

<p>Principal Areas of Disagreement Summary Statement PADSS from Network Rail Infrastructure Limited</p>	<p>Version Number: 2.0 Submitted at: 06/06/2024</p>
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This Principal Areas of Disagreement Summary Statement (PADSS) has been prepared following the format set out in the Planning Inspectorate's letter of 8 September 2023.

The first version of this PADSS was submitted to the Examining Authority on 15 March 2024 as an annex to Network Rail's written representation. Since then, Network Rail has undertaken further analysis and modelling work to further clarify and refine its position in respect of the proposals. The table below sets out in track changes Network Rail's updated position. Where issues and concerns have been deleted this is either because that issue or matter has been resolved and/or this is no longer a principal issue that Network Rail intends to pursue during the Examination.

Pending further discussions, it remains the case that Network Rail is not in a position to reach a view on the likelihood of the stated concerns being addressed during the Examination. However, this PADSS is intended to be a 'live' document so will be updated in due course to include this information.

Principal Issue in Question	Concern held	What needs to change/be amended/be included in order to satisfactorily address the concern	Likelihood of concern being addressed during Examination
1. Land implications			
1.1. Land implications	<p>The DCO includes the proposed compulsory acquisition of land and rights belonging to Network Rail. These rights include the permanent acquisition of land, the temporary occupation of land and the acquisition of rights benefitting Network Rail, including rights of access.</p> <p>Work is ongoing to review the impact of these proposed acquisition, but these access rights should be maintained so that Network Rail can effectively and safely access and maintain the railway.</p>	<p>Technical Clearance underway within Network Rail to clarify impact and acceptability of the land acquisition proposals.</p> <p>Network Rail expects all rights that it relies on to be retained.</p>	
1.2. Asset protection	<p>The DCO includes the carrying out of works which are on or in close proximity to the railway. Network Rail's Southern Region Asset Protection and Optimisation team (ASPRO) must be engaged to support the safe delivery of works in a way which does not unduly place risk on the railway. In addition an ASPRO "Structures Agreement" will be required in respect of the proposed widening of the Airport Way bridge.</p>	<p>Gatwick Airport to engage with NR Southern Region ASPRO and agree any relevant Asset Protection agreements, including the Structures Agreement.</p>	

2. Transport assessment: overall conclusion that no mitigation for rail system required			
<p>2.1. Lack of mitigative funding for rail</p>	<p>The Gatwick Northern Runway DCO does not include any mitigative funding to manage the impact of the proposed increase in passengers on the railway network.</p> <p>Gatwick have proposed a Transport Mitigation Fund which is, Network Rail understand, intended to support surface transport measures, as and when such investment is required to accommodate unexpected impacts resulting from an increase in airport passenger numbers. Network Rail have provided a separate response at Deadline 4 to the Transport Mitigation Fund explaining its unsuitability for mitigating rail-specific impacts.</p> <p>Network Rail also note the proposed Sustainable Transport Fund - This is an existing fund which is secured via the current section 106 agreement. It is funded as a levy on the number of available air passenger car parking spaces and the number of staff parking permits issued each year. This is not considered an appropriate mechanism to fund rail-specific mitigation either.</p> <p>The absence of specific mitigations or a future fund which could deliver investment in rail is important as Gatwick’s Holistic Strategic Transport (GHOST) Model predicts that, with the Northern Runway, the number of combined staff and passenger two-way rail trips to/from the Airport relative to 2016 (the base year for the model) will increase by 66% to 2029, 96% to 2032, and 119% to 2047. In absolute terms, this represents an increase from just under 50,000 daily rail trips in 2016 to around 96,000 in 2032. According to ORR station usage data, in the year from April 2022 to March 2023, 16.5 million people passed through Gatwick station, equivalent to over 45,000 people each day. With ongoing demand recovery, by late 2023 the station had exceeded the passenger demand levels observed in 2016. Overall growth at Gatwick is forecast to more than double the number of rail passengers to the Airport by 2032 compared to today, of which around 40% are associated with the Northern Runway Project. The</p>	<p>Acknowledgement from Gatwick that the Northern Runway Project is a major change event for the railway and that business as usual arrangements are unsuitable.</p> <p>We do not agree that there will be sufficient capacity on the rail network in the early 2030s to accommodate Gatwick’s growth whilst also meet current and future passenger expectations.</p> <p>Gatwick’s Northern Runway Proposal will add additional demand onto already busy services and so we expect Gatwick to recognise their impact and contribution to a shared challenge.</p> <p>Gatwick are yet to identify and propose appropriate mechanisms which could fund investment in rail, including infrastructure or train service subsidy, to support the provision of sufficient capacity to serve the additional airport passengers anticipated in the future.</p>	

