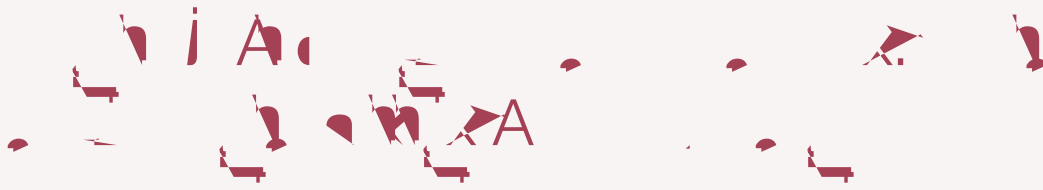


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Strategic Case - assessment of need

Economic Case -

Financial and Commercial Case -

Management Case -

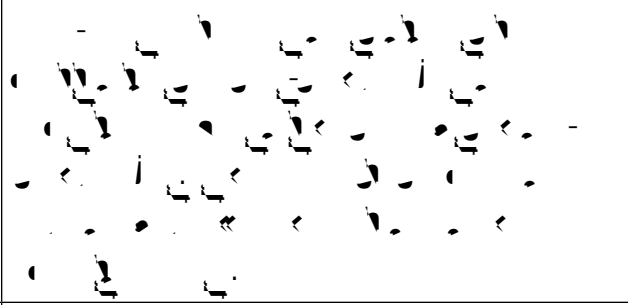
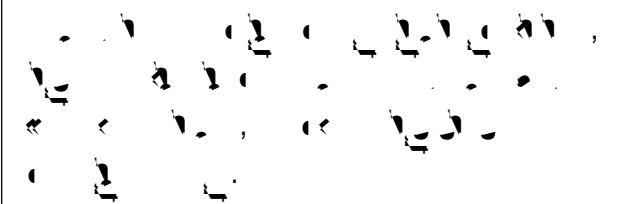
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provide information about the performance of the Gatwick Airport Second Runway scheme against a range of relevant indicators. In line with the principles of sustainable development, this includes examining the likely social, environmental and economic effects of the scheme.

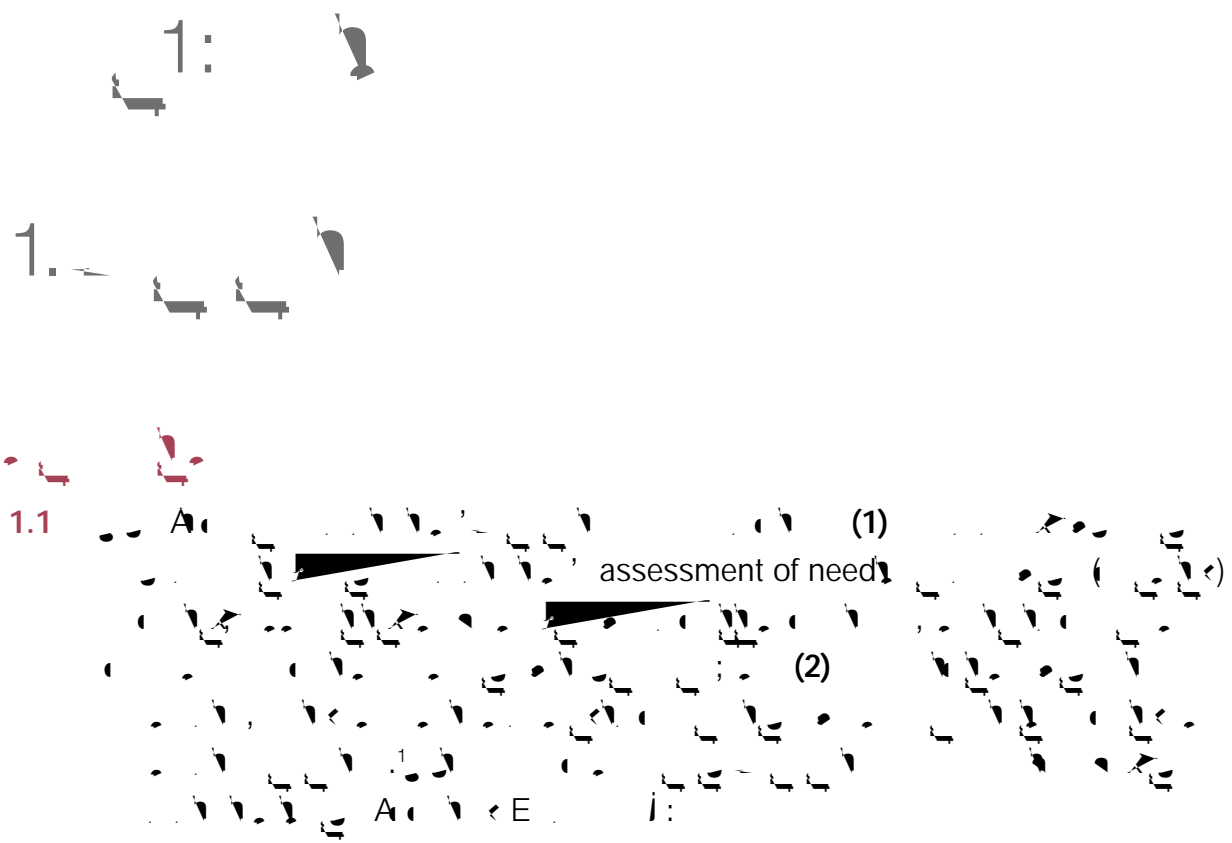
Commission’s approach to forecasting: passengers demand and carbon



<p>Assessment of need</p>	
<p>Global growth</p>	
<p>Relative decline of Europe</p>	

Low-cost is king	
Global fragmentation	

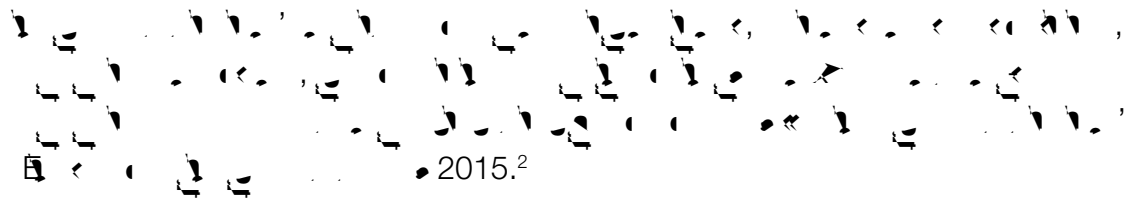




Strategic Case – assessing the proposal's alignment with the assessment of need set out in the Commission's Interim Report, and providing an overview of its wider impacts, both positive and negative.

1.2



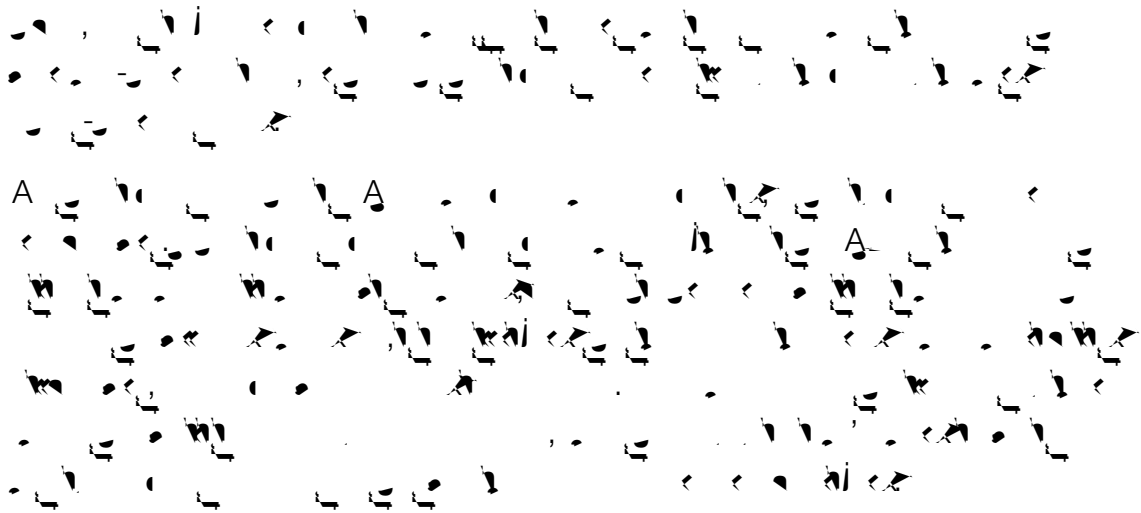


assessment of need:

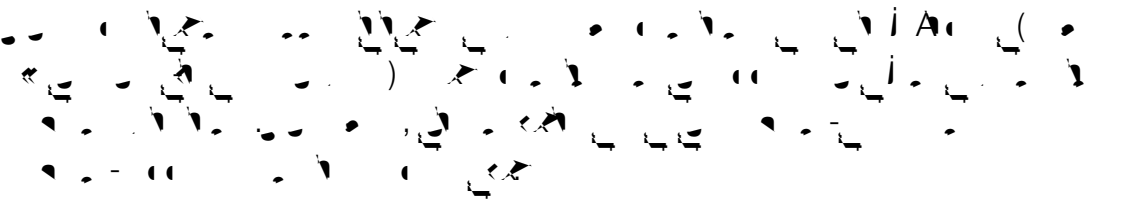
Q1: Does the option provide additional capacity that facilitates connectivity in line with the assessment of need? What kind of connectivity may the option provide?

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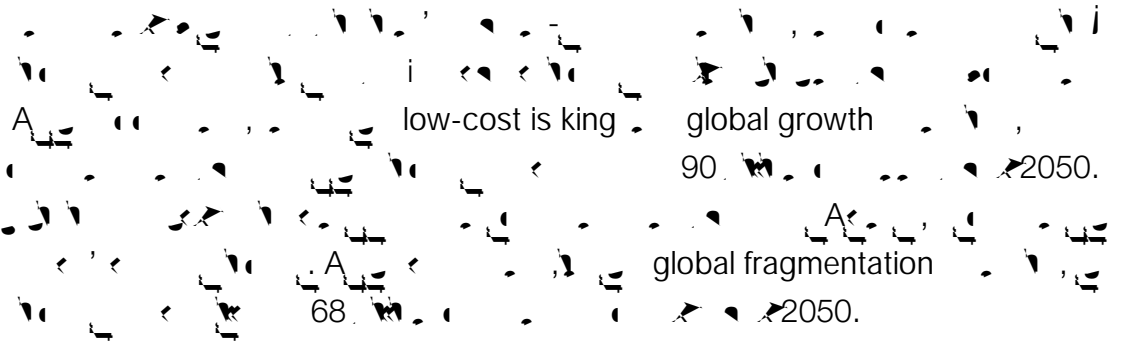


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Carbon-traded

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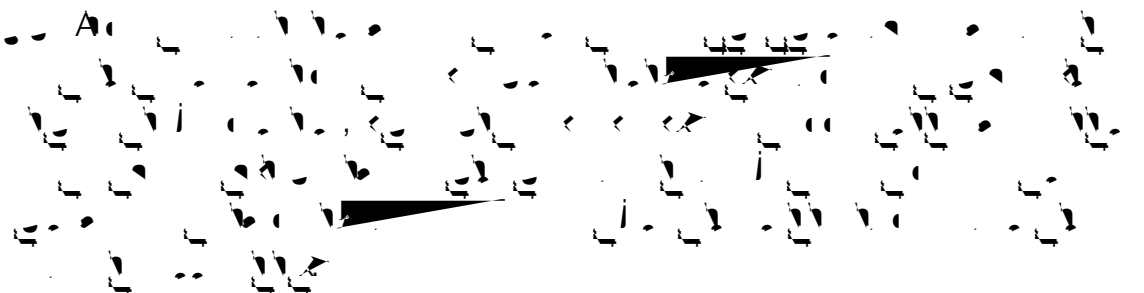
Table 1.2: Gatwick Airport Second Runway option, terminal passengers and destinations, Airports Commission’s carbon-traded forecasts

Scenario	Passengers per annum (m)				Destinations			
	2011	2030	2040	2050	2011	2030	2040	2050
A	34	50	62	82	216	236	244	264
		58	86	96		253	276	281
		49	62	83		202	208	224
		72	91	96		269	260	254
		40	53	68		187	197	210
Gatwick Airport Ltd forecasts		65	83	95				

