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London Luton Airport Expansion

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7.03 Design and Access Statement

Appendix B - Part 4 of 4 (Chapter B5)

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**London Luton Airport Expansion Development Consent
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**7.03 DESIGN AND ACCESS STATEMENT APPENDIX B –
SIFT REPORTS PART 4 OF 4 (CHAPTER B5)**

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B5 Sift Back Check



Statutory Consultation 2022

Works Description Report Appendix - Sift Back Check

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1 INTRODUCTION

1.1 Overview

1.1.1 To enable the delivery of the vision for Luton Rising (a trading name of London Luton Airport Limited), a multi-disciplinary team prepared a strategy for growth of Luton Airport.

1.1.2 As part of this strategy for growth, the Project team undertook a masterplanning process to develop alternative options for the expansion of the airport and to appraise these against a range of factors. This included Government Aviation Policy, the full spectrum of economic, social, environmental and physical considerations, and our corporate vision for the airport.

1.2 The Sift process to date

1.2.1 A structured, multi-stage process of option sifting was developed to help identify which options should be taken forward. The methodology and findings were covered in three separate reports with the options under consideration in Sifts 2 and 3, as set out in **Chapter 2**. To summarise the sift process, these were:

- a. **Sift 1** (Autumn 2017)¹ which appraised the long list of options;
- b. **Sift 2** (Winter/Spring 2018)² which appraised the options remaining under consideration; and
- c. **Sift 3** (Autumn 2018)³ which took into consideration feedback from the non-statutory consultation process from Summer 2018 and further technical work undertaken since Sift 2, in order to recommend the most preferred option for the proposed scheme to be taken forward to statutory consultation in Autumn 2019.

1.2.2 At the end of Sift 3, Option 1a – with two-terminals proposed to the north of the runway – emerged as the most preferred option based on performance against the majority of the sift criteria and the information available at the time. This option performed the most strongly in relation to strategic fit, economic benefits, deliverability (within the context of the current concession, attractiveness to future concessionaires and not requiring additional land beyond our current holdings), operational viability and cost-benefit.

1.2.3 However, since the 2019 statutory consultation, a number of changes have been made to the Proposed Development because of a range of internal and external factors, including responses to the consultation – these are set out in **Chapter 3**. As a result of these changes since Sift 3, we considered it prudent to undertake a back check of the previous sift exercises to understand whether these changes would have altered the findings or shortlisting of options.

1.2.4 This document should be considered in the context of, and by reference to, the three previous sift exercises and the reports (available on the Luton Rising website), and highlighted above.

¹ London Luton Airport Limited (February 2019) Luton Airport Expansion Project: Sift 1 Report, Final

² London Luton Airport Limited (February 2019) Luton Airport Expansion Project: Sift 2 Report, Final

³ London Luton Airport Limited (February 2019) Luton Airport Expansion Project: Sift 3 Report, Final

2 PREVIOUS SIFT EXERCISES

2.1 Overview

2.1.1 This section provides a summary of the options that were considered previously through the sift process, by way of background to this back check exercise. Further detail on the options and appraisal findings are set out in the three sift reports as mentioned in Chapter 1 and are available on the Luton Rising website.

2.2 Summary of Sift 1

2.2.1 Sift 1 was undertaken in the autumn of 2017 and appraised seven options against a set of high-level, qualitative criteria. One of these option families consisted of a two-terminal option with either: a realigned (3a); extended (3b); or additional (3c) runway. The option 3 family was not considered to be consistent with the emerging Government policy to make the best use of existing runways. In addition, all option 3 sub-options also performed very poorly on deliverability in relation to financial and technical viability on account of delivering capacity ahead of demand (second runway) and the large amount of earthworks required. The latter also increases the estimated cost of the project, as does the fact that the second runway and realigned runway sub-options both require acquiring significant areas of land outside of LLAL ownership.

2.2.2 As a result of the factors listed above, the option 3 family was discontinued at that stage. The four remaining options – two single terminal building options and two double terminal building options – were considered as being more aligned with the overall project vision and objectives, including complying with emerging Government policy, and were developed further for Sift 2.

2.3 Summary of Sift 2

2.3.1 The Sift 2 options which were considered were as follows:

- a. **Option 1a** – new terminal and apron capacity to the north of the runway, resulting in two-terminals north of the runway;
- b. **Option 1b** – a single terminal complex to the west of the site;
- c. **Option 1c** – a single terminal complex to the east of the site; and
- d. **Option 2** – new terminal and apron capacity to the south of the runway, with two-terminals; one north and one south of the runway.

London Luton Airport Expansion Development Consent Order

Sift back check

Figure 2.1: Option 1a at Sift 2



Figure 2.2: Option 1b at Sift 2



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Sift back check

Figure 2.3: Option 1c at Sift 2



Figure 2.4: Option 2 at Sift 2



- 2.3.2 Sift 2 was undertaken during winter/spring 2018 and its findings indicated that only one option was considered to be much less favourable than the other options. This was option 2, which represents a new terminal building and all associated infrastructure south of the existing runway. It was recommended that this option should be discontinued at this stage, subject to the outcome of the non-statutory consultation during summer 2018.
- 2.3.3 Option 1a performed better against the majority of the sift criteria than the other options and was considered the most preferred at this stage and presented as such during the consultation. This was because the option performed most strongly in relation to strategic fit, economic benefits, deliverability (within the context of the current concession, attractiveness to future concessionaires and not requiring additional land beyond current LLAL holdings), operational viability and cost-benefit.
- 2.3.4 In environmental terms, option 1a performed in line with the options 1b and 1c given its similar spatial extent, and performed better than option 2 on noise, landscape and visual impact, and heritage, although marginally worse for water resources and air quality.

