most participants preferred Option A, although it was seen to be potentially more disruptive for some passengers

Overall, option A is preferred but disruptions during school holidays are strongly opposed by some travelling with children

Option A

- Total time to complete project: **6 Months**

How travel on your route will be affected:

- **2 x full week closures** affecting weekday and weekend travel (2 x 9 days) both scheduled during **school holidays.**
- **4 weekend closures** (roughly one weekend closure every six weeks for 6 months)

Total: 26 days closed

The alternative service provided will be:

- Replacement bus service
- Dedicated **staffed and heated waiting area** at replacement bus interchange with free WiFi, access to additional toilets and refreshments

Advantages

- As with scenario one, most prioritise finishing the works in a shorter time frame to avoid longer term and potentially unexpected disruption.
- Dedicated staff was a slight draw, although secondary to length of disruption. This benefit is linked to the importance placed on good communication and past experiences of confusion around works and replacements means passengers can see a benefit from dedicated staff, informing passengers about changes.

Disadvantages

- Some parents in the group opted for Option B as they felt A would have too much impact on them and their children – making it harder to travel and entertain during a busy period.
    - Although a small group of passengers could see the benefit of closures in school holidays. They suggested passengers are less likely to be using the train either because they are off work anyway, or are more likely to be travelling abroad.

'I'd go for option A because all I think of is how quickly can we get this done and dusted. I would work around the closures"
(Focus group, North)

Some favoured Option B for its simplicity, with some parents also seeing it as the clear winner

Option B

- Total time to complete project: **12 months**

- **20 weekend closures** (approximately one every 2-3 weeks over the year)

Total: 40 days closed

- Replacement bus service
- **No dedicated waiting area** for replacement buses.

Advantages

- Having just one type of disruption over the time period meant option B was perceived as straightforward, with closure times and dates being easy to understand.
- A handful of commuters who don't also travel by train for leisure felt this would have no impact on them.

Disadvantages

- Very regular weekend work was seen to be particularly disruptive and relentless for leisure travellers.
- Amongst those preferring Option B for length and disruption reasons, there was irritation about the loss of the additional benefits (staff and heated waiting area) and confusion over why this isn't simply the status quo.

"Option B seems more straightforward, you could get your head round it and when it would be open and when it would be closed, even If you are a leisure traveller like me, you could work out when to avoid it, so I'd be happy with that." *(Focus group, Midlands)*

Participants were also presented with some additional information and alternatives:

Option A	Option B
Opportunities for other work:	
• Other **improvements to station accessibility** will be done during the 2 x 9-day closures. • This **will prevent the need for further closures** to complete the station improvements **for 2 years** after the project has completed.	• **Some** routine maintenance **will be possible** during the one-week blockade • But **some additional weekend closures will be needed** on this section of the route to complete the work to improve station accessibility in the two years after the project has completed.
A journey to visit a friend/commute to work is usually 1 hour long…	
30 minutes additional journey time **Total journey time : 1hr and 30 mins**	**30 minutes additional journey time** **Total journey time : 1hr and 30 mins**
Your journey to visit family or commute to work is usually 1 hour and 30 minutes long…	
45 minutes additional journey time **Total journey time : 2 hours and 15 mins**	**45 minutes additional journey time** **Total journey time: 2 hours and 15 mins**

Additional information strengthened preferences for option A, and in some cases decreased the attractiveness of option B

For most passengers, the additional information in this scenario worked to reaffirm votes for option A:

- As in scenario 1, with passengers seeing the benefit of **increased opportunities for other work, shorter train journeys and no need for future planned engineering works for a further two years.**

For those who supported option B, additional information either:

- Had **no effect** on support, amongst the minority that **were most opposed to weekday work** believing the additional weekend works could be worked around; Or
- Reduced preferences from option B and increased preference for option A. This occurred amongst those who supported option B due to school **holidays closures** in option A, finding the prospect of no future planned engineering works appealing, **reducing their strength in support** for option B

"I'm still opting for B because more weekends wont be a problem, even if it's closed more, I know I can work around it which is not the case for option A."
(Focus group, North)

"I'm guess the further disruptions are a problem for me, what I want to avoid is disruptions with school holidays, but this just sounds like more."
(Focus group, North)

Scenario 3: A small project

Generally, there was a preference for Option B, however participants found it harder to trade-off where lengths and disruptions feel less distinct

Option B was generally preferred due to it taking less time, but preferences were less pronounced

Option B

- Total time to complete project: **4 months**

- **1 bank holiday weekend** (3-day closure)
- **1 extended weekend closure** (4 days, Mon-Fri)
- **2 weekend closures**

Total: 11 days closed

- Replacement bus service

Advantages

- Some participants were fixed in their view that 'quicker is best' by this stage, driving support for option B.
- The overall disruption to commuters was still deemed minimal with just two working days over the whole time period.