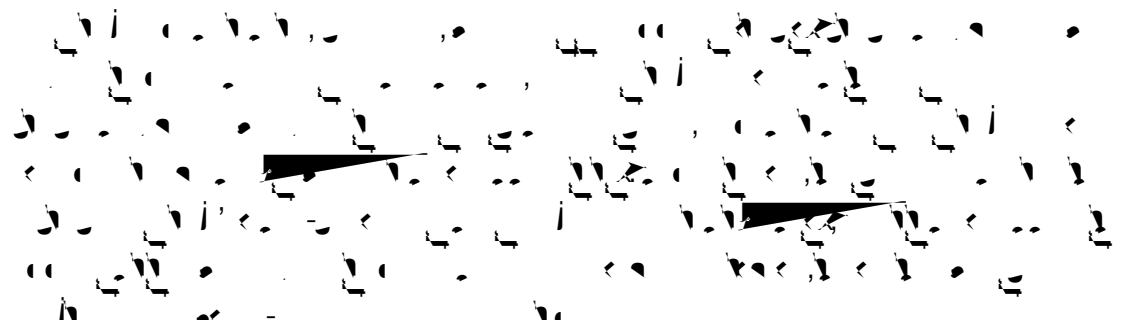
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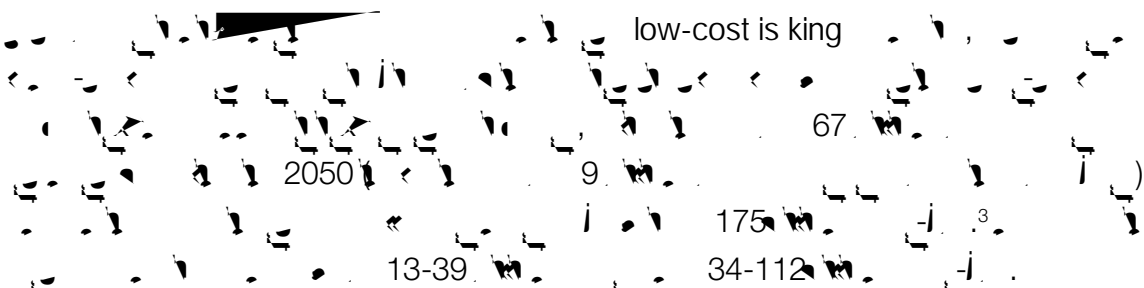
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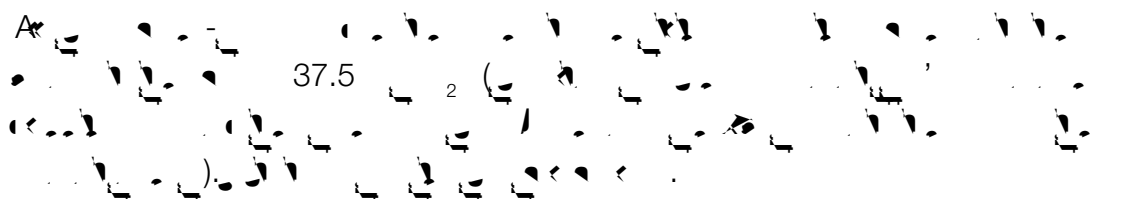
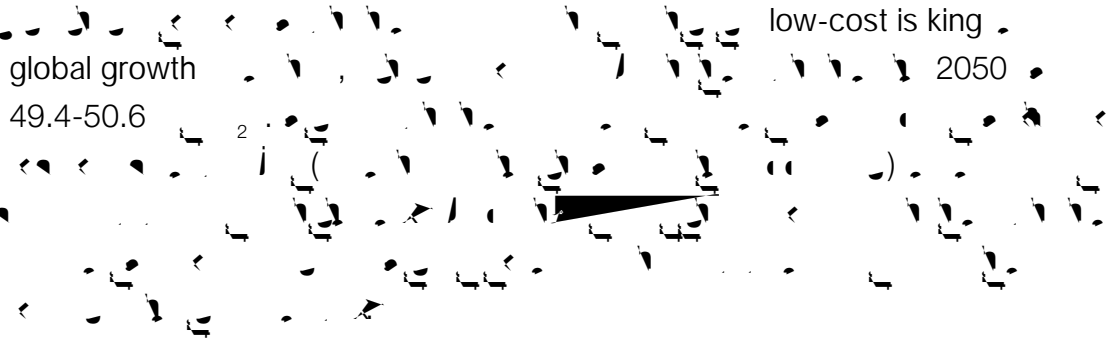


Table 1.3: Gatwick Airport Second Runway option, Airports Commission's carbon-traded forecasts of UK aviation emissions in 2050 (MtCO₂e)

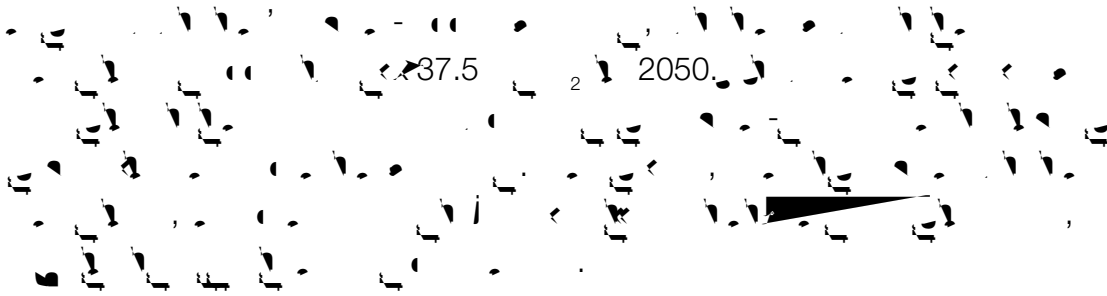
CCC Advice	Assessment of need	Global growth	Relative decline of Europe	Low-cost is king	Global fragmentation
37.5	40.8	49.4	43.7	50.6	38.7

1.23



Carbon-capped

1.24



1.25



Table 1.4: Gatwick Airport Second Runway option, terminal passengers and destinations, Airports Commission’s carbon-capped forecasts

Scenario	Passengers per annum (m)				Destinations			
	2011	2030	2040	2050	2011	2030	2040	2050
A	34	46	56	69	216	225	240	258
B		44	49	60		231	224	233
C		42	49	61		196	198	203
D		53	78	86		243	251	248
E		39	50	63		187	194	206

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2 A E 4 30 2/ ()

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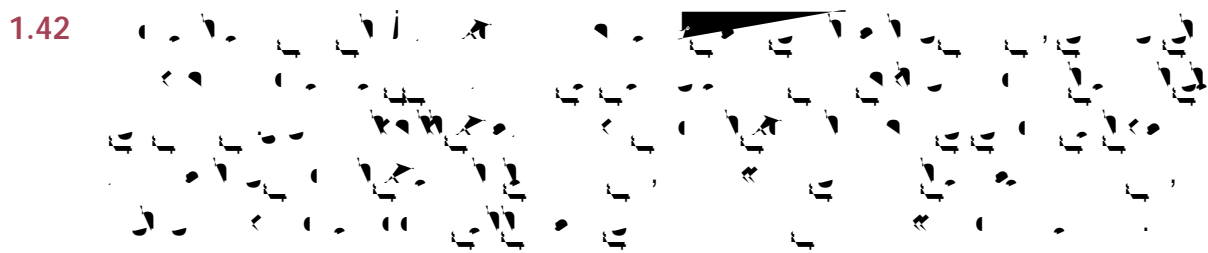
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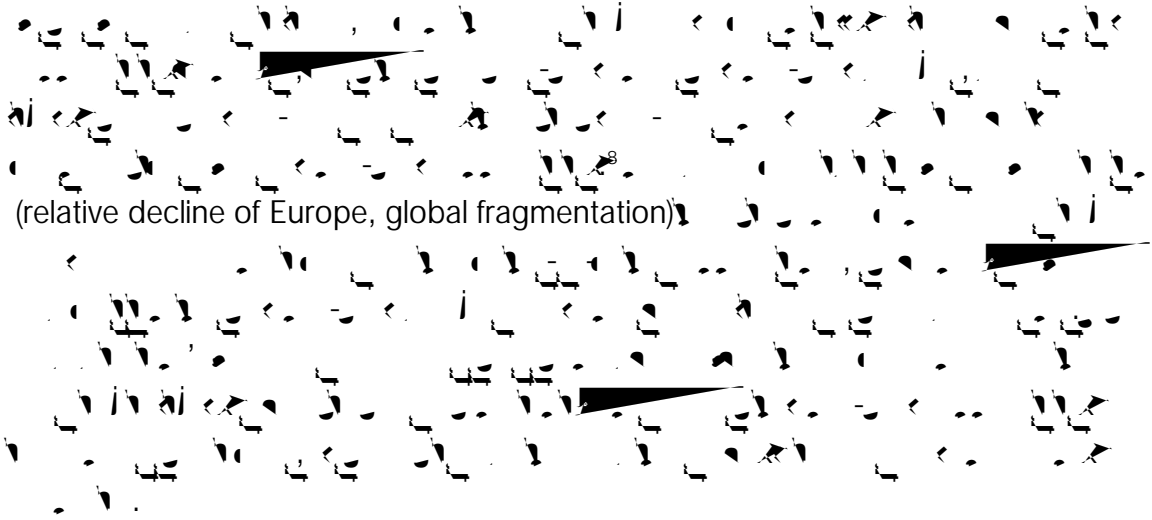
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The freight sector

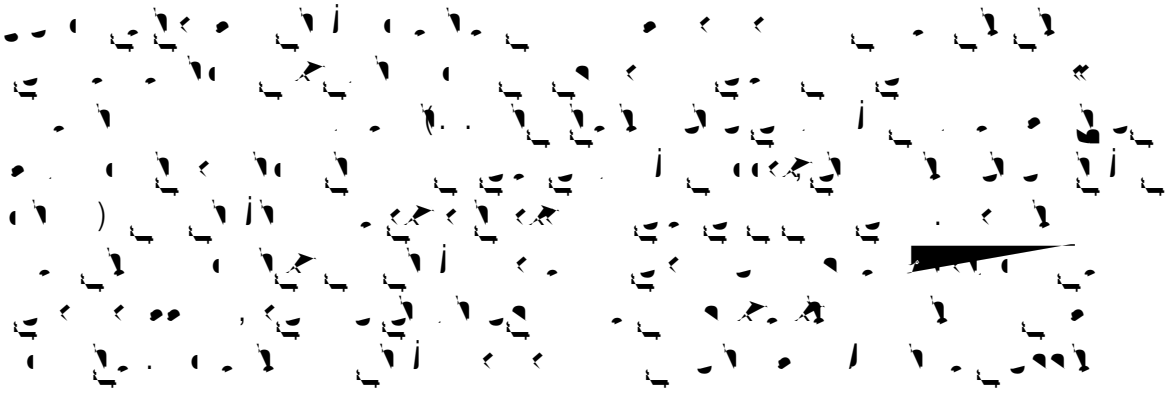


Airline response 3: Gatwick point-to-point growth, Heathrow remains the

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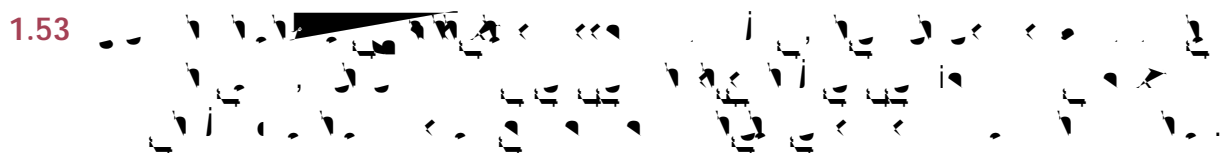
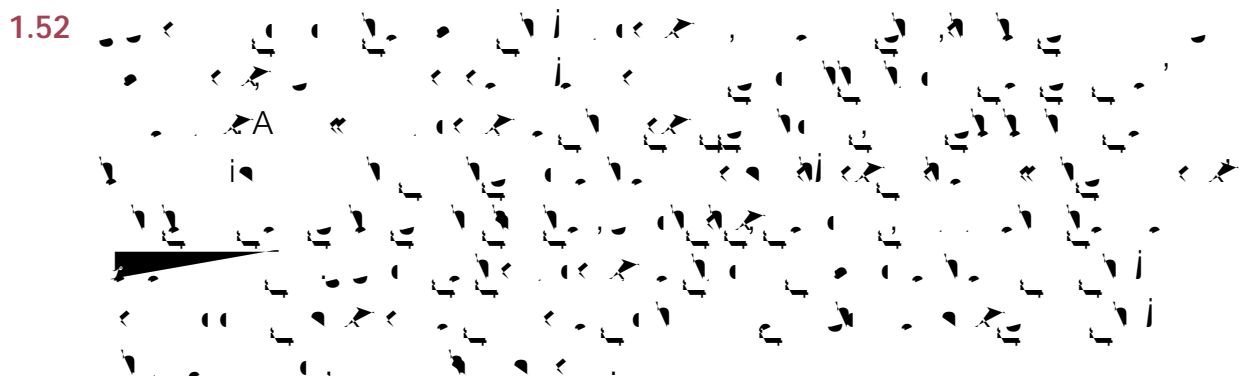
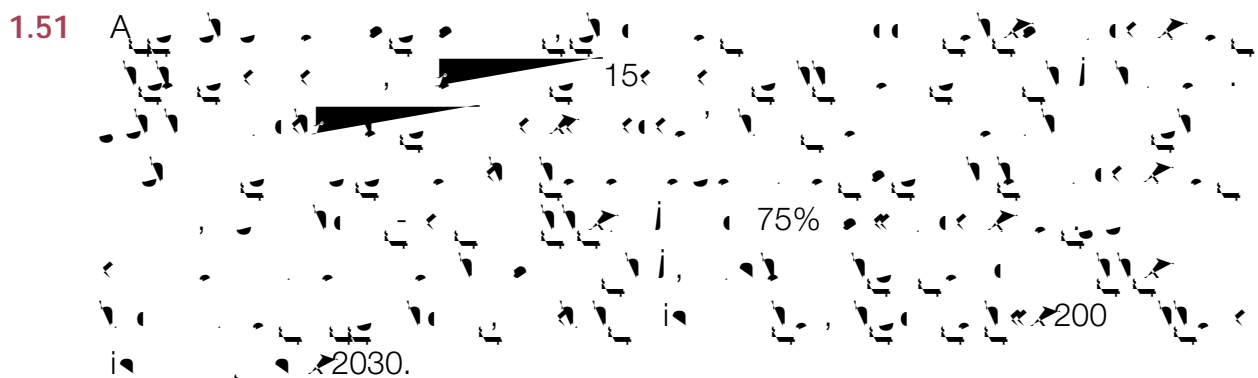


2: Socio-economic and spatial development

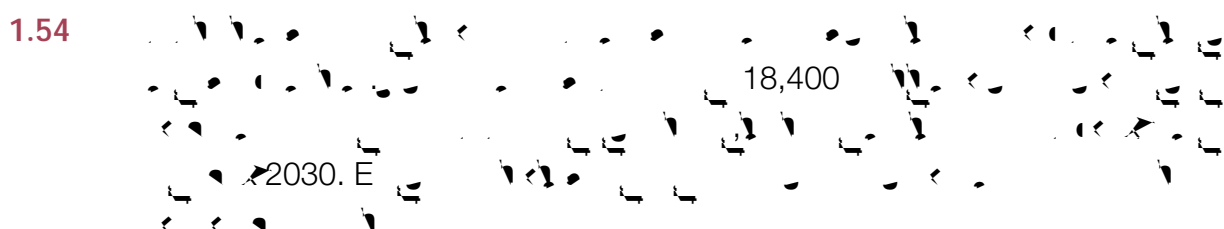
Q4: How may the option fit with relevant long-term strategies for socio-economic and spatial development?