2.4 Summary of Sift 3

- 2.4.1 Following Sift 2, ongoing scheme development, additional information and consideration of views expressed during consultation led to further two main changes for the options under consideration at Sift 3:
- a. Development of a new sub-option, option 1d, which retained Wigmore Valley Park in its current location; and
 - b. Revision of the Sift 2 option layouts to achieve a target capacity of 32 million passengers per annum (mppa), as opposed to 36-38mppa as originally considered in Sifts 1 and 2.
- 2.4.2 The options considered at Sift 3 were as follows:
- a. **Option 1a** – two-terminals north of the runway, scaled back to a 32mppa scheme;
 - b. **Option 1b** – a single terminal complex to the west of the site, scaled back to a 32mppa scheme;
 - c. **Option 1c** – a single terminal complex to the east of the site, scaled back to a 32mppa scheme;
 - d. **Option 1d** – a new scheme that retained Wigmore Valley Park in its entirety with a new terminal building further east and within North Hertfordshire; and
 - e. **Option 2** – two-terminals, one north and one south of the runway, scaled back to a 32mppa scheme.

Figure 2.5: Option 1a at Sift 3



Figure 2.6: Option 1b at Sift 3



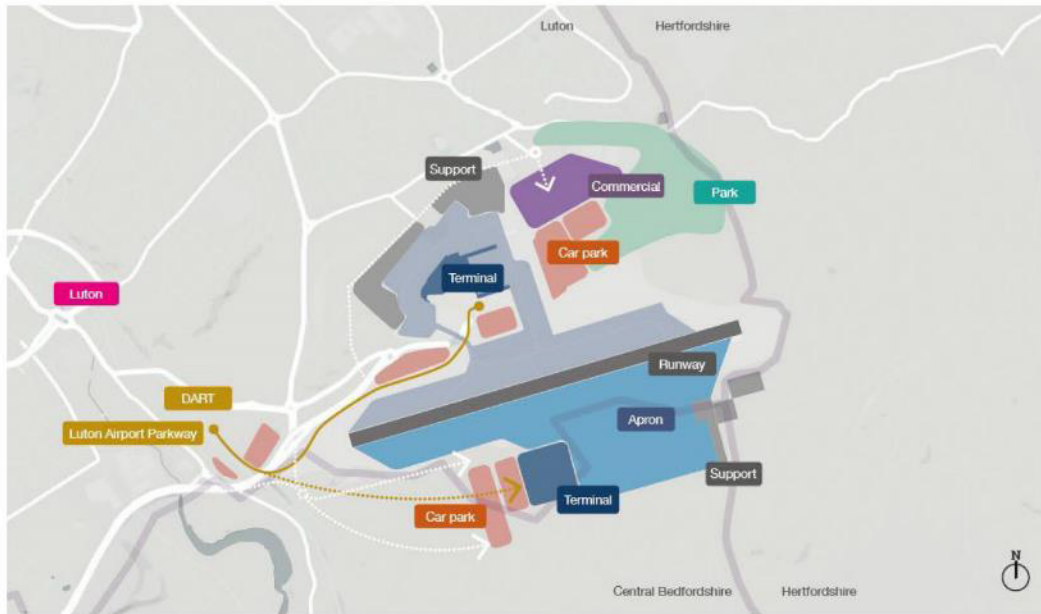
Figure 2.7: Option 1c at Sift 3



Figure 2.8: Option 1d at Sift 3



Figure 2.9: Option 2 at Sift 3



- 2.4.3 Of all five options considered at Sift 3, taking on board changes made following consultation, additional technical work and back-checking during the finalisation of Sifts 1 and 2, option 1a remained the most preferred option which performed the strongest against the majority of the sift criteria, based on available information. This option performed the most strongly in relation to strategic fit, economic benefits, deliverability (within the context of the current concession, attractiveness to future concessionaires and not requiring additional land beyond current LLAL holdings), operational viability and cost-benefit.
- 2.4.4 The other four options – 1b, 1c, 1d and 2 – were recommended to be discontinued at this stage. In particular, options 1d and 2 were recommended to be discontinued based on the appraisal of sift criterion S2: In broad conformity with national and local town planning policies and capable of attracting the consents required, where both options proposed development in the North Hertfordshire and Central Bedfordshire Green Belt and outside of the LLP6 Strategic Allocation boundary. Option 1d performed poorly, notably on the basis of operations, noise impacts, land ownership and landscape and visual impact considerations amongst others.
- 2.4.5 Both of the single terminal options, 1b and 1c, performed significantly less well than 1a in overall terms. Whilst they were considered capable of delivering some degree of beneficial impacts in relation to strategic fit, economic, social, deliverability, operational viability and cost-benefits, they also delivered significant adverse impacts in relation to surface access and landfill criteria compared to other options.