Northern Runway Project can be seen to add in the region of 20,000 additional rail trips every day, which Network Rail reflects is a material increase and that accommodating this demand will require a range of interventions.

At a strategic level, the overall level of capacity provided in the December 2019 timetable is the limit for the foreseeable future without further capacity upgrades, such as the Brighton Main Line Upgrade Programme. Rail industry forecasts – which only account for modest growth at Gatwick – indicate that the capacity limit on the Brighton Main Line will be exhausted in the 2030s - a similar timescale to this proposal. In particular, we are forecasting increased passenger standing on services from Gatwick in the morning peak and to Gatwick in the evening. Shoulder peak services are also forecast to experience standing. Additional passengers associated with the Northern Runway Project will be adding to the future crowding such that all additional passengers are likely to have to stand. We are working with GTR to finalise our analysis and will provide further representations in due course. Without additional infrastructure capacity, accommodating growth over and above industry forecasts will require careful review of the allocation of services and distribution of passenger capacity.

The DCO inherently assumes the overall railway system will provide the rail capacity required by the Airport, including a return to December 2019 levels of capacity. This does not take account of the unprecedented financial constraints that the rail industry is operating within, which has resulted in recent capacity reduction. This includes reductions in the number of passenger trains leased by GTR. It is important to note that there is no public funding currently allocated or planned for the train service or infrastructure mitigations that Gatwick's expansion might require, and Gatwick have not identified mechanisms to fund any future shortfall. This is also out of alignment with the Aviation Policy Framework which notes that "The general position for existing airports is that developers should pay the costs of upgrading or enhancing road, rail or other transport networks or services where there is a need to cope with

Gatwick have not set out any funded proposals for mitigations to manage the impact of the additional airport demand, similar to the commitments Gatwick have made for the road network. There are a range of mitigation measures which could increase capacity of the Brighton Main Line and mitigate the impact of the proposals on the wider network, which we have set out in an attachment. We wish to discuss these with the applicant.

Network Rail's view is that the Transport Mitigation Fund is not an appropriate mechanism for securing this investment (see [NR's comments on responses to ExQ1 at Deadline 4](#)). Network Rail's view is that a separate ringfenced Rail Mitigation Fund would be the most appropriate and streamlined approach. This would enable the introduction of appropriate governance arrangements for these funds and the integration of appropriate rail industry representation.