Local assessments

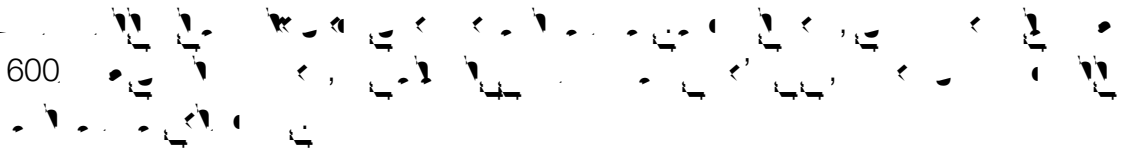
Growth of employment



Pressure on housing demand and infrastructure



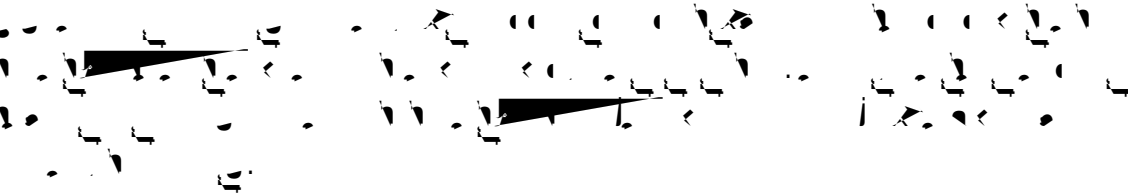
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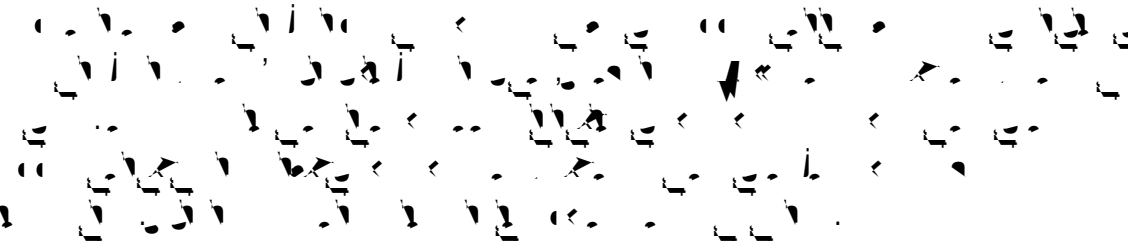
Regional and wider impacts

Regional

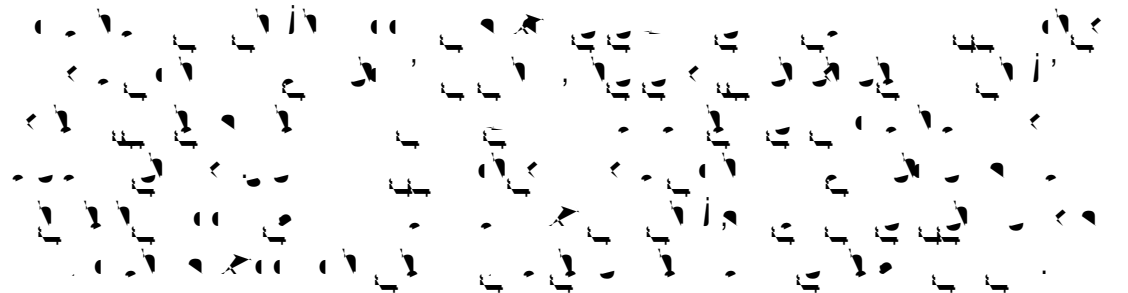
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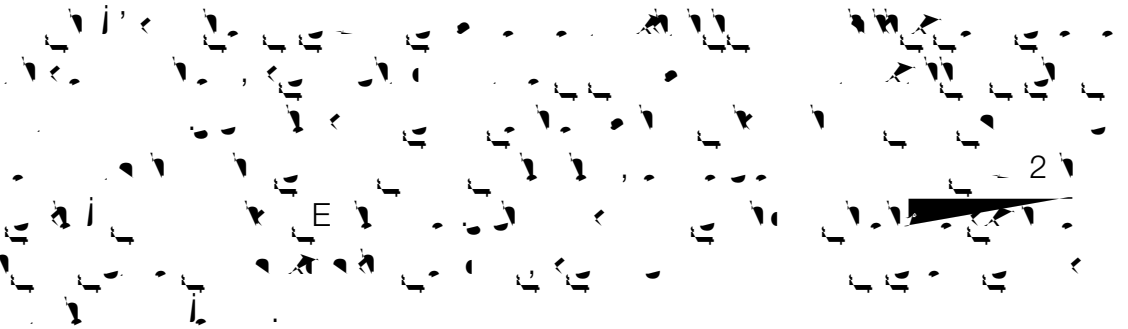
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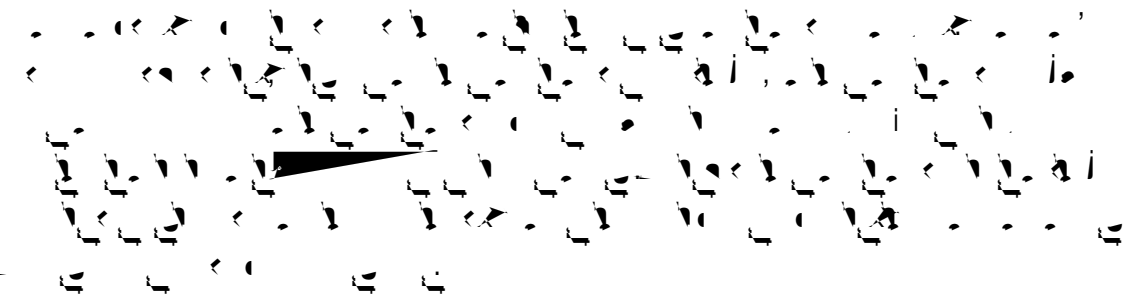


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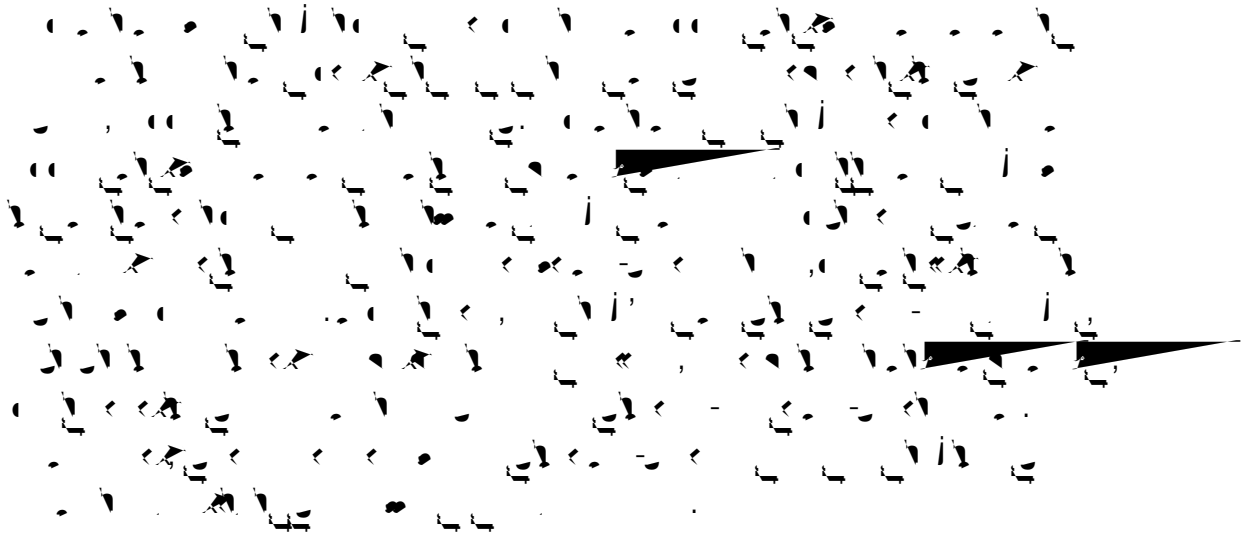


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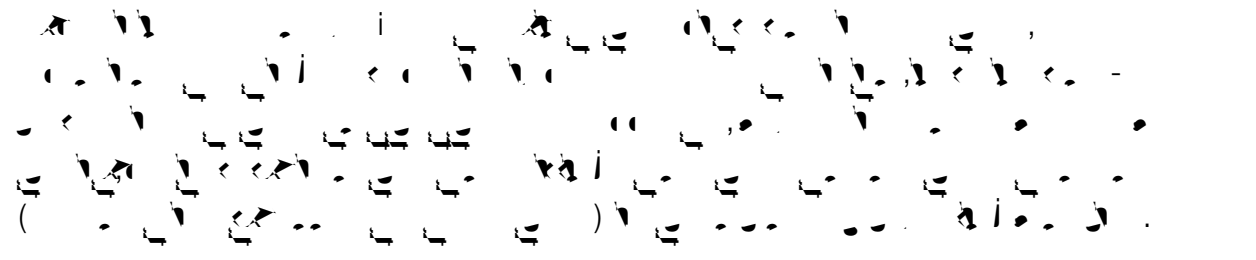
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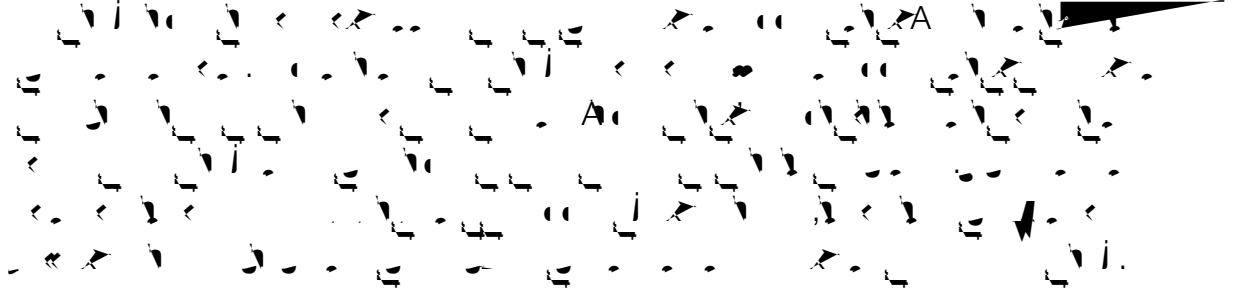
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Table 2.1: Interim Report economic analysis findings