3 KEY CHANGES TO THE PROPOSED DEVELOPMENT

- 3.1.1 As set out in **paragraph 1.2.3**, a number of changes have been made to the Proposed Development since the 2019 statutory consultation and Sift 3. The key changes to the fully built-out scheme are:
- a. inclusion of Airport Access Road (AAR) – previously, only a part of the AAR, formerly known as Century Park Access Road (CPAR), was included in the Development Consent Order (DCO) proposals so that the necessary alteration works could be carried out to the eastern end of the road, in order for it to accommodate airport traffic. The rest of the AAR was assumed to be delivered and consented under the New Century Park planning consent. Uncertainty as to if and when the entirety of the AAR could be delivered, as a consequence of the changed economic situation caused by the Covid-19 pandemic, led to the decision to include a slightly modified version of the road within our DCO proposals. This provides the certainty required that we would have the ability to deliver the road ahead of the time it would be relied upon for access to the expansion area east of the existing airport;
 - b. provision of new sustainability design measures;
 - c. reduction in total car park footprint;
 - d. reduction in the size of the airfield platform and landside remediation works, along with an updated remediation strategy;
 - e. improvements to the masterplan including reconfigured taxiways, reducing the number of stands within the landfill boundary, reducing the size of the engine run-up bay and a new access road to the relocated Fire Training Ground;
 - f. updated phasing of development including later construction start and end dates; and
 - g. further development of a new approach to managing the potential effects of future expansion called Green Controlled Growth.
- 3.1.2 Other changes are more detailed and relate to: change of fuel storage facility; removal of centralised waste and recycling centre; reconfiguration of operational support accommodation; altered access roads and vehicle control point (VCP) location; inclusion of a surface movement radar; and re-alignment of the fuel spur connection. Due to the detailed nature of these changes, they are not considered to be material changes to the Proposed Development and, as such, it is not considered necessary to include them as part of this back check. This reflects the fact that some are detailed design changes and others are refinements to smaller elements of the masterplan which were not considered – or designed in some cases – at the time of the earlier Sift exercises. In addition, some of these changes relate to different phases whereas the previous Sift exercises – and therefore this Sift back check – focus only on the final, built-out scheme.
- 3.1.3 Having reviewed the previous Sift exercises and considered the changes made since the 2019 statutory consultation, it is our view that the main material

change to the Proposed Development that may potentially impact on the earlier appraisals and Sift outcomes is the inclusion of the AAR. This is because it is the only change that impacts on any of the six key assumptions listed below. The other changes listed above in **paragraph 3.1.1** have also be considered in the back check exercise; however, the more minor changes listed in **paragraph 3.1.2**, are considered matters of detail beyond those considered in the Sift process.

3.1.4 Sifts 2 and 3 were conducted on the basis of a set of common assumptions, supplemented by specific technical assumptions where applicable. The AAR was assumed to have been substantively built out in the fourth assumption, set out below:

- a. all options assumed to have a capacity of up to originally 36-38mppa for Sifts 1 and 2, later revised down to 32mppa at Sift 3, based on information available at the time of the Sift process, and required infrastructure to support this capacity;
- b. all options assumed to focus on containing as much of the future development and impact within the area of LLAL land ownership;
- c. all options assumed to include reasonable embedded and good practice mitigation (e.g. a code of construction practice), but not additional mitigation (for example, new link roads on land outside of LLAL ownership) for the purposes of this sift;
- d. land within LLAL ownership also included the new business park development proposed at New Century Park which, at the time of Sifts 2 and 3, were assumed to be built out according to the extant planning application (application ref. 17/02300/EIA). In the case of option 1d (for Sift 3) as Wigmore Valley Park would be retained, New Century Park was assumed not to have been built out;
- e. for the purposes of appraisal, all options were assumed to receive the benefit of an extension to the consented Luton Direct Air-Rail Transit (DART) system from Luton Airport Parkway Station which is currently under construction and scheduled to open in 2022. Any extensions to the current DART route which would be needed to serve each option could be materially different for each option; and
- f. however, renewable energy sources (photovoltaics, etc.) would not be shown on the drawings as it was assumed the effect would be the same for all options.

3.1.5 As the AAR is now to be completely included within the Proposed Development rather than built out in advance, it is necessary to revise the fourth assumption as follows (changes emphasised below in bold and underlined): *Land within LLAL ownership also includes the new business park development proposed at New Century Park which is assumed to be built out according to the current planning application (application ref. 17/02300/EIA), **except the AAR which is now included in its entirety as part of the DCO application**. In the case of option 1d (for Sift 3) as Wigmore Valley Park would be retained, New Century Park was assumed not to have been built out.*

4 PURPOSE AND SCOPE OF THE BACK CHECK

4.1.1 The purpose of this back check was to consider whether significant design changes to the Proposed Development following Sift 3 – particularly the inclusion of the AAR within the scheme – constituted a material change to the Proposed Development such that it would have changed the conclusions of Sifts 2 or 3 (the options under consideration during Sifts 2 and 3 are set out in **Chapter 2**). The back check considers whether the preferred option chosen after Sift 3 (Option 1a) remained the highest scoring option in light of the subsequent changes to the Proposed Development (see **paragraph 3.1.1**).