Disadvantages

- Bank holidays were more contentious for leisure travellers as many perceive they are more likely to take longer leisure breaks/journeys during this time given bank holidays are longer, and more infrequent than standard weekends.
- Several wanted to know why the scheduling was necessary on bank holiday. This didn't drive many to move away from Option B, but for the small number who did their view was very strong.

"Option B is just over and done with in 4 months, its quicker, for me that's much more preferable. Not really [any downsides] it is only a short journey, I could live with that one."
(Focus group, Midlands)

Responses were most mixed for this scenario, though the longer total length of disruption still caused criticism

Option A

- Total time to complete project: **8 months**

How travel on your route will be affected:

- **9 weekend closures (sat & sun)** meaning disruption at weekends once every 3-4 weeks for 8 months.

Total: 18 days closed

The alternative service provided will be:

- Replacement bus service

Advantages

- The handful of commuters who did not also frequently travel for leisure felt this option would have no impact on them.

Disadvantages

- The total length of closure was unappealing to some compared to option B – though the strength of this opinion was much weaker for 8 months versus 4 months than the first two scenarios.
- The regularity of the weekend closures (once every three to four weeks) was less appealing to leisure travellers – driving them to opt for Option A.

The four day closure infringing on the Friday and Monday is more disruptive than doing it on weekends. I think shutting on Bank Holidays…people will travel then. that would move a lot of money in the economy (Paired depth, South West)

Participants were also presented with some additional information and alternatives:

Option A	Option B
Opportunities for other work:	
• **Additional maintenance/improvement is not possible** during the 2-day weekend closures. • So **some additional weekend closures will be needed** on this section of the route for other planned maintenance after the project has completed.	• **Improvement work to track and signals** during bank holiday and extended weekend closures – resulting in a **more reliable train service.** • **No line closures for planned works for a further 2 years** after the project has completed. (Line closures would only be needed if unexpected maintenance is required.).
A journey to visit a friend/commute to work is usually 40 minutes long…	
30 minutes additional journey time **Total journey time: 1 hour and 10 mins**	**30 minutes additional journey time** **Total journey time: 1 hour and 10 mins**
Alternative service arrangements	
Bus replacement	• A **reduced train service will run during the bank holiday and extended weekends.** • **The overall additional journey time is the same** but you will not need to change to a bus for part of the journey. • Bus replacement on 2-day weekend line closures

Additional information had more of an impact on preferences in this scenario, where starting opinions were less strong

In this scenario, additional information about **replacement services** had an impact on views.

For some, buses increased the attractiveness of option A.

- Believing the bus is easier and likely to involve no changes – especially important to those travelling with children.

These passengers were concerned by trains replacements believing:

- That reduced services would be extremely busy, causing particular concern from a COVID-19 health and safety context.
- That alternate routes may require several changes, being more frustrating especially on longer journeys.

The majority preferred rail services offered in B, with some expressing concern with the bus option:

- Trains are thought to be premium – and that's what passengers believe they have paid for.
- Trains are assumed to be quicker by most.
- Buses and coaches can be inaccessible by those with physical disabilities, with trains seen as the best option amongst disabled people in groups.

"Sometimes a reduced service is less reliable. If it was going to be as frequent as the train, then I'd rather get the bus."
(Focus groups, Midlands)

"The train is better and it's what you have paid for at the end of the day, that's what's so frustrating about replacements."
(Focus groups, North)

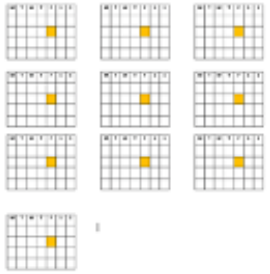
Example activity and stimulus materials

Example online community activity

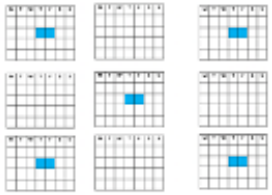
How the work could be achieved

The total time required can also be split up into different 'blocks' of work.

For example, for works which require a total of 240 hours of line closure like this one, this could be split as:



- **Option A: A lot of short line closures.** 10 x 24-hour closures (e.g., closing the line one day per week ten times, over 10 months (closures of 24 hours roughly once a month)



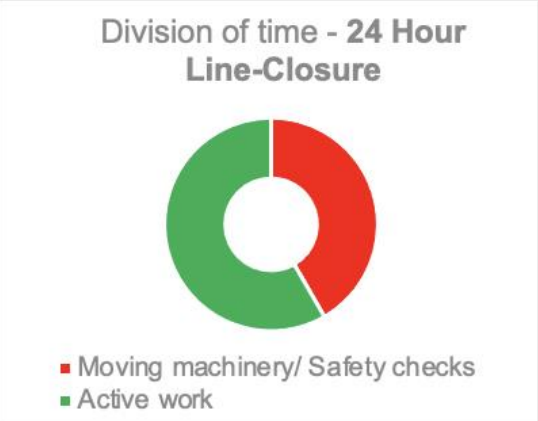
- **Option B: Fewer slightly longer line closures.** 5 x 48-hour closures (e.g., closing for two days per week five times, over 10 months (closures of 48 hours roughly once every two months)