	<p>additional passengers travelling to and from expanded or growing airports” (p.75, para. 5.12).</p> <p>Overall, our position is that Gatwick should provide a reasonable and proportionate contribution to the rail network to mitigate the effects of airport-driven growth for which Network Rail and the wider rail industry on behalf of the taxpayer are not currently funded to provide.</p>		
<p>3. Transport assessment: technical modelling approach, assumptions, comprehensiveness and conclusions</p>			
<p>3.1. Unfunded model assumptions</p>	<p>Gatwick’s transport modelling assumes that the rail industry will deliver the following schemes in time for the opening of Gatwick’s Northern Runway:</p> <ul style="list-style-type: none"> a) 24 tph Thameslink services (also as per table 9.2.1). 9.4.16 of the Transport Assessment incorrectly states that 24 tph has been delivered – this requires Traffic Management which has not yet been delivered; b) North Downs 3 tph service pattern; c) Restoration of 4 tph Gatwick Express peak and off peak; d) Reinstatement of peak hour services (as per the December 2019 timetable); e) Additional off peak fast services between Thameslink / London Bridge and Gatwick (Table 9.2.1) – these cannot be accommodated without a major change to service specification or increased infrastructure capacity. <p>For points a-d, these model input assumptions are uncommitted and unfunded, but nonetheless credible. Point e is not compatible with the capacity available on the current infrastructure.</p>	<p>For 3.1a, confirmation of the materiality of the 24tph Thameslink service assumption to the overall analysis.</p> <p>For 3.1b-d, clarification from Gatwick Airport on the materiality of these outcomes to the overall Transport Assessment if they are not in place.</p> <p>For 3.1b-d, proposals for mechanisms for Gatwick to fund/ part-fund the implementation of these services, should the industry not have implemented them by the timescales required by the NRP.</p> <p>For 3.1e, Network Rail have received supplemental advice</p>	

		<p>from Gatwick and are reviewing the implications alongside observed capacity data.</p>	
<p>3.2. Technical model clarification and alignment</p>	<p>A large volume of information has been provided relating to forecast train loading data across services which would be affected by the Northern Runway Project. Network Rail are working to review these in detail with Gatwick Airport Ltd and to compare to observed and industry forecasts.</p> <p>At this stage, Network Rail cannot endorse the Airport’s conclusion that “no significant increase in crowding on rail services is expected as a result of the Project” and that therefore “no additional mitigation is required” (Transport Assessment, page 73).</p> <p>In summary, Network Rail’s concerns relate to the following areas:</p> <ul style="list-style-type: none"> i. The aggregation of passenger demand by hour and service group does not reflect the significant variation that results in uneven passenger loads across each of the Brighton Main Line service groups. Network Rail are reviewing observed loading data provided by GTR to understand the materiality of this concern as there is a risk the modelled outputs artificially smoothen out demand. ii. The assumptions relating to assumed train capacities, including train lengths, formation and seated and standing densities. The requirements for airport passengers, particularly those with luggage, have a material impact on passenger experience and reduce effective available capacity. Network Rail are reviewing the provided data to understand the materiality of this concern. iii. The modelling of the Gatwick Express and the impact of fare differentials on the overall distribution of capacity may smoothen out demand. 	<p>It is noted that Network Rail are in live discussions with Gatwick Airport Ltd to explore these issues. Ongoing liaison between Network Rail and Gatwick Airport Ltd is required to come to an agreement on factors such as these.</p> <p>It is possible that initiatives or investments in services and infrastructure could be required to satisfy these concerns – Gatwick Airport Ltd should propose mechanisms for this to be implemented if required.</p>	

	<p>iv. Alignment with rail industry forecasts and subsequent conclusions. Our draft analysis is forecasting high levels of passenger standing on services from Gatwick in the morning peak and to Gatwick in the evening, before Gatwick’s growth is considered. Shoulder peak services are also forecast to experience standing.</p> <p>v. Conclusion from Gatwick that future crowding levels are acceptable. We note that it is an industry standard to aim for passengers at peak times to not have to stand for more than 20 minutes, and no standing at off peak times.</p> <p>vi. It is unclear how much of the additional demand is allocated to the slow line services via Redhill – this area is under review.</p> <p>vii. Our review has also highlighted a fundamental difference in the baseline growth expectations for Gatwick Airport demand between those presented by GAL in the Transport Assessment and the growth rate which is provided for rail planning purposes by the Department for Transport. In short, Gatwick’s Business As Usual scenario has a much higher growth rate than the rail industry’s baseline (based on our funder’s assumptions). This means the impact of Gatwick’s BAU growth is not currently accounted for in our analysis, creating a large gap between current forecasts and the NRP proposals. Network Rail are working to refine these assumptions and assess the impact of a more substantial BAU growth rate.</p> <p>Network Rail reserves the right to add items to this list as our analytical assurance activity continues.</p>		
<p>3.3. Rail network performance challenge</p>	<p>Maintaining good train service performance is an ongoing challenge on the Brighton Main Line. The high volume of trains, passengers, and mix of service groups including freight sharing the same infrastructure means</p>	<p>Network Rail has provided an indicative range of initiatives in the attached appendix which could improve rail network</p>	