4.1.2 The Delivery Team leads who had advised on previous sift exercises and back checks, were asked to:

- a. review, consider and decide whether the change to the assumption regarding the AAR would have affected their earlier appraisals in terms of scoring; and
- b. review, consider and decide whether any other design change listed above would have affected their earlier appraisals in terms of scoring.

5 SUMMARY OF BACK CHECK FINDINGS

5.1 Overview

5.1.1 In Sifts 2 and 3, an agreed set of strategic objectives and sift criteria were used, based on key aviation policy and guidance documents and LLAL's Vision for Sustainable Growth 2020-2050 (December 2017). These are set out below in **Table 5.1**.

Table 5.1: Strategic objectives and criteria for Sifts 2 and 3

	Strategic Objective	Sift Criteria
Strategic Fit	O1: Compliance with Government Aviation Policy	S1: Consistent with making best use of the existing runway
	O2: To identify a scheme that is likely to be capable of being consented and secured through a DCO	S2: In broad conformity with national and local town planning policies and capable of attracting the consents required
	O3: To provide additional capacity and connectivity in line with the assessment of need	S3: Increase capacity both airside and landside to achieve target increase of 32mppa/up to 36-38mppa
Economic	O4: To maximise the potential economic benefits to the regional, sub-regional and local economies	S4: Deliver economic benefits nationally and regionally S5: Increase job opportunities for the people of Luton and the surrounding areas
Social	O5: To maintain and where possible improve the quality of life for Luton's residents and the wider population	S6: To promote quality of life and minimise adverse impacts on communities
Sustainability & Environment	O6: To minimise environmental impacts and, where practicable, to actively mitigate and manage any potential environmental effects	S7: Noise impact S8: Air quality S9: Natural habitats and biodiversity S10: Carbon emissions S11: Water resources S12: Flood risk S13: Cultural heritage S14: Landscape and visual impact and environmental land use S15: Climate change

	Strategic Objective	Sift Criteria
Surface Access	O7: To maximise the number of passengers and workforce arriving at the airport on public transport	S16: Public transport modal share
	O8: To minimise new build highway requirements	S17: Requirement for additional highway infrastructure
	O9: To minimise impact on the wider highway network	S18: Impact on wider highway network
Operational viability	O10: To be technically viable, taking account of the needs of airport users, operators and phasing	S19: Deliverable within the context of the current concession to 2031 S20: Attractive to future concessionaires S21: Feasibility of landfill, earthworks and ground conditions S22: Additional land required beyond current LLAL holdings
	O11: To enhance LTN's system efficiency and resilience	S23: Operational effectiveness S24: System resilience S25: Attractiveness to airline operators S26: Safeguarding for expansion S27: Safeguarding existing levels of maintenance, repair & overhaul (MRO), business aviation and cargo activity
Cost	O12: To be affordable including any public expenditure that may be required and taking account of the needs of airport users and operators (Value for Money)	S28: Estimated cost-benefit

5.1.2 For the majority of the Sift criteria listed above in **Table 5.1**, the appraisal leads confirmed that there would not have been a change to their appraisals with the inclusion of the AAR with the Proposed Development. For those three strategic objectives where changes were identified in the appraisal scores as a result of the inclusion of the AAR - relating to surface access, deliverability and cost-benefit - these have been summarised below, and set out in further detail in **Appendix A**.

5.1.3 In Sifts 2 and 3 and this back check exercise, the same eight-level evaluation system has been used as shown in **Table 5.2**. It is based on professional judgement and information available at the time of the appraisals, ranging from Large Beneficial (+20) to Large Adverse and Currently Unworkable (-20).

Table 5.2: Appraisal levels

Appraisal level	Scoring
Large Beneficial	20
Moderate Beneficial	10
Slight Beneficial	5
Neutral	0
Slight Adverse	-5
Moderate Adverse	-10
Large Adverse	-20
Currently Unworkable	-20

5.2 Surface Access

Table 5.3: Original scoring of surface access objectives for options at Sift 2 and Sift 3 and revised scoring as a result of the back check (changes shown in bold)

Strategic Objective	Sift Criteria		Sift 2 Scoring				Sift 3 scoring				
			Option 1a	Option 1b	Option 1c	Option 2	Option 1a	Option 1b	Option 1c	Option 1d ⁴	Option 2
O8: To minimise new build highway requirements	S17: Requirement for additional highway infrastructure	<i>Original scoring</i>	Moderate Adverse	Large Adverse	Large Adverse	Large Adverse	Moderate Adverse	Large Adverse	Large Adverse	Moderate Adverse	Large Adverse
		<i>Revised scoring</i>	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse
O9: To minimise impact on the wider highway network	S18: Impact on wider highway network	<i>Original scoring</i>	Moderate Adverse	Large Adverse	Large Adverse	Large Adverse	Moderate Adverse	Large Adverse	Large Adverse	Moderate Adverse	Large Adverse
		<i>Revised scoring</i>	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse	Large Adverse

⁴ As set out in paragraph 2.4.1, Option 1d was only appraised in Sift 3 as it was developed after Sift 2 had been undertaken.