Impact	Cost of a capacity constraint (\$/MWh 2021-2080, 2013) ⁹
	15-18
	5
	30-45

9

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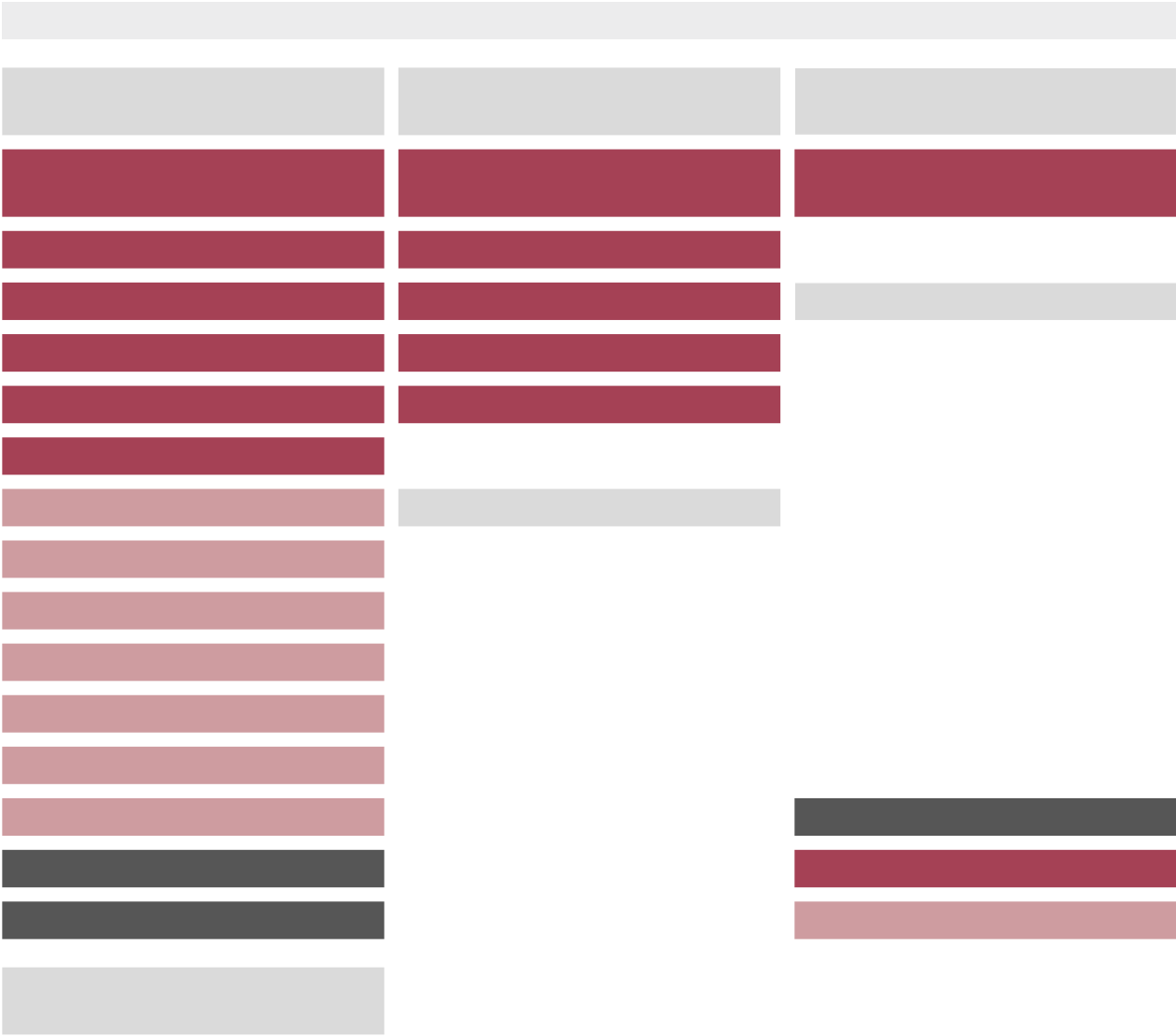
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Figure 2.1: Economic appraisal framework



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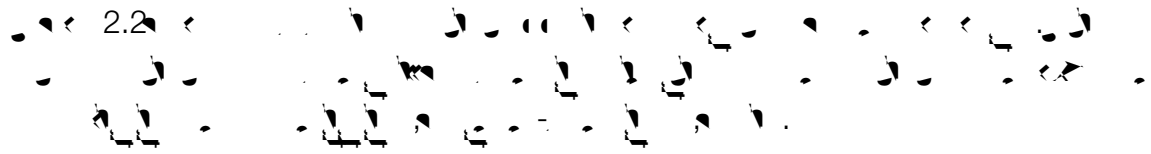


Table 2.2: Appraisal results presented in the economic case

Table 2.2: Appraisal results presented in the economic case	

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Table 2.3: Passenger, producer and government impacts, present value (£ billion, 2014 prices)¹⁷

	Assessment of need	Global growth	Relative decline of Europe	Low-cost is king	Global fragmentation
	45.4	127.7	45.8	95.7	31.4
	(41.8)	(110.4)	(43.3)	(64.0)	(29.7)
	2.5	8.4	3.1	5.2	1.0
Net Total excluding I to I	6.1	25.6	5.6	36.9	2.8
	1.7	4.3	1.4	7.2	1.0
Net Total including I to I	7.8	30.0	7.0	44.1	3.7

Table 2.4: Passenger, producer and government impacts, present value (£ billion, 2014 prices)¹⁸

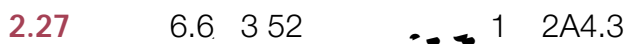
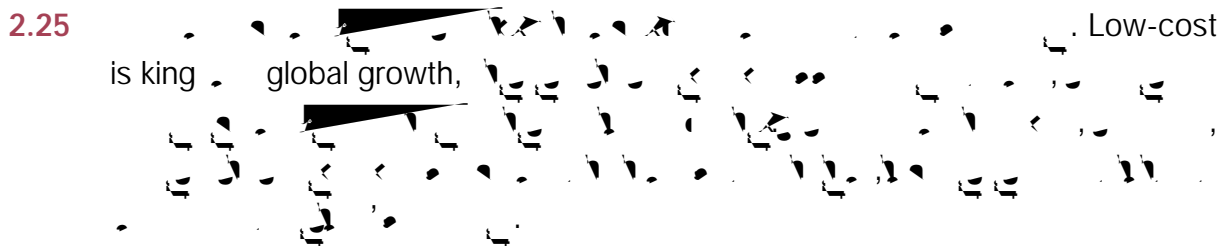
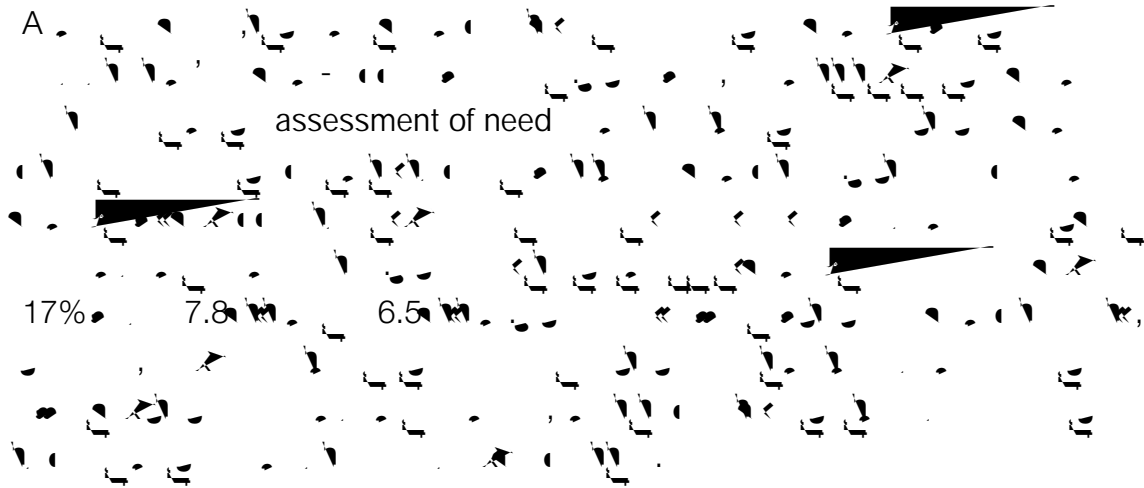


Table 2.4: Passenger benefits split by passenger type, present value (£ billion, 2014 prices)

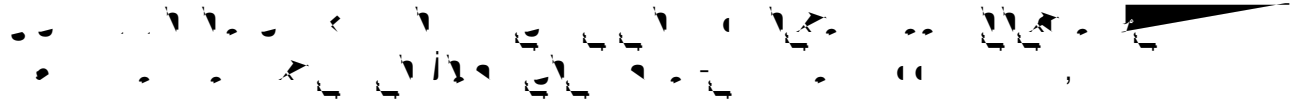
	Total	UK	Foreign	I to I
A	47.1	32.9	12.6	1.7
B	132.0	90.7	37	4.3
C	47.2	31.6	14.2	1.4
D	102.9	66.3	29.3	7.2
E	32.4	23.1	8.2	1.0

2.28 A

2.28



2.29



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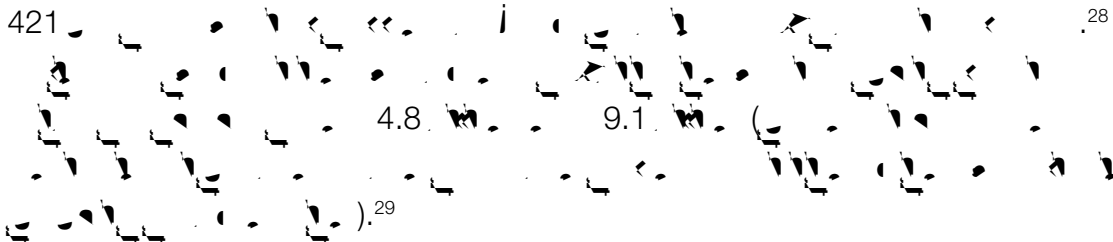
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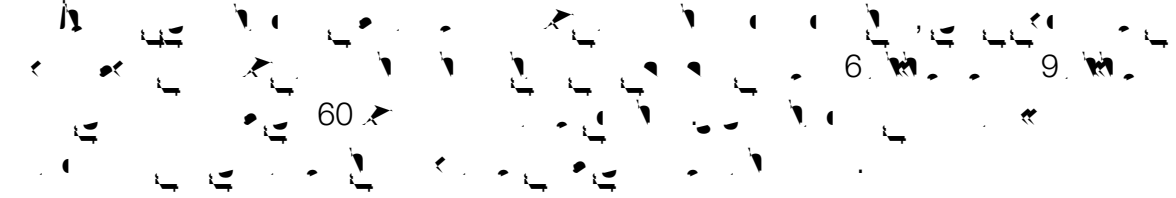
Scenario	2010	2015	2020	2025	2030	2035	2040	2045	2050	Total
Scenario A	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	20.6
Scenario B	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	16.2
Scenario C	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	13.4
Scenario D	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	10.6
Scenario E	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	7.8
Scenario F	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	5.0
Scenario G	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	2.5
Scenario H	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.6
Scenario I	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	1.3
Scenario J	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.8
Scenario K	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.5
Scenario L	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4
Scenario M	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3
Scenario N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
Scenario O	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Scenario P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario Q	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario U	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario X	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scenario Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2.6: Value of monetised air quality impacts, present value (£ million, 2014 prices)

Table 2.7: Carbon assessment for Gatwick Airport Second Runway, change in MtCO₂

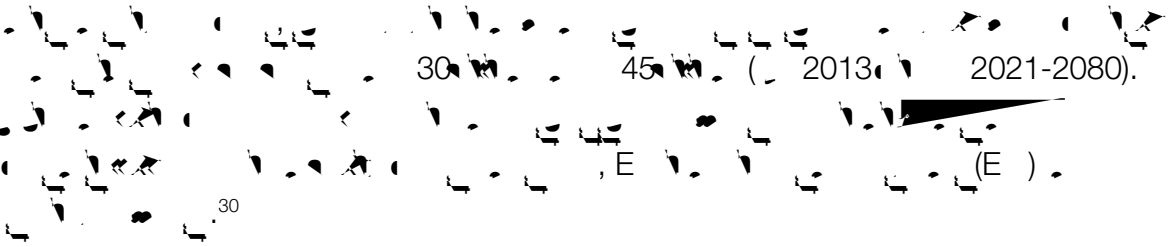


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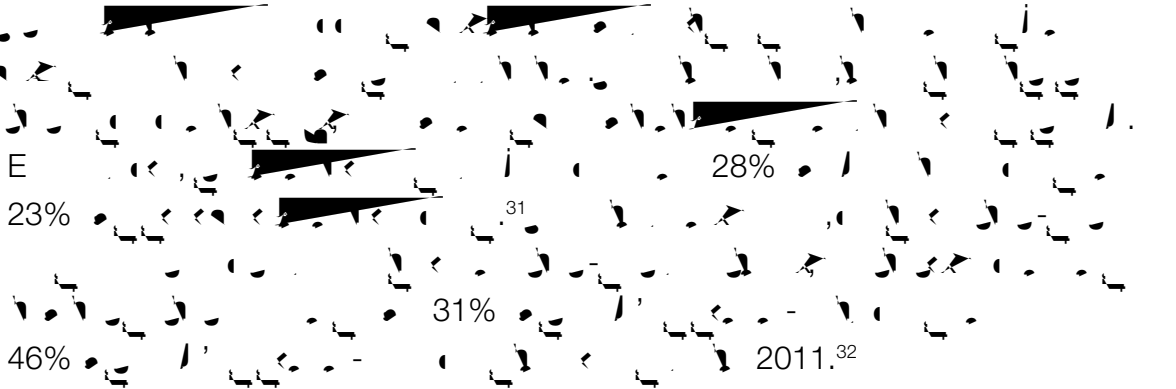