	<p>small disruptions on the network can cascade and magnify, leading to cancellations and more significant network disruption.</p> <p>Gatwick’s Transport Assessment does not recognise this ongoing challenge to maintain and improve performance across the Brighton Main Line and is instead proposing more trains and passengers on a system which is at or will soon be at its functional capacity*.</p> <p>It is in both Gatwick’s and the rail industry’s best interests to ensure a reliable rail service can operate otherwise existing performance challenges on the Brighton Main Line could significantly dent passenger experience and diminish Gatwick’s attractiveness for passengers. This could also threaten the achievement of the Airport’s modal shift targets.</p> <p>Our concern is that Gatwick has not acknowledged how the Northern Runway Proposal will add to the interlinked capacity and performance challenge. Gatwick has also not proposed any initiatives to mitigate the impact of the Airport’s growth on railway system performance.</p> <p>Similarly, the additional pressure placed on the rail network from Gatwick’s expansion will mean engineering access for maintenance, renewals and enhancements will become increasingly difficult to accommodate and the pressure on alternative routes when passengers are diverted will also increase.</p> <p>*The train service operating in the December 2019 timetable was the most intensive possible on the existing infrastructure, without unacceptably compromising overall system performance. At peak times there were no more paths available, and the off-peak periods were used as a ‘buffer’ time to recover from delays which accumulate in the peak. Effectively, the December 2019 timetable was the ‘cap’ to the service volume which could be accommodated peak and off peak, without infrastructure enhancements.</p>	<p>performance for Brighton Main Line and Gatwick Airport rail passengers. Network Rail expects Gatwick to contribute to, or fully fund, initiatives such as (but not limited to) those identified.</p>	
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<p>3.4. Gatwick Airport station capacity is a concern with future passenger levels</p>	<p>The Gatwick Station Project has substantially increased passenger capacity and has transformed the journey from train to plane and given passengers travelling between Brighton and London easier, faster, more reliable journeys.</p> <p>The Gatwick Station Project delivers additional capacity but explicitly did not account for the impact of the Northern Runway Project. The evidence provided in the Transport Assessment indicates a particular issue with congestion at two of the ticket barriers (gate lines) due to the extra passengers arising due to the scheme, which requires further investigation and potential mitigative measures.</p> <p>Network Rail have undertaken a high level quality assurance exercise of Gatwick’s station capacity modelling. This has included comparing gateline throughput to observed data, as well as understanding the current spread of passengers across the gatelines.</p> <p>Network Rail’s conclusion is that the station modelling is sufficiently robust in its distribution of passenger across the northern and southern overbridges and gatelines – modelled distribution is in line with observed distribution from April 2024.</p> <p>The model assumes a slightly faster throughput of the gatelines compared to observed, but this is partially offset by observed data indicating instances of greater use of the southern gateline compared to the modelled analysis.</p> <p>As the modelling does broadly reflect the current operational situation, Network Rail are confident that there will be congestion at the arrival gatelines in the future as passenger demand rises, and the Northern Runway Proposal will add to this congestion.</p> <p>Consequently, we do not agree with Gatwick’s conclusion that “the Project does not require any additional mitigation works to Gatwick Airport station” (Transport Assessment, p. 83).</p>	<p>Network Rail have identified mitigation measures which would reduce congestion at the arrival ticket gates in the future. These are attached.</p>	
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<p>3.5. Brighton Main Line freight services unaccounted for in Transport Assessment</p>	<p>We are concerned that Gatwick’s Transport Assessment makes no mention of rail freight services. This is an issue because many rail freight services interact with Gatwick passenger services each day. This affects network performance and capacity and means that capacity is not necessarily available in the off peak to accommodate additional passenger services to serve Gatwick demands.</p> <p>Network Rail is also committed to deliver freight growth across the Region. Existing and potential future freight train usage of the network is another reason as to why the off-peak service assumptions provided in table 9.2.1 may not be deliverable as assumed.</p> <p>Allocation of limited network capacity will also become increasingly difficult into the future, with competing demands from the network.</p> <p>There is also an opportunity to deliver goods by rail to reduce road network implications which may also require freight terminal interventions such as at Crawley New Yard or in the immediate Gatwick station area. Gatwick has not acknowledged this opportunity at this stage.</p>	<p>Removal of the off-peak service uplift assumed in the modelling in table 9.2.1, and acknowledgement of freight services using the network in the off-peak.</p> <p>Consideration of the opportunities for delivery of materials by rail during construction.</p> <p>Identification of any required mitigative works to Crawley New Yard or in the immediate Gatwick station area and how those would be funded.</p>	
<p>3.6. Wider network capacity issues that are unacknowledged and/or assessed</p>	<p>There are system-wide considerations that Network Rail must have due regard to as different proposals will interface with one another. Although these are outside the scope of Gatwick’s own DCO, the implications could be severe as pressures increase across the route from multiple directions. Concerns for the rail industry are:</p> <ul style="list-style-type: none"> - The current application for expansion at Luton Airport, which is served by the same Thameslink services that would be serving Gatwick. Increases in demand at both ends of the route clearly places further pressure on the overall service. - Integration with the Elizabeth Line at Farringdon - with demand increases from Gatwick and Luton as well as general shift towards Farringdon from other London Terminal stations could result in wider system limitations and the need for interventions here. - 	<p>Due to the uncertainty in these applications, it is unlikely Gatwick can satisfy these concerns.</p>	