- 5.2.1 For S17 Requirements for additional highway infrastructure and S18 Impact on wider highway network, in both Sift 2 and Sift 3, Option 1a was considered to perform better than the other options under consideration at the time, with an appraisal rating of Moderate Adverse compared to Large Adverse for the other options.
- 5.2.2 The inclusion of the AAR within the Proposed Development would require a significant amount of new highway infrastructure to be provided, and a significant amount of traffic management to construct the road in its entirety. Therefore, under this back check, Options 1a and 1d would be downgraded from Moderate Adverse to Large Adverse ratings for criteria relating to O8 To minimise new build highway requirements and O9 To minimise impact on the wider highway network, putting it on a par with the other options which were already considered to have Large Adverse impacts.

5.3 Deliverability

Table 5.4: Original scoring of deliverability objectives for options at Sift 2 and Sift 3 and revised scoring as a result of the back check (changes shown in bold)

Strategic Objective	Sift Criteria		Sift 2 Scoring				Sift 3 scoring				
			Option 1a	Option 1b	Option 1c	Option 2	Option 1a	Option 1b	Option 1c	Option 1d	Option 2
O10: To be technically viable, taking into account of the needs of the airport users, operators and phasing	S22: Additional land required beyond current LLAL holdings	Original scoring	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Large Adverse	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Large Adverse	Large Adverse
		Revised scoring	Slight Beneficial	Slight Beneficial	Slight Beneficial	Large Adverse	Slight Beneficial	Slight Beneficial	Slight Beneficial	Large Adverse	Large Adverse

5.3.1 For S22 *Additional land required beyond current LLAL holdings*, the inclusion of the AAR within the Proposed Development is likely to require additional pockets of land outside of our current ownership and will need to be acquired from owners and leaseholders. Based on the information available at the time of this back check, the back check downgraded the appraisal ratings for Options 1a, 1b and 1c from a Moderate Beneficial to Slight Beneficial in Sifts 2 and 3.

5.4 Estimated Cost-benefit

Table 5.5: Original scoring of cost-benefit objectives for options at Sift 2 and Sift 3 and revised scoring as a result of the back check (changes shown in bold)

Strategic Objective	Sift Criteria		Sift 2 Scoring				Sift 3 scoring				
			Option 1a	Option 1b	Option 1c	Option 2	Option 1a	Option 1b	Option 1c	Option 1d	Option 2
O12: To be affordable including any public expenditure that may be required and taking account of the needs of airport users and operators (Value for Money)	S28: Estimated cost-benefit	<i>Original scoring</i>	Large Beneficial	Moderate Beneficial	Moderate Beneficial	Large Beneficial	Large Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Large Beneficial
		<i>Revised scoring</i>	Slight Beneficial	Neutral	Neutral	Slight Beneficial	Slight Beneficial	Neutral	Neutral	Neutral	Slight Beneficial

5.4.1 For *S28 Estimated Cost-benefit*, the requirement to provide the AAR within the Proposed Development would downgrade the appraisal level of all options as the change would add significant cost to the plan for the highway infrastructure which had not previously been included in the scheme. Inclusion of the AAR would therefore downgrade Options 1a and 2 to Slight Beneficial, and all other options to Neutral.

5.5 Overall findings

- 5.5.1 Whilst the inclusion of the AAR within the Proposed Development would increase the volume of landfill material which requires excavation, treatment and processing, it would not alter the earlier scoring of the options. In Sifts 2 and 3, Options 1a, 1b and 1c were all considered to have Large Adverse impacts due to the landfill, and Option 2 Slight Adverse, whilst Option 1d in Sift 3 was considered to be Moderate Adverse.
- 5.5.2 Some of the other changes to the Proposed Development (listed above at **paragraph 3.1.1**) were considered to potentially have minor effects on the earlier appraisals in relation to delivery, efficiency and resilience due to changes in phasing, but no significant changes to appraisal levels.
- 5.5.3 Overall, even taking into account the downward adjustments for the surface access, deliverability and cost-benefit criteria, the back check concluded that Option 1a would have remained the most preferred option in both Sift exercises when taking account of the changes to the Proposed Scheme. This is illustrated overleaf in **Figures 5.1 and 5.2** which show the relative distribution of the appraisal levels where each box represents a rating for each of the Sift Criteria.

London Luton Airport Expansion Development Consent Order

Sift back check

Figure 5.1: Frequency of appraisal levels for each option family at Sift 2 after the back check