Wider economic impacts

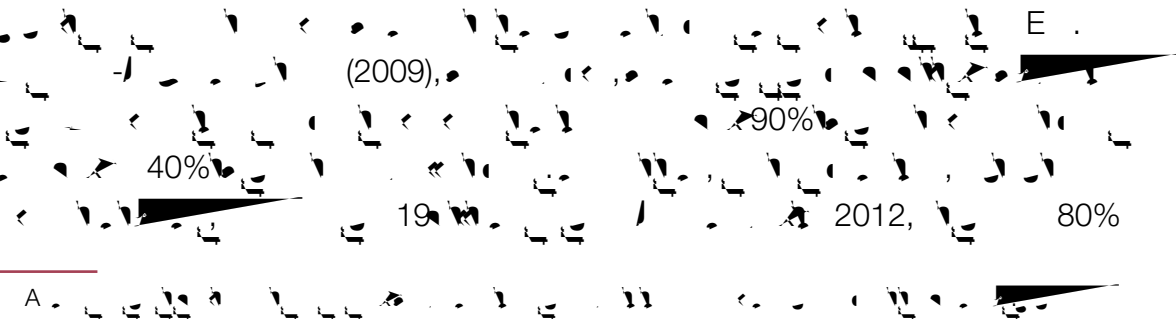
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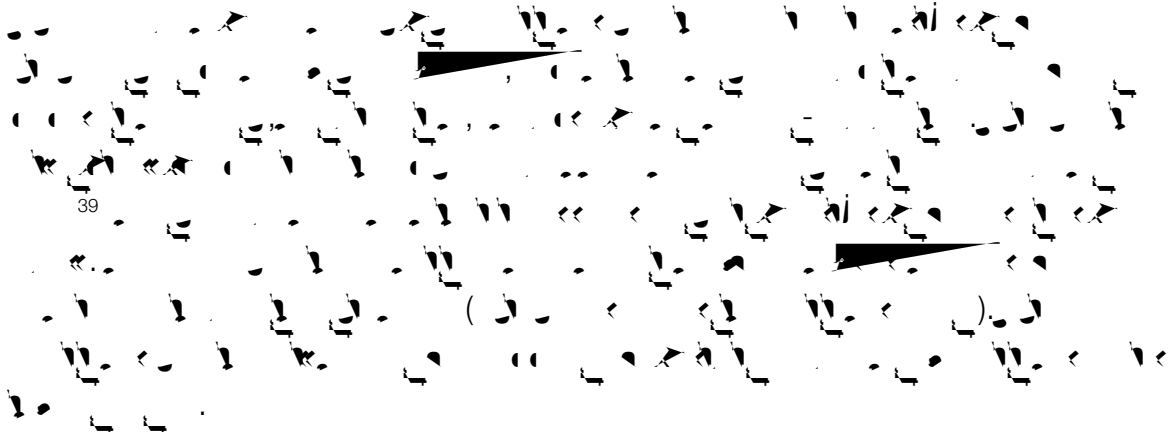
Table 2.9: Additional jobs for Gatwick Airport Second Runway

Year	Assessment	Number of jobs
2030	Additional jobs (compared to baseline)	200-23,600
	Jobs (total)	27,800-58,400
2050	Additional jobs (compared to baseline)	

Table 2.10: Additional homes need for Gatwick Airport Second Runway

2030	Low	High
A ()	0 ³⁷	13,500
A ()	150	18,400

2.57

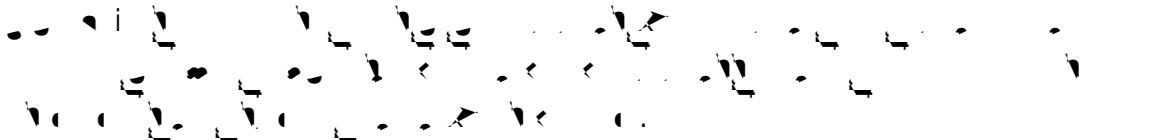


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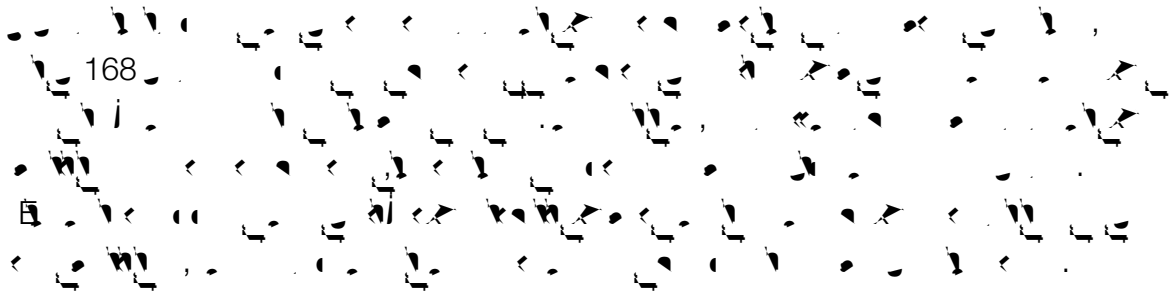


Community

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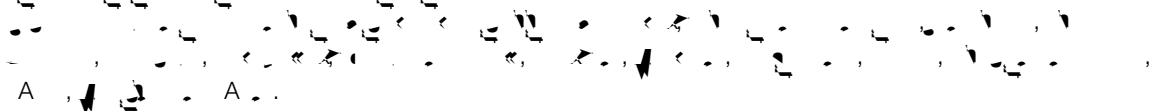
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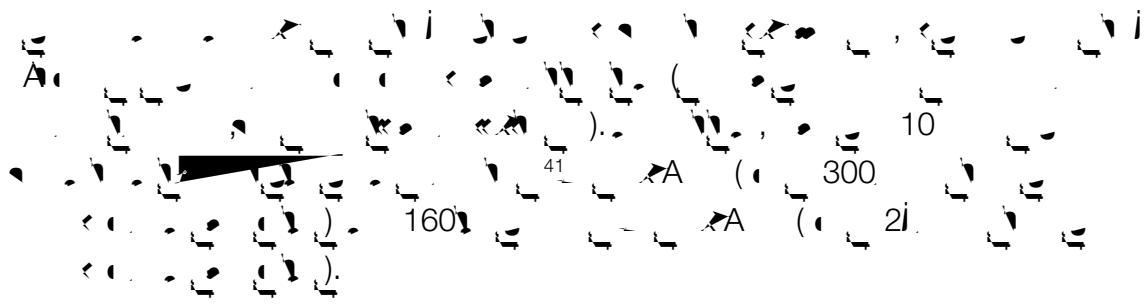


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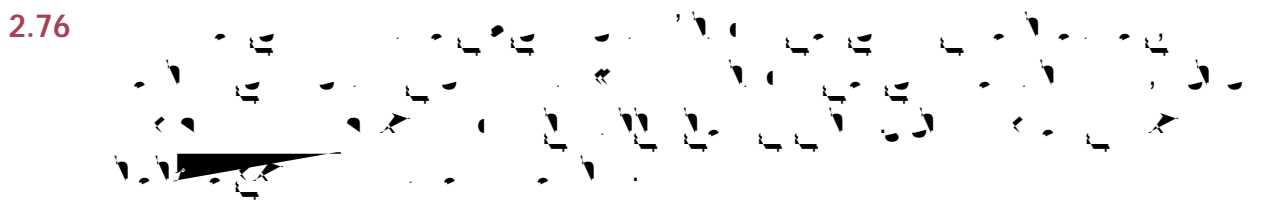
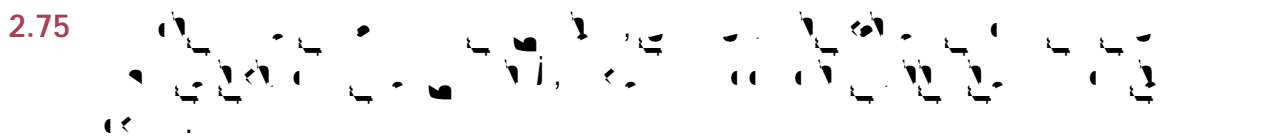
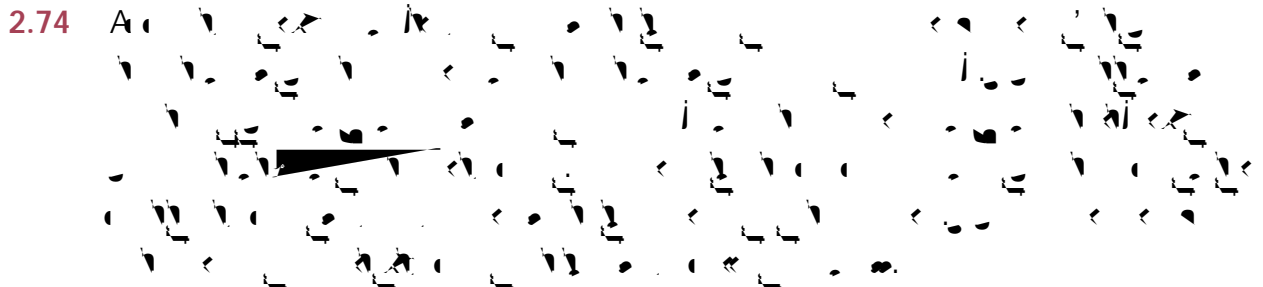
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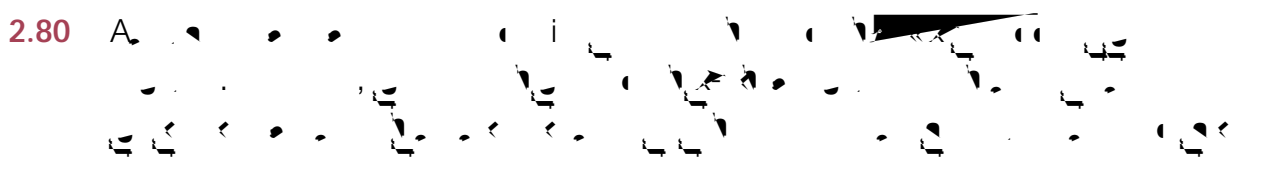
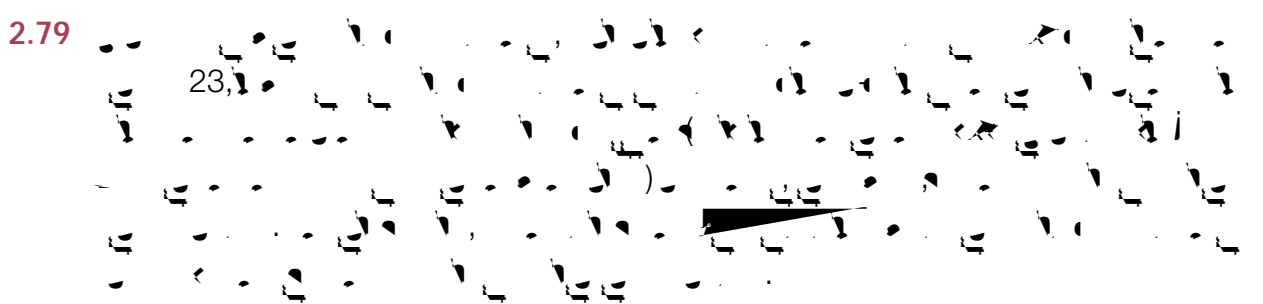
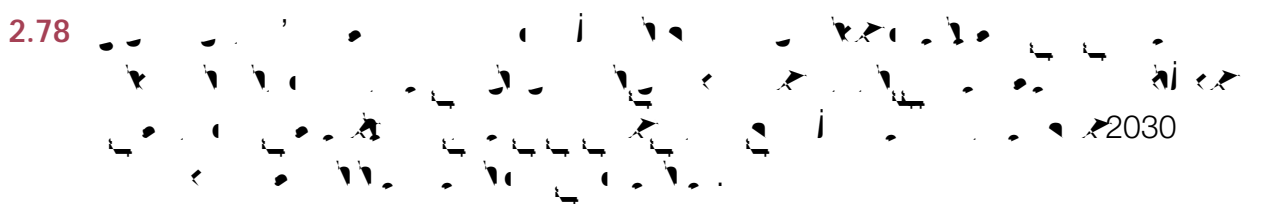
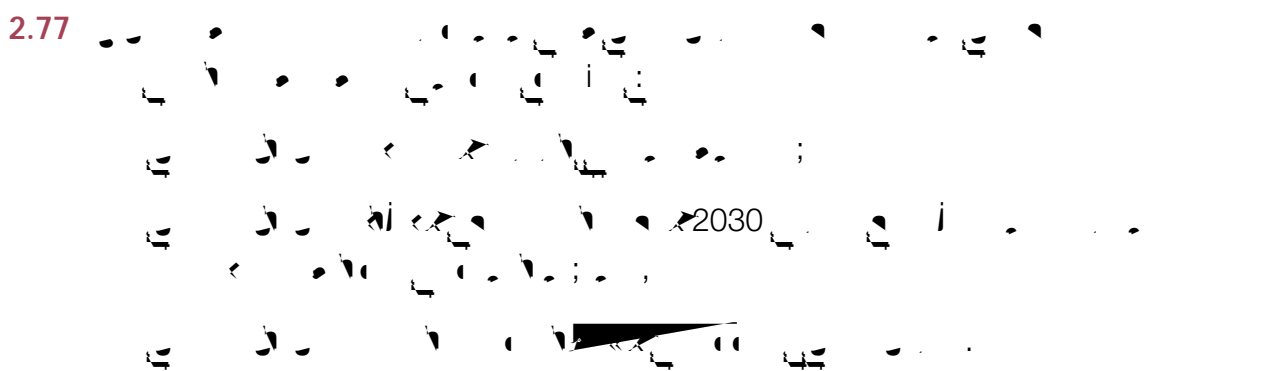
Quality of life