4. Transport Assessment: Sustainable Access Commitments queries and issues			
<p>4.1. Mode share target for rail</p>	<p>Currently, Gatwick's Sustainable Access Commitments (SACs) are stated as a combined 'public transport' target, differentiated by staff and air passenger trips.</p> <p>While this reflects the separate trip characteristics/modal choices made by passengers and staff, it makes it ambiguous what the rail industry mode share target is. The lack of a rail specific target means accountability in its achievement could be undermined and a specific target would focus industry partners on a simple goal.</p>	<p>Details from Gatwick on how it intends to monitor and manage rail mode shares and details on the opportunities that will exist for the airport to invest in initiatives which could increase rail demand and mode share – particularly for initiatives which would require subsidy.</p> <p>Having a clear rail mode share target that Gatwick is accountable for achieving.</p>	
<p>4.2. Mode share opportunities</p>	<p>Gatwick does not take a proactive approach to increasing rail mode share. The largest mode share uplift is between 2016 and 2029 – which is a result of the completion of major schemes such as Thameslink and the Elizabeth Line, which have already been delivered. No further rail enhancements are identified in Section 7.3 of the Transport Assessment or the updated version of ES Appendix 5.4.1: Surface Access Commitments. It is therefore unsurprising that mode share for rail only marginally improves between 2029 and 2047.</p> <p>Network Rail points to the Aviation Policy Framework which notes that “all proposals for airport development must be accompanied by clear surface access proposals which demonstrate how the airport will ensure easy and reliable access for passengers, increase the use of public transport by passengers to access the airport, and minimise congestion and other local impacts” (p.75, para 5.11).</p> <p>As no rail interventions are identified by Gatwick, and the rail mode share uplifts are linked to schemes that have already been delivered, the</p>	<p>Identification of, and funding for, rail initiatives that would support Gatwick in achieving its public transport modal shift targets.</p> <p>Further discussion on the mode share opportunities for rail.</p>	