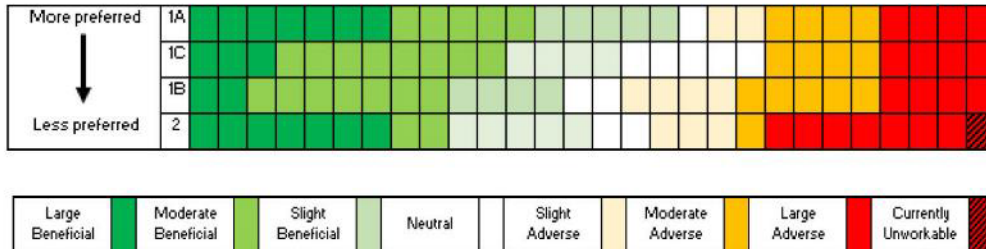
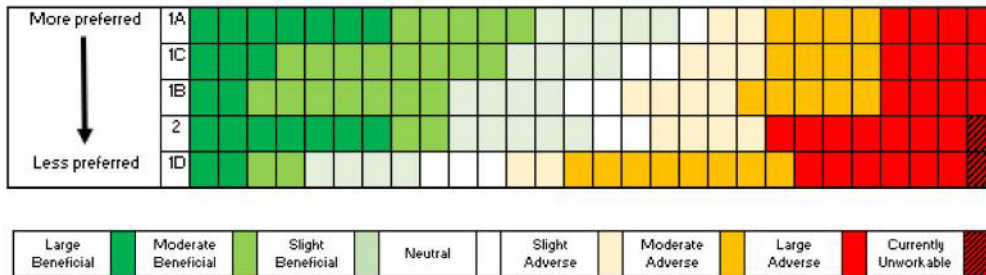


Figure 5.2: Frequency of appraisal levels for each option family at Sift 3 after the back check



APPENDIX A: SIFT BACK CHECK FINDINGS

Sift Criteria	Does the change to the assumption regarding AAR change our Sift 2 or 3 appraisals in terms of scoring? If so how and why?	Are there any other changes made since 2019 consultation which alter our Sift 2 or 3 appraisals in terms of scoring? If so, which change, how and why?
Strategic objective O1: Compliance with Government Aviation Policy		
S1 Consistent with making best use of the existing runway	The inclusion of the AAR within the Proposed Development does not give rise to any change in the assessment of options against Government Aviation Policy compared to Sift 2 or 3 appraisals.	Green initiatives and other improvements to the environmental impact of the scheme enhance compatibility with Government Aviation Policy but the changes to phasing mean that the scheme delivers capacity more slowly than envisaged by policy approach of making best use of existing runways. To the extent that Option 2 might have been capable of earlier delivery (as not impacting on the existing concession directly), this could have improved its scoring under sub-criteria S4 and S5 at Sift 2 but would not alter the Sift 3 score.
Strategic objective O2: To identify a scheme that is likely to be capable of being consented and secured through a DCO		
S2 In broad conformity with national and local town planning policies and capable of attracting the consents required	The AAR benefits from planning consent as part of the extant planning consent for Century Park (17/02300/EIA). Consent is now being sought for the road as part of the Proposed Development so that it can be delivered alongside Luton Airport's expansion plans, later than anticipated in the extant consent. The change is therefore primarily related to phasing and delivery, and although the benefits and impacts of the link road will now be considered as part of the wider DCO proposals, this change is not considered to have any material impact on the principle of the Proposed Development or its strategic case. Therefore, the inclusion of the AAR is not considered to change the broad conclusions of the Sift 2 or Sift 3 appraisals in respect of Strategic Objective O2.	The appraisal commentary at both Sift 2 and Sift 3 was high-level and as such, the changes to the Proposed Development since Sift 3 would not change the broad conclusions of the Sift 2 or Sift 3 appraisals in respect of Strategic Objective O2.
Strategic objective O3: To provide additional capacity and connectivity in line with the assessment of need		
S3 Increase capacity both airside and landside to achieve target increase up to 36-38mppa	The inclusion of the AAR within the DCO rather than being built out ahead of the DCO, is not considered to have an impact on capacity of the airport and as such, no change is envisaged to the Sift 2 or 3 appraisals.	To the extent that the phased delivery of capacity is now later than originally planned, this means that connectivity may not be delivered in time to meet demand, i.e. the forecasts are capacity constrained. This would not alter the Sift appraisals because the other options develop capacity similarly.

Sift Criteria	Does the change to the assumption regarding AAR change our Sift 2 or 3 appraisals in terms of scoring? If so how and why?	Are there any other changes made since 2019 consultation which alter our Sift 2 or 3 appraisals in terms of scoring? If so, which change, how and why?
Strategic objective O4: To maximise the potential economic benefits to the regional and sub-regional economy		
S4 Deliver economic benefits nationally and regionally	The inclusion of the AAR within the Proposed Development is not considered to have an impact on this objective as the overall economic benefits and job opportunities would remain the same as if it had been delivered in advance. As such, no change is envisaged to the Sift 2 or 3 appraisals.	To the extent that the phasing has changed, the delivery of economic benefits is deferred but this would not alter the relative scoring of options unless other options could be delivered earlier. However, as the preferred option is now being delivered at a lower cost than originally envisaged at Sift 3, this would increase producer benefits and potentially contribute to a higher economic benefit score, offsetting the above effect. Therefore the changes would not affect the conclusions drawn at Sifts 2 and 3.
S5 Increase job opportunities for the people of Luton and the surrounding area	As above for S4.	To the extent that the phasing has changed, the delivery of job opportunities is deferred but this would not alter the relative scoring of options at Sift 2 or Sift 3.
Strategic objective O5: To maintain and where possible improve the quality of life for Luton's residents and the wider population		
S6 Promote positive benefits and minimise adverse impacts on local communities	The inclusion of the AAR does not change the result of the Sift 2 or Sift 3 appraisals on this communities scoring.	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 communities scoring.
Strategic objective O6: To minimise environmental impacts and, where practicable, to actively mitigate and manage any potential environmental effects		
S7 Noise impact	<p>The inclusion of the AAR does not change the result of the Sift 2 or Sift 3 appraisals on noise, taking into account best practice mitigation measures.</p> <p>The AAR will introduce increased levels of road traffic noise (compared to the baseline position rather than in absolute terms) that may affect receptors north of Eaton Green Road. However, it is expected that the combination of existing ambient noise levels at receptors along with the separation distance between the AAR and receptors is sufficient that significant noise impacts arising from the AAR are unlikely.</p>	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 noise appraisal scoring.
S8 Air quality	The inclusion of the AAR in the Proposed Development will increase the construction activity compared to the baseline position rather than in absolute terms. However, it is considered that all construction dust impacts will be rendered negligible with best practice mitigation, following guidance.	<p>The main consideration influencing the option scores are:</p> <ul style="list-style-type: none"> • the locations of additional sources of emissions introduced; • the additional emissions from traffic generated; and • the additional emissions from flights generated.