2.69





Surface access



1. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

2. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

3. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

4. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

5. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

6. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

7. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

8. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

9. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

10. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

11. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

12. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

13. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

14. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

15. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

16. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

17. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

18. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

19. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

20. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

21. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

22. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

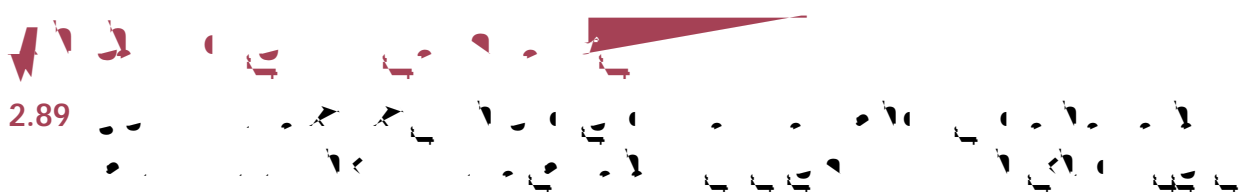
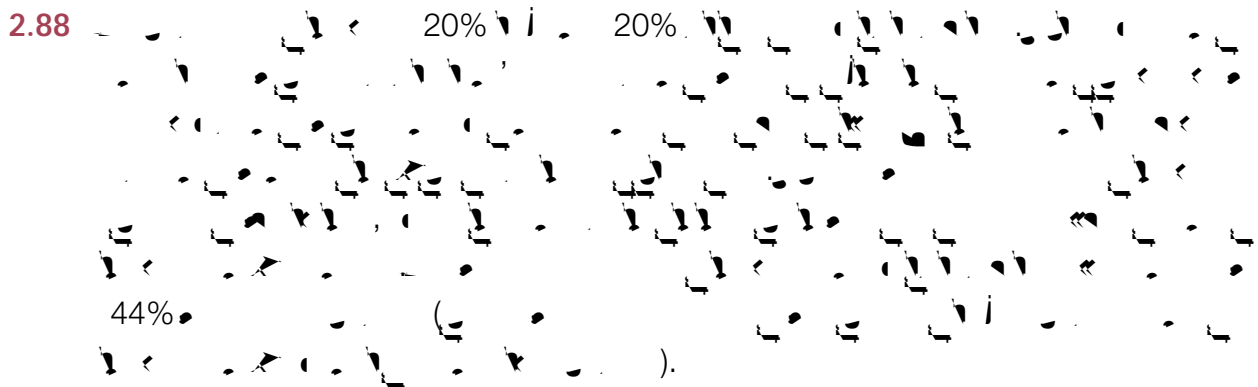
23. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

24. Bir organizmanın yaşam alanı, yaşamı için gerekli olan tüm kaynakları içerir. (D)

Table 2.11: Scheme capital expenditure costs per scenario
 (£ billion, 2014 prices)⁴²

Scenario	AoN carbon-capped	AoN carbon-traded	Low-cost is king carbon-traded	Global fragmentation carbon-capped ⁴²
Scenario A (2014, Real)	7.4	9.3	9.3	7.4
Scenario B (2014, PV)	4.7	6.5	6.5	4.7
Scenario C A (2014, Real)	0.8	0.8	0.8	0.8
Scenario C B (2014, PV)	0.5	0.5	0.5	0.5
TOTAL (2014, Real)	8.2	10.1	10.1	8.2
TOTAL (2014, PV)	5.2	7.0	7.0	5.2

Table 2.12: Scheme capital expenditure costs per scenario



⁴² E... assessment of need

2.102

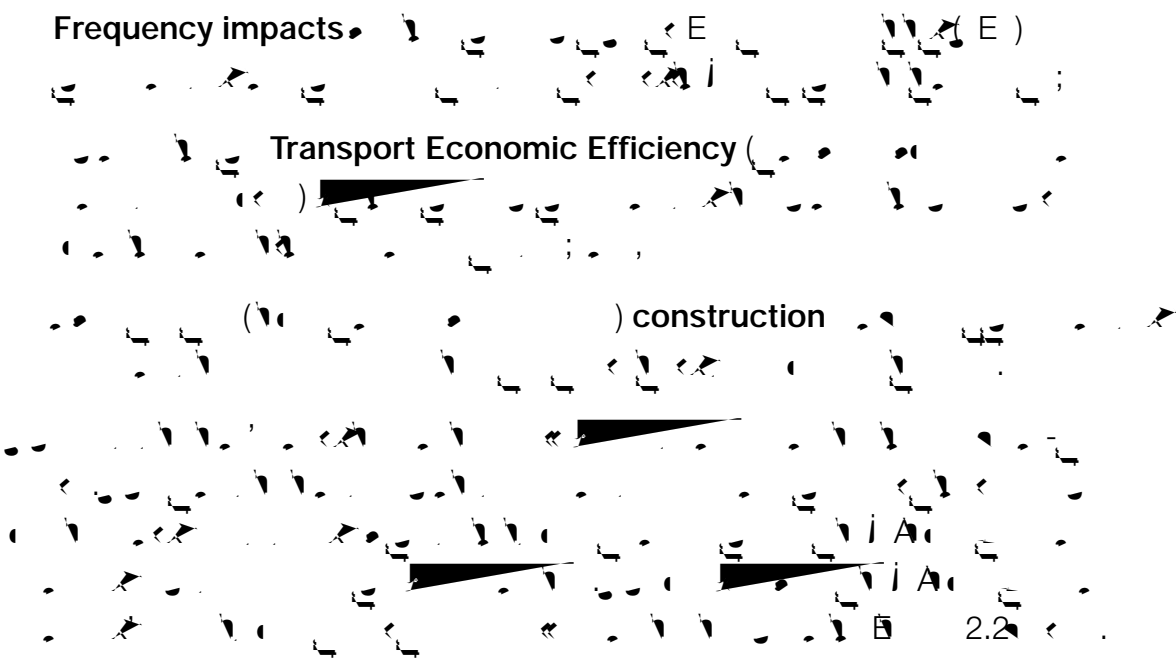
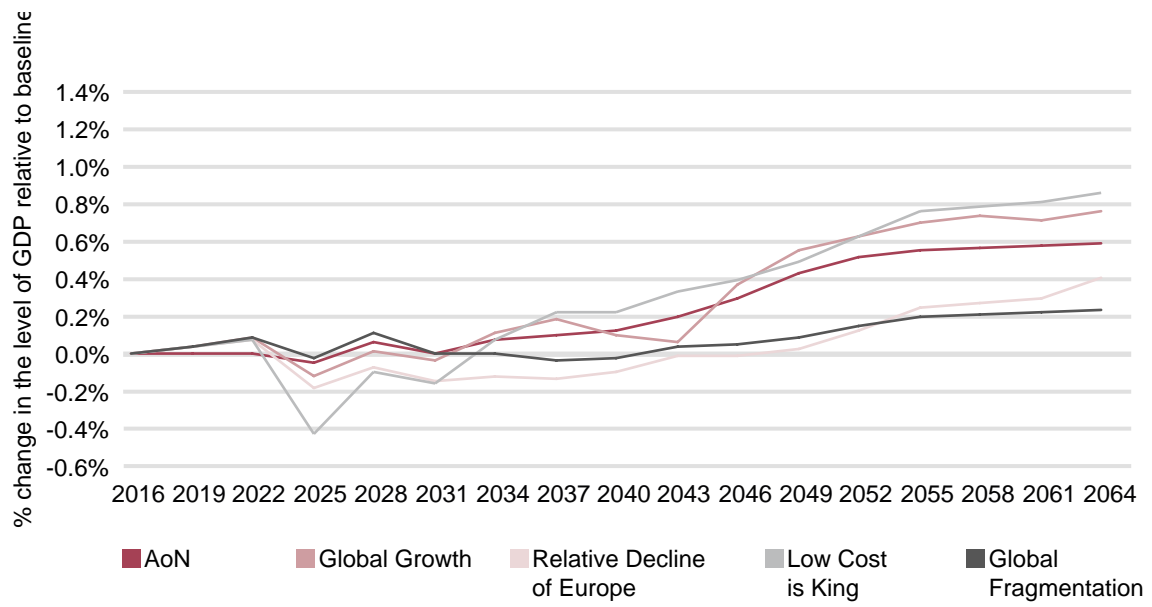
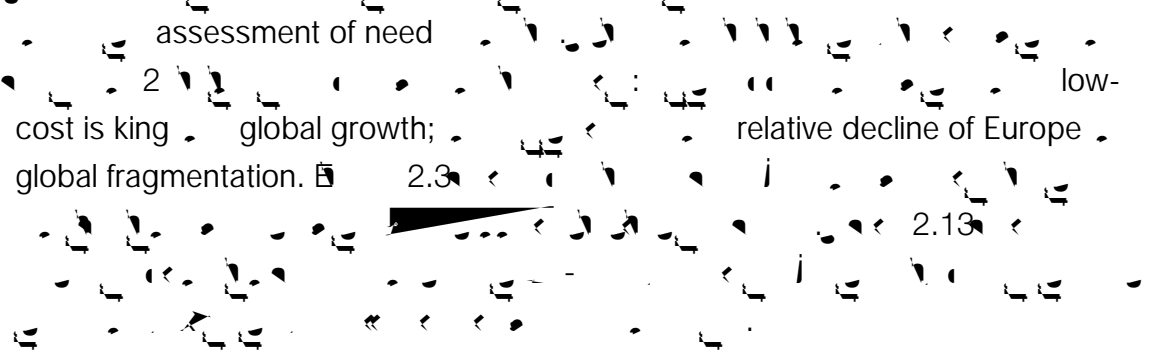


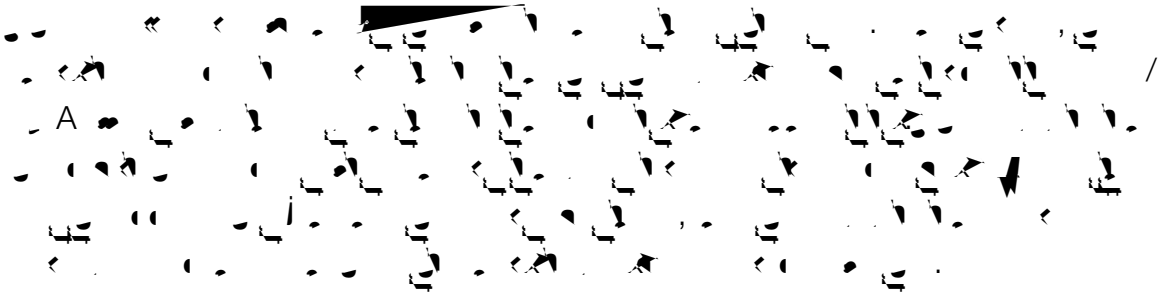
Figure 2.2: Overall GDP impacts for all scenarios



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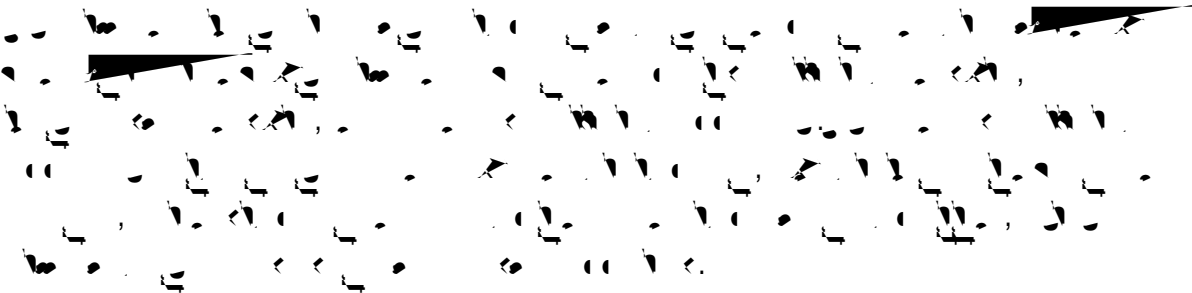
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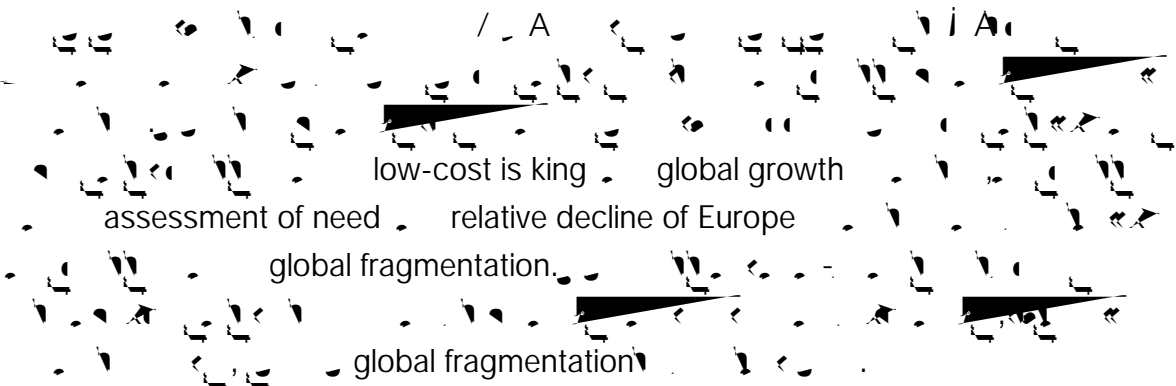
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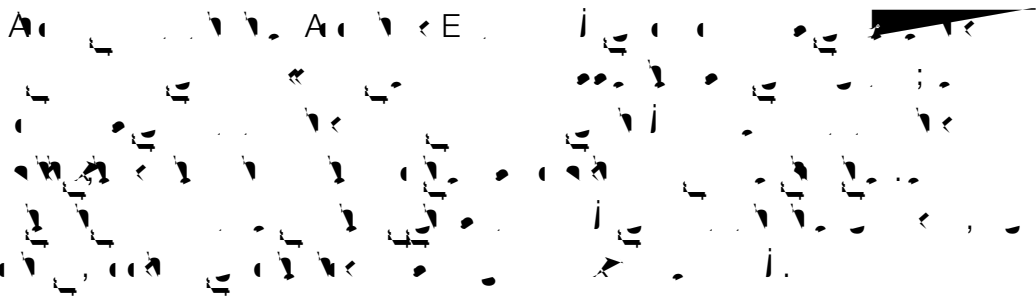