	<p>increase in rail trips appears to be in line with the overall increase in passenger numbers rather than a concerted effort to encourage the use of rail.</p> <p>Furthermore, increasing highway capacity will make achieving public transport mode share commitments more challenging.</p>		
<p>4.3. Clarity of mode share commitments</p>	<p>The Transport Assessment is not clear as to the actions that Gatwick are proactively taking to drive mode shift, only that the Sustainable Access Commitments and mode shift targets are an output of the model specification. Objective 4 of the Transport Assessment reads “Objective 4: Deliver a new standard in sustainable surface access in support of Gatwick’s Decade of Change” (p.4, para. 50). This objective should be supported by clear initiatives to support monitoring and evaluation.</p>	<p>Gatwick have identified a list of the push and pull interventions to ensure the mode shift targets are achievable and thus achieved in the Statement of Common Ground.</p>	<p>Concern clarified; no interventions are proposed to increase modal share of rail.</p>

ANNEX TO NETWORK RAIL'S PADSS

Gatwick Northern Runway proposal: draft rail mitigations

This document summarises some of the options available to mitigate the impact of the proposed Northern Runway Project on the rail network; particularly the Brighton Main Line (BML). This attachment has been prepared in support of the NR Principal Areas of Disagreement Summary Statement submitted at Deadline 5.

The Northern Runway proposal generates a material increase in rail passenger demand over and above the "business as usual" anticipated increase in passenger numbers. The applicant should provide a reasonable and proportionate contribution to mitigate the effects of airport-driven rail demand growth.

Mitigation will be needed to address the capacity issues arising from the applicant's proposals. The nature and scale of that mitigation is not yet known, pending the full review of the applicant's modelling (in progress) but there is an identified need for mitigation. The below constitutes a list of both operating and capital expenditure schemes that would help mitigate the effects of Gatwick's growth and enable the rail network to better absorb the additional forecast passenger volumes.

Please note that the list below is not exhaustive and subject to change and further development work is required to confirm benefits and overall viability.

Ref	Theme	Intervention	Capex / Opex	Cost	Desired outcome	Proposal to GAL
0	Mitigation of impact (refer to PADSS 2.1)					
0.0	Mitigation of impact	Rail mitigation fund	N/A	TBC	A fund for rail investment which mitigates the impact of the airport's expansion. The fund is to be of sufficient scale and flexibility to support as many of the below interventions as necessary to mitigate Airport expansion effects in line with the relevant Aviation Policy Framework. The Aviation Policy Framework states " <i>The general position for existing airports is that developers should pay the costs of upgrading or enhancing road, rail or other</i>	As per the Aviation Policy Framework, GAL must pay a contribution to the cost of upgrades and or enhancements arising from the growing Airport. GAL to recognise and agree that there are capacity issues forecast in the future at the station and on the wider network, which are worsened by the Northern Runway proposal.

Ref	Theme	Intervention	Capex / Opex	Cost	Desired outcome	Proposal to GAL
					<i>transport networks or services where there is a need to cope with additional passengers travelling to and from expanded or growing airports” (p.75, para. 5.12).</i>	Therefore, GAL to agree provide a fund as part of their application to fund (in whole or part) rail interventions.
1	Station capacity (refer to PADSS 3.4)					
1.a	Train station capacity	Additional Wayfinding	Capex	Very low	Increased spreading of passenger demand over the two gatelines.	GAL to commit to fully fund and monitor effectiveness of signage at reducing issue.
1.b	Train station capacity	Additional Staff at peak times to manage gateline/queues	Opex	Medium	Improvement in customer experience and gateline management and additional ticket checking capacity.	Network Rail note that this intervention is likely to have only limited effectiveness at mitigating gateline crowding.
1.c	Train station capacity	Removal of all gates	Capex & Opex	Low	Alternative to 1.d – removes congestion but introduces significant revenue protection risk.	GAL to fully fund a jointly-sponsored (with NR and GTR) study into gateline capacity / station operational review prior to runway opening. GAL to fund any resulting recommendations.
1.d	Train station capacity	New Gateline in South Terminal	Capex	High	Alternative to 1.c to help resolve congestion. Would require land take from GAL to NR.	Network Rail note that this intervention is likely to have greater effectiveness at mitigating gateline crowding compared to 1a or 1b.
1.e	Train station capacity	Use of Platform 7 exit route via PTI Building	Capex	Low	Would provide additional capacity during peak periods of congestion but introduces a poor passenger experience via a longer route and is only effective for Platform 7 passengers.	GAL to commit to fully fund (if aforementioned review (item 1d) finds that a new platform 7 exit would be required).
2	Rail network capacity (refer to PADSS 3.1 and 3.2)					