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Sift Criteria	Does the change to the assumption regarding AAR change our Sift 2 or 3 appraisals in terms of scoring? If so how and why?	Are there any other changes made since 2019 consultation which alter our Sift 2 or 3 appraisals in terms of scoring? If so, which change, how and why?
	The inclusion of the AAR in the Proposed Development was previously assumed to be delivered in the baseline. All options would have equivalent impacts on air quality in the operational phase and the inclusion of AAR in the Proposed Development is unlikely to change the individual scores of each option. Therefore, the change will not affect the Sift 2 or Sift 3 appraisal scores.	These main considerations are unaffected by the changes in this back check, which are considered to be minor. Therefore, the changes are not considered to alter the Sift 2 or 3 appraisal scores.
S9 Natural habitats and biodiversity	The inclusion of the AAR within the Proposed Development results in the partial loss of Dairyborn Scarp District Wildlife Site (DWS), which is designated for its mosaic of habitats and scrub, as well as impacts to protected and/or notable habitats and species noted for all potential appraisal options. However, the overall appraisal level would remain the same as reported during Sift 2 and Sift 3, Moderate Adverse, with additional impacts on receptors of no more than medium value.	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 natural habits and biodiversity scoring, as changes have not significantly changed the overall construction footprint of the scheme.
S10 Carbon emissions	Despite the inclusion of the AAR as part of the Proposed Development, the most significant greenhouse gas (GHG) emissions remain from aircraft cruise emissions and all options considered in Sift 2 and 3 would have Large Adverse impacts. Therefore no change is considered necessary to the results of the Sift 2 and 3 appraisals on greenhouse gases.	Despite Government proposals to move towards net zero domestic aviation by 2040 ⁵ and the decarbonisation of road transportation, the most significant GHG emissions will still be from international aircraft cruise emissions which fall under the control of the airlines. Therefore, all options considered in Sift 2 and 3 would still have Large Adverse impacts.
S11 Water resources	As previously assumed, reasonable embedded and good practice mitigation for pollution prevention, and the application of a drainage strategy to manage surface water run off appropriately, would be in place to manage similar risks arising from the AAR. The inclusion of the AAR therefore does not change the scoring of either Sift 2 or 3 on water resources or flood risk.	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 water resources scoring.
S12 Flood risk	As above for S11.	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 flood risk scoring.
S13 Cultural heritage	The change to the assumption regarding the AAR does not change the scores for either the Sift 2 or Sift 3 appraisals as the location or route does not impact on any cultural heritage assets.	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 cultural heritage scoring.

⁵ Department for Transport (2021) Decarbonising Transport: A Better, Greener Britain

Sift Criteria	Does the change to the assumption regarding AAR change our Sift 2 or 3 appraisals in terms of scoring? If so how and why?	Are there any other changes made since 2019 consultation which alter our Sift 2 or 3 appraisals in terms of scoring? If so, which change, how and why?
S14 Landscape and visual impact and environmental land use	The inclusion of the AAR does not change the result of the Sift 2 or Sift 3 appraisals on landscape, land use and visual amenity as the route remains the same as within the extant planning consent for New Century Park.	No other changes to the Proposed Development have been made that would affect the Sift 2 or Sift 3 landscape, land use and visual amenity scoring.
S15 Climate change	All options in Sift 2 and 3 were appraised to have a Slight Beneficial impact in terms of their resilience to climate change, in comparison to the existing airport, assuming that any new assets and infrastructure would be engineered to current design and building specifications. It is assumed that the AAR would also be engineered to current design and building specifications. No change is needed to the results of the Sift 2 and 3 appraisals on climate change due to the introduction of the AAR.	It is still assumed that any new assets and infrastructure would be engineered to current design and building specifications and therefore would have a beneficial impact in terms of their resilience to climate change. No change is needed to the results of the Sift 2 and 3 appraisals on climate change due to the introduction of other changes.
Strategic objective O7: To maximise the number of passengers and workforce arriving at the airport on public transport		
S16 Public transport modal share	No changes to Sift 2 and 3 scoring are envisaged as the AAR is still being delivered and the only change is to phasing.	No changes to the scoring of this criteria from Sifts 2 and 3 are considered necessary based on other changes to the Proposed Development.
Strategic objective O8: To minimise new build highway requirements		
S17 Requirement for additional highway infrastructure	The requirement to provide AAR would change the Sift 2 and Sift 3 scoring for Option 1a from Moderate Adverse to Large Adverse as this is a significant amount of highway infrastructure to provide within the Proposed Development. This also applies to Option 1d.	No changes to the scoring of this criteria are considered necessary based on other changes to the Proposed Development.
Strategic objective O9: To minimise impact on the wider highway network		
S18 Impact on wider highway network	As above with S17, the requirement to provide AAR would change the Sift 2 and Sift 3 scoring for Option 1a from -10 (Moderate Adverse) to -20 (Large Adverse), as significant amount of traffic management will be required to construct AAR in its entirety. Also applies to Option 1d.	No changes to the scoring of this criteria are considered necessary based on other changes to the Proposed Development.
Strategic objective O10: To be technically viable, taking into account of the needs of airport users, operators and phasing		
S19 Deliverable within the context of the current concession to 2031	No changes to scoring are envisaged as the inclusion of the AAR within the Proposed Development - as opposed to being delivered in advance - does not affect the context of the current concession.	No change to previous Sift appraisals between options is considered necessary. The only differences would arise if other options could be delivered more quickly.