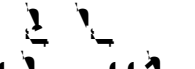
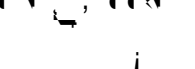
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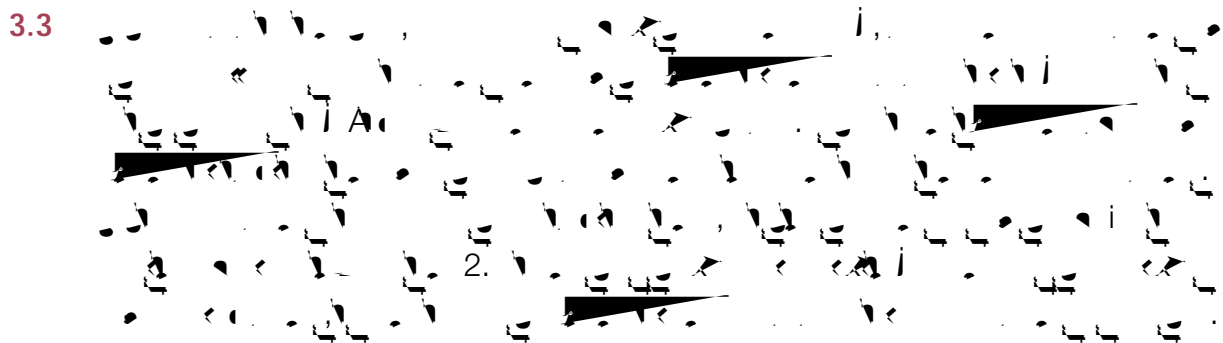















2.112

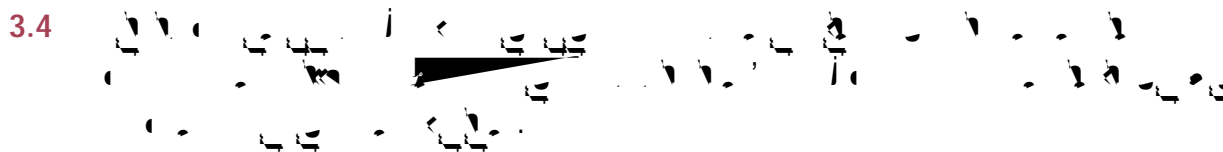

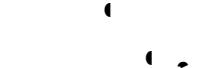


3.


3.1  A  A  < E  I  

3.2                       

3.3                

3.4   


3.5   A  < E  I  

3.6

1. A

2.

3.

A

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4

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3.8

A

48

Table 3.1: The Commission’s Financial and Commercial Risk Framework

Risk	Description
1. Demand and revenue	<p>The Commission's revenue is primarily derived from the sale of its publications, which are sold through a network of distributors. The Commission's revenue is also derived from the sale of its services, which are sold through a network of distributors. The Commission's revenue is also derived from the sale of its products, which are sold through a network of distributors.</p>
2. Cost and integration	<p>The Commission's costs are primarily derived from the purchase of raw materials, which are purchased through a network of suppliers. The Commission's costs are also derived from the purchase of services, which are purchased through a network of suppliers. The Commission's costs are also derived from the purchase of products, which are purchased through a network of suppliers.</p>
3. Contracting	<p>The Commission's contracts are primarily derived from the purchase of raw materials, which are purchased through a network of suppliers. The Commission's contracts are also derived from the purchase of services, which are purchased through a network of suppliers. The Commission's contracts are also derived from the purchase of products, which are purchased through a network of suppliers.</p>
4. Financing	<p>The Commission's financing is primarily derived from the sale of its publications, which are sold through a network of distributors. The Commission's financing is also derived from the sale of its services, which are sold through a network of distributors. The Commission's financing is also derived from the sale of its products, which are sold through a network of distributors.</p>
5. Investment	<p>The Commission's investment is primarily derived from the sale of its publications, which are sold through a network of distributors. The Commission's investment is also derived from the sale of its services, which are sold through a network of distributors. The Commission's investment is also derived from the sale of its products, which are sold through a network of distributors.</p>

Risk	Description
6. Regulatory and policy	<p>6.1. Regulatory and policy risks are those risks that arise from changes in the regulatory and policy environment. These risks are categorized into three main areas: (a) changes in the regulatory and policy environment, (b) changes in the regulatory and policy environment, and (c) changes in the regulatory and policy environment.</p>
7. Timing and delivery	<p>7.1. Timing and delivery risks are those risks that arise from delays in the timing and delivery of the project. These risks are categorized into three main areas: (a) delays in the timing and delivery of the project, (b) delays in the timing and delivery of the project, and (c) delays in the timing and delivery of the project.</p>

Assessment of Gatwick Airport Second runway scheme

Passenger demand forecasts and overall cost requirements

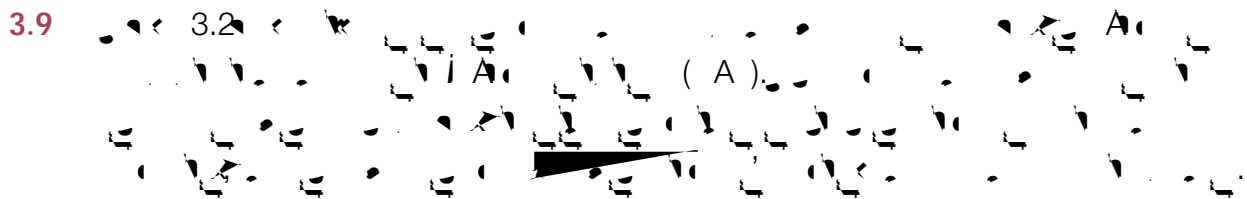


Table 3.2: Passenger demand forecasts used by the Airports Commission and GAL

Scenario	Passengers per annum (m) Carbon-traded				Passengers per annum (m) Carbon-capped			

3.10 E ... A ...

Assessment of need (A -)

Assessment of need (A -)

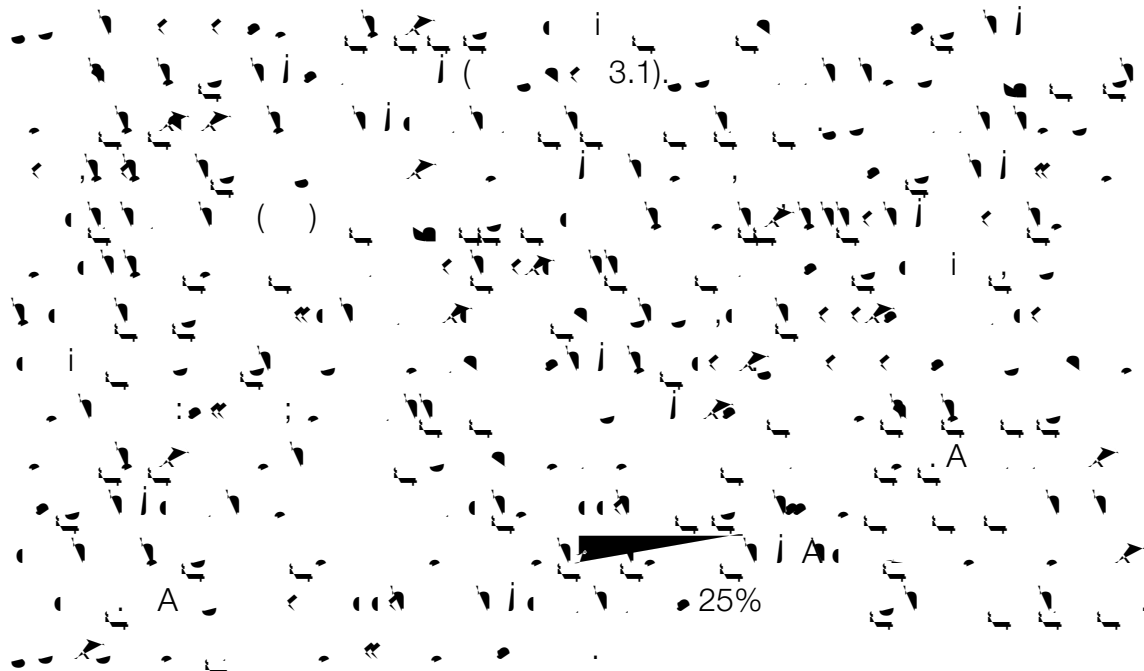
Low-cost is king (-)

Global fragmentation (E-)

3.11 A A A global fragmentation 2025. A low-cost is king A

3.12

3.13



3.14

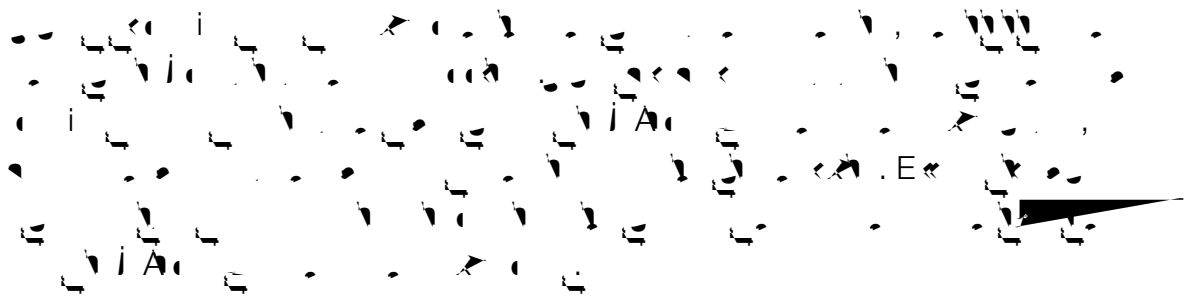


Table 3.3: Gatwick Airport Second Runway – Airports Commission cost estimates (€ million, 2014 prices)

	AoN-CC	AoN-CT	LCIK-CT	GF-CC	Gatwick demand forecast
	7,387	9,340	9,340	7,387	9,340
A	787	787	787	787	787

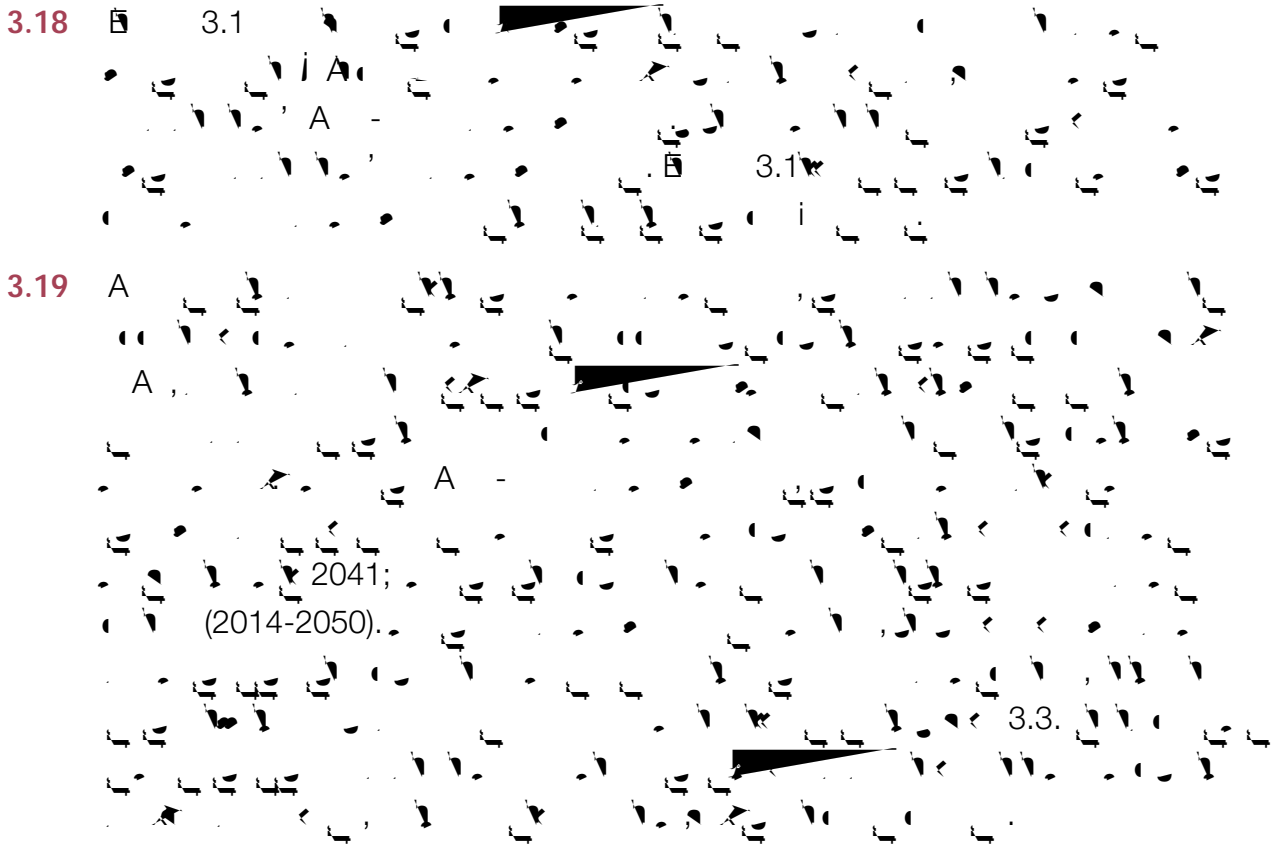
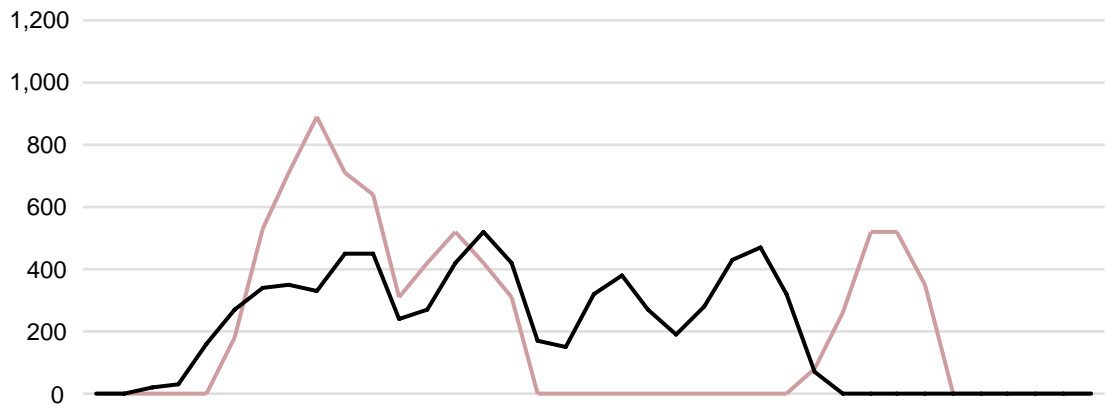