Ref	Theme	Intervention	Capex / Opex	Cost	Desired outcome	Proposal to GAL
2.a	Rail network capacity	Additional rolling stock to lengthen GTR services	Opex	Low	Longer trains as passenger demand requires.	GAL subsidise more rolling stock to accommodate additional passengers, if this has not already secured by time the second runway opens.
2.b	Rail network capacity	Restoration of pre-covid train services	Opex	Low	Return of pre-covid fast line services to pre-covid (or an equivalent level), where gaps remain.	GAL subsidise operational expenditure of fast line services if not already running by time the second runway opens.
2.c	Rail network capacity	Brighton Main Line Upgrade (CARS)	Capex	Very High	Additional services at peak times and potentially to reliably operate more services in off peak times.	GAL make a financial contribution to a scheme such as CARS if and when it progresses.
2.d	Rail network capacity	Train service reconfiguration	Opex	Low	Review and reallocation of train service capacity to meet passenger demand requirements in the future.	GAL do not oppose or act unreasonably in future timetable consultations.
2.e	Rail network capacity	Additional rolling stock to lengthen / uplift GWR services	Opex	Low	Longer and more frequent GWR services on the North Downs Line.	N/A - not identified as an immediate capacity issue.
2.f	Rail network capacity	Platform extensions to lengthen GWR services	Capex	Medium	Longer platforms on the North Downs Line to support longer trains.	N/A - not identified as an immediate capacity issue.
2.g	Rail network capacity	Enhanced renewals	Capex	Medium	Additional network capability and capacity is delivered over and above a renewal.	GAL make a financial contribution.
2.h	Rail network capacity	Redhill sidings	Capex	Medium	Increased stabling capacity for additional rolling stock and services.	GAL make a financial contribution.
3	Network reliability (refer to PADSS 3.3)					
3.a	Network reliability	Reigate Platform 3 (or similar)	Capex	Medium	Removal of splitting and joining at Redhill which will improve reliability on the BML.	GAL make a financial contribution.
3.b	Network reliability	Cottage Junction Grade Separation	Capex	Medium	Removal of key flat junction in the Selhurst Triangle which will reduce conflicts between trains on the BML, improving train service reliability.	GAL make a financial contribution.

Ref	Theme	Intervention	Capex / Opex	Cost	Desired outcome	Proposal to GAL
3.c	Network reliability	Gloucester Road Junction Grade Separation	Capex	Medium	Removal of key flat junction in the Selhurst Triangle which will reduce conflicts between trains on the BML, improving train service reliability.	GAL make a financial contribution.
3.d	Network reliability	Uckfield passing loop extension	Capex	Medium	Removal of first section of single line between Hever and Ashurst to improve overall service reliability on the BML.	GAL make a financial contribution.
3.e	Network reliability	Victoria Layout Enhancement	Capex	Medium	Improvements to the track layout at Victoria (e.g. Battersea reversible upgrade as part of an enhanced renewal) to increase timetable flexibility and improve service reliability.	GAL make a financial contribution.
3.f	Network reliability	Haywards Heath turnback	Capex	Low	Increased flexibility to start / terminate trains at Haywards Heath during disruption – improving passenger experience and journey reliability.	GAL make a financial contribution.
3.g	Network reliability	Fast to Slow Crossovers between Gatwick and Three Bridges	Capex	Low	Increased flexibility for the routing of Fast to Arun Valley Line trains between Gatwick and Three Bridges, increasing service reliability on the BML.	GAL make a financial contribution.
3.h	Network reliability	Automatic Route Setting (ARS) on the Brighton Main Line	Capex	Low	Improved network performance through reducing pressure on signallers.	GAL make a financial contribution.
3.i	Network reliability	Traffic Management on the Brighton Main Line (Stock and Crew)	Capex	Medium	Improved network performance through automating decision making.	GAL make a financial contribution.
3.j	Network reliability	Crawley New Yard / Salfords Improved Freight Access	Capex	Low	Improved network performance by reducing the time it takes for freight trains to propel (manoeuvre) in and out of freight yards on the BML.	GAL make a financial contribution.
3.k	Network reliability	Integrated command and control with Gatwick	Opex	Low	Improved network performance by aligning control to provide consistent operational decisions.	GAL make a financial contribution.