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Sift Criteria	Does the change to the assumption regarding AAR change our Sift 2 or 3 appraisals in terms of scoring? If so how and why?	Are there any other changes made since 2019 consultation which alter our Sift 2 or 3 appraisals in terms of scoring? If so, which change, how and why?
S20 Attractiveness to future concessionaires	No changes to scoring are envisaged as the inclusion of the AAR within the Proposed Development - as opposed to being delivered in advance - does not affect the airport's attractiveness to future concessionaires.	As above for S19.
S21 Feasibility of landfill, earthworks and ground conditions	The AAR included as part of the Proposed Development increases the volume of landfill material which requires excavation, treatment and processing. In addition, the technical contamination risk assessment and the remediation strategy reports, which inform the Environmental Statement, will need to be revised. However, overall, it does not change the scoring of the appraisal in Sift 2 or 3.	The volumes stated in Sift 2 and 3 of natural material are now different due to the reduction in platform size. In addition, the retention of landfill material beneath the proposed aviation platform in the revised scheme means the improvement to the environment (soils and groundwater) by removing the landfill material will not be fully achieved. This change to the scheme also means that technical reports for the earthworks and contamination assessment will need to be revised. However, overall it does not change the scoring of the appraisal in Sift 2 and 3.
S22 Additional land required beyond current LLAL holdings	Most of the land required for the Proposed Development is owned by LLAL, as reflected in the earlier appraisal scorings. The inclusion of AAR in the Proposed Development may however, depending on its final design, require pockets of land which may need to be acquired from owners and. Therefore the scoring should be downgraded from a Moderate Beneficial to a Slight Beneficial for options 1a, 1b and 1c in both Sifts 2 and 3.	Additional land outside the airport boundaries is required in some areas.
Strategic objective O11: To enhance LTN's system efficiency and resilience		
S23 Operational effectiveness	The inclusion of AAR within the Proposed Development is not considered to impact the airport's operations, therefore the inclusion of AAR would not give rise to a change in the conclusions of Sifts 2 and 3 options appraisals.	To the extent that elements of the 21.5 mppa scheme have been pared back from options considered at Sifts 2 and 3, this results in some operational compromises which could impact on the efficiency and resilience in earlier phases but not of the overall scheme. This could have a slight impact on the previous appraisal scores, but would have affected all options equally.
S24 System resilience	As above for S23.	As above for S23.
S25 Attractiveness to airline operators	As above for S23.	As above for S23.
S26 Safeguarding for expansion	As above for S23.	As above for S23.

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Sift Criteria	Does the change to the assumption regarding AAR change our Sift 2 or 3 appraisals in terms of scoring? If so how and why?	Are there any other changes made since 2019 consultation which alter our Sift 2 or 3 appraisals in terms of scoring? If so, which change, how and why?
S27 Safeguarding existing levels of MRO, Business, Aviation and Cargo activity	As above for S23.	As above for S23.
Strategic objective O12: To be affordable including any public expenditure that may be required and taking account of the needs of airport users and operators (Value for Money)		
S28 Estimated cost-benefit	The requirement to provide AAR would change the Sift 2 and Sift 3 scoring for Option 1a from Large Beneficial to Slight Beneficial as this is a significant amount of cost added to the cost plan for the highway infrastructure. Several areas in Airfield, Platform and Landside infrastructure have been scaled back to accommodate the cost allowance for the AAR.	Changes to the platform, terminals, and landside enable additional sustainability measures to be incorporated. At the time of the original Sifts 2 and 3, the capital expenditure extent of the environmental mitigations were not fully calculated and would have further compounded the affordability of the options considered at Sifts 2 and 3. This may have downgraded the results of the other options in the Sift 2 and 3 appraisals as the extent of sustainability measures were not included in the initial consultation and associated cost plans; however, the sustainability measures would ultimately have been the same across all options.