Figure 3.1: Scheme Capex requirement under the AoN-CC demand scenario



3.29

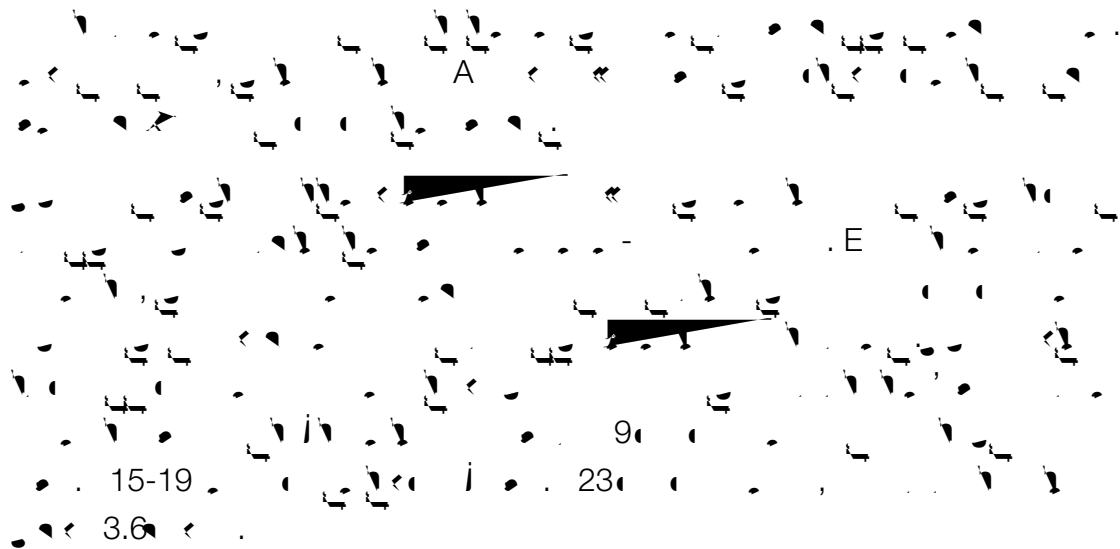
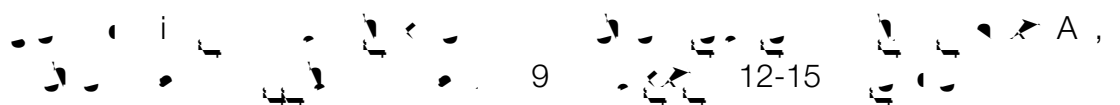


Table 3.6: Estimated passenger charges across the Commission’s four demand scenarios

Scenario	AoN-CC	AoN-CT	Low-cost is king	Global fragmentation
15-19	21.34	23.48	16.46	22.31
(2019-2050) ⁵⁵	18.76	19.28	16.33	18.29
(2014-2050) ⁵⁶	16.95	17.55	15.36	16.19

3.30



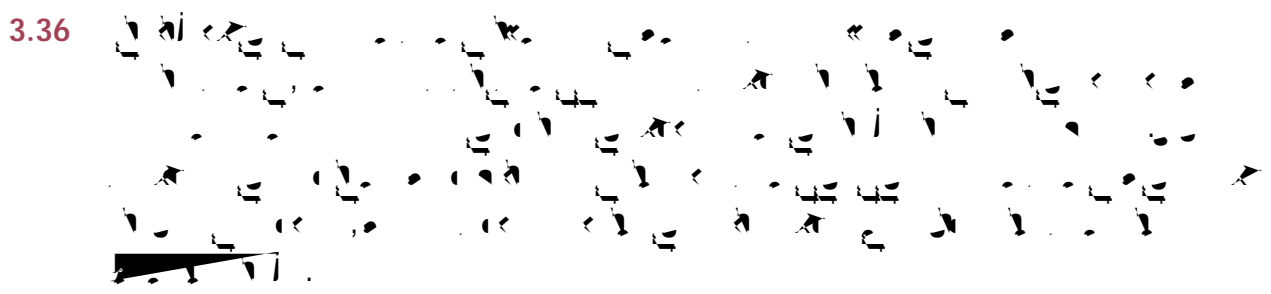
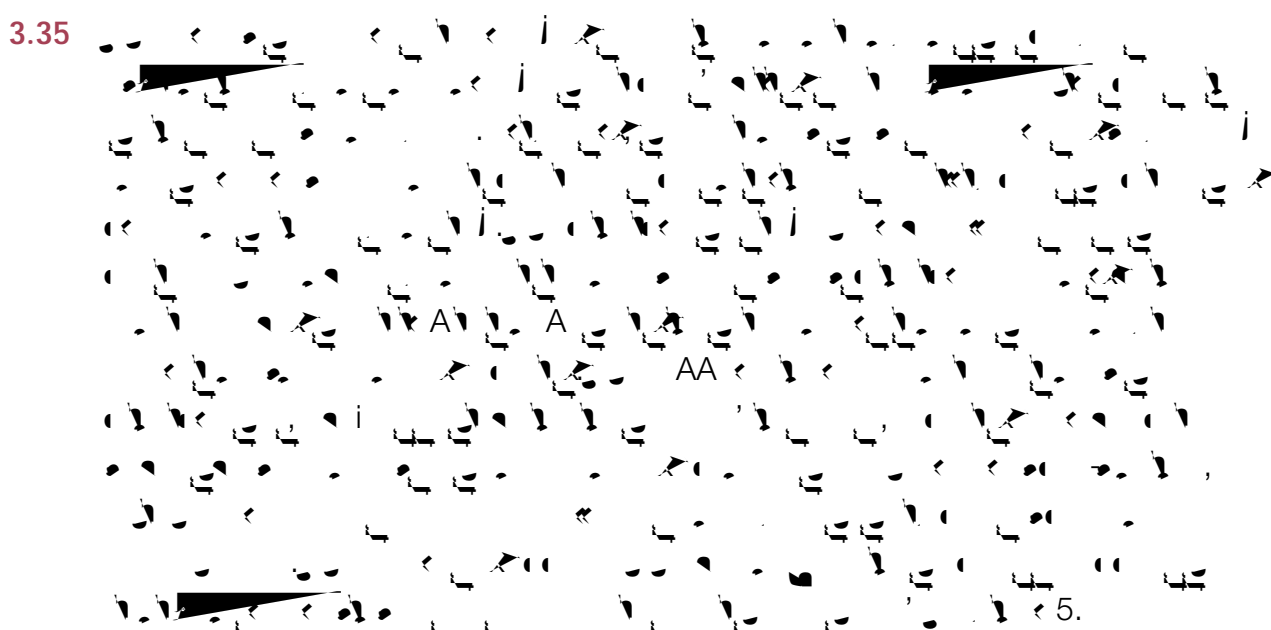
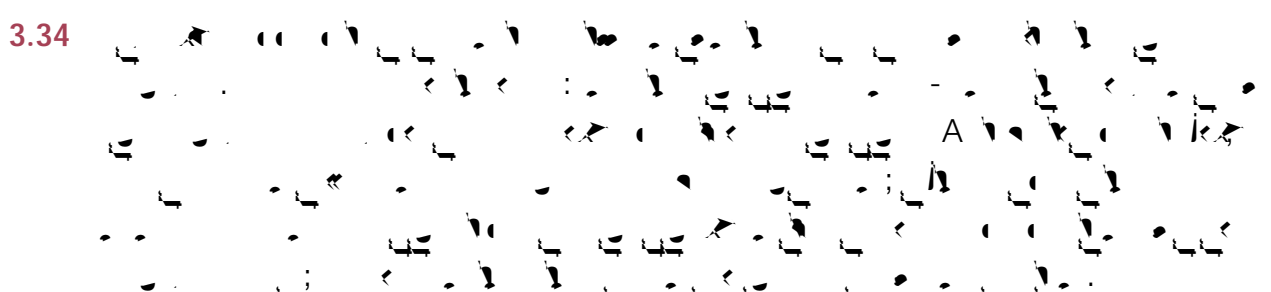
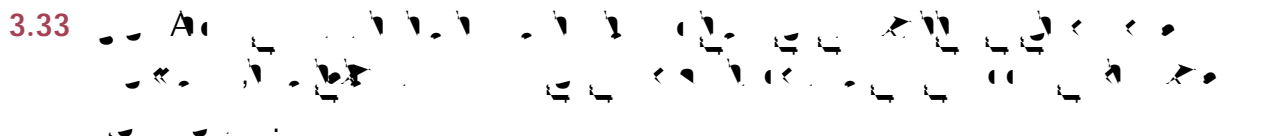
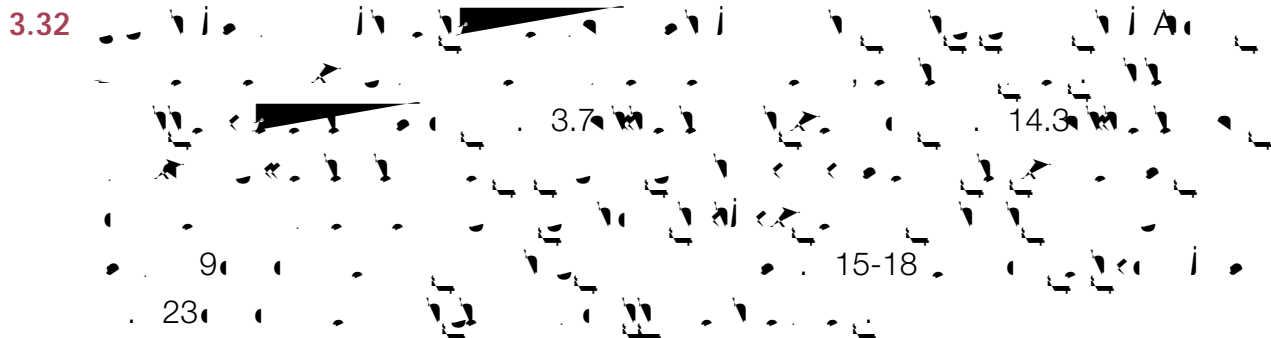
Application of risk framework

3.31 **الخطوات المتبعة في تقييم المخاطر**

Risk	Description									
<p>Financing</p>	<p>A</p> <table border="1"> <caption>Financing Metrics</caption> <thead> <tr> <th>Year</th> <th>Metric 1</th> <th>Metric 2</th> </tr> </thead> <tbody> <tr> <td>2012</td> <td>10.4</td> <td>2.4</td> </tr> <tr> <td>2013</td> <td>3.7</td> <td>14.3</td> </tr> </tbody> </table> <p>A</p> <p>2013 3.5</p>	Year	Metric 1	Metric 2	2012	10.4	2.4	2013	3.7	14.3
Year	Metric 1	Metric 2								
2012	10.4	2.4								
2013	3.7	14.3								
<p>Investment</p>	<table border="1"> <caption>Investment Metrics</caption> <thead> <tr> <th>Year</th> <th>Metric 1</th> <th>Metric 2</th> </tr> </thead> <tbody> <tr> <td>2012</td> <td>10.4</td> <td>2.4</td> </tr> <tr> <td>2013</td> <td>3.7</td> <td>14.3</td> </tr> </tbody> </table> <p>A</p>	Year	Metric 1	Metric 2	2012	10.4	2.4	2013	3.7	14.3
Year	Metric 1	Metric 2								
2012	10.4	2.4								
2013	3.7	14.3								
<p>Regulatory and policy</p>	<p>A</p>									
<p>Timing and delivery</p>	<p>E</p> <p>A</p> <p>A</p>									

Financial Review 2013

Assessment of implications for affordability and commercial deliverability