- **Option C: One long blockade.** 1 x 10-day blockade (e.g., closing the line for 10 days once)

Example online community activity

As a result not all of the time during the line closure is spent on the actual work of maintenance or improvement. However, the longer a closure is, the higher the proportion of working time vs. preparation/other 'lost' time. For example:

- For a 24-hour line closure = 14 hours of active work
- For a 48-hour line closure = 28 hours of active work
- For a 10-day closure = 230 hours of active work

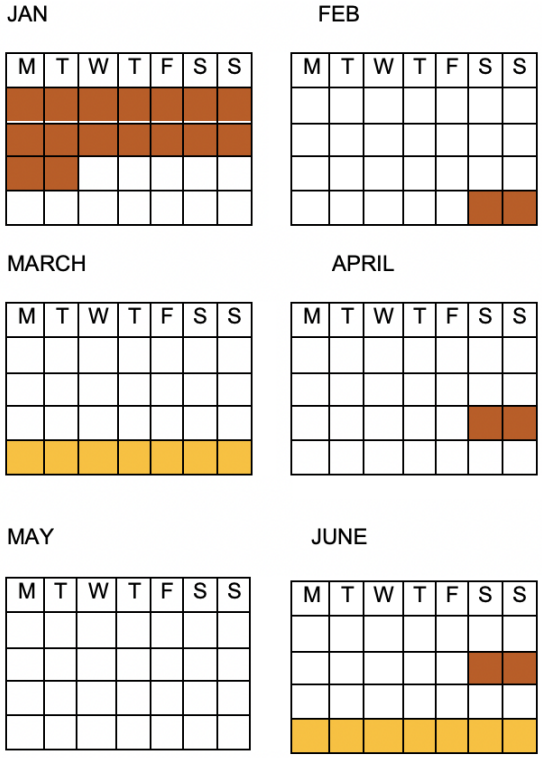


Example focus group stimulus

Line closed (no trains)

No trains after 10pm

Option A



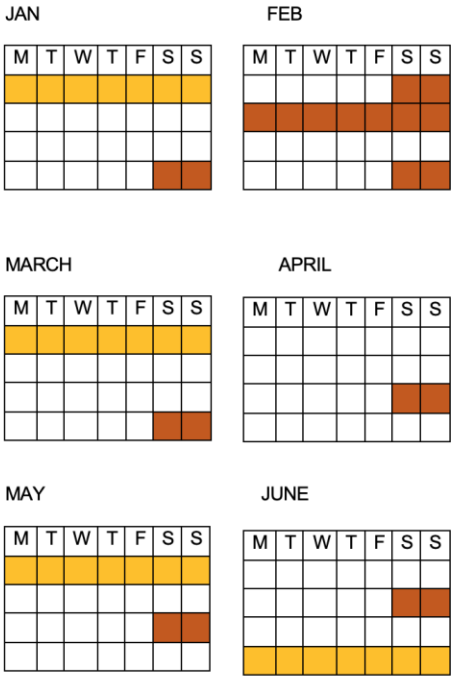
x2

Project lasts 18 months

Days line is closed: 52

No-late night service: 6 weeks

Option B



x6

Project lasts 3 years

Days line is closed: 69

No-late night service: 20 weeks

Example focus group stimulus

Opportunities for other work

Option A

- **Enhancements** to the stations and rail track along the route during the 2 x 16-day closures; meaning **improved accessibility and facilities** at stations and a **more reliable** train service.
- No line closures for **planned** works for a further 2 years after the project has completed. (Line closures would only be needed if unexpected maintenance is required.)

Option B

- **Some, but more limited** improvement and maintenance works will be possible during the weekend closures.
- Some **additional weekend closures** will be needed for other planned maintenance after the project has completed.

Example focus group stimulus

Journey length and additional time

Journey one – usually 1 hour long

Option A	Option B
A journey to visit a friend/commute to work is usually 1 hour long…	
30 minutes additional journey time Total journey time : 1hr and 30 mins	**1 hour additional journey time Total journey time: 2 hours**

Total time: 1hr and 30 mins	
Normal journey time 1hr	Extra time 30 mins

Total time: 2 hours	
Normal journey time 1 hr	Extra time 1 hr

Example focus group stimulus

Journey two – usually 1 hour 30 mins long

Option A

Option B

Your journey to visit family or commute to work is usually 1 hour and 30 minutes long…

45 minutes additional journey time
Total journey time : 2 hours and 15 mins

1 hour and 15 minutes additional journey time
Total journey time: 2 hours and 45 minutes

Total time: 2 hours and 15 mins	
Normal journey time 1hr and 30 mins	Extra time 45 mins

Total time: 2 hours and 45 mins	
Normal journey time 1hr and 30 mins	Extra time 1 hr and 15 mins

Thank you

For more information, please contact the DfT team at RailResearch@dft.gov.uk

Department for Transport