Ref	Theme	Intervention	Capex / Opex	Cost	Desired outcome	Proposal to GAL
3.l	Network reliability	Maintenance environment improvements	Capex	Low	Upgrade to staff facilities including car parking, route accommodation, etc. to drive improved staff satisfaction and improve productivity, leading to improvements in network operations planning and resilience.	GAL make a financial contribution.
3.m	Network reliability	'Over and above' committed maintenance	Opex	Low	Enhanced management approach to issues such as vegetation management, earthworks, lift and escalators.	GAL make a financial contribution.
3.n	Network reliability	Strategic network deconfliction e.g. Stoa's Nest, Keymer Junction	Capex	High	Removal of flat junctions on the Brighton Main Line to reduce interactions between services and improve network reliability.	GAL make a financial contribution.
3.o	Network reliability	Enhancement to ETCS (digital signalling) programme	Capex	Low-Medium	Deliver enhancements on top of the ETCS programme to secure wider network capability improvements, such as closer spacing of signals and bi-directional capability which may also support more services during maintenance periods.	GAL make a financial contribution.
4	Service coverage (refer to PADSS 4.2)					
4.a	Service coverage	Restoration / enhancement of overnight services	Opex	Low	Increased rail mode share, particularly between midnight and 0600.	GAL subsidise operation of more overnight services if not already running by time the second runway opens.
4.b	Service coverage	Bi-directional signalling	Capex	Medium	Signalling that enables trains to use alternative tracks in the case of planned track closures, enabling increased rail service coverage. Note this is subject to engineering access confirmation.	GAL sponsor and fund a feasibility study.
4.c	Service coverage	Kent to Gatwick rail services	Opex	Low	Increased rail mode share to / from Kent.	GAL subsidise services on a trial basis.
5	Customer experience					
5.1	Customer experience	Gatwick Airport station	Capex	Medium	At platform level, there are a range of initiatives (e.g. lighting, shelters, wayfinding,	GAL make a financial contribution.

Ref	Theme	Intervention	Capex / Opex	Cost	Desired outcome	Proposal to GAL
		improvements (platforms)			removing platform clutter) which could be deployed to assist with distribution of passengers along the platform. This would reduce localised congestion at platform level. As passenger numbers continue to increase as a result of the project, the need to intervene will increase.	
5.2	Customer experience	Victoria station improvements	Capex	Medium	In the year to March 2023, 4 million passenger journeys per year between London Victoria and Gatwick, making Victoria a key gateway station for Gatwick, Further Investment could be delivered at Victoria station to improve passenger experience. The nature of this investment could be confirmed by working with relevant parties.	GAL make a financial contribution.
5.3	Customer experience	Norwood Junction station enhancements	Capex	Medium	Norwood Junction station is a key interchange point for passengers from South London into Gatwick services but only has step-free access to/from platform 1. This could be resolved if funding for step-free access was provided to other platforms (2-5).	GAL make a financial contribution.
5.4	Customer experience	East Croydon station improvement	Capex	High	East Croydon is one of the busiest origin stations for Gatwick demand and could be enhanced to improve the experience of those travelling to the airport.	GAL make a financial contribution.
5.5	Customer experience	Clapham Junction station enhancements	Capex	High	Clapham Junction has known constraints for interchange and is one of the top destinations for Gatwick rail passengers.	GAL make a financial contribution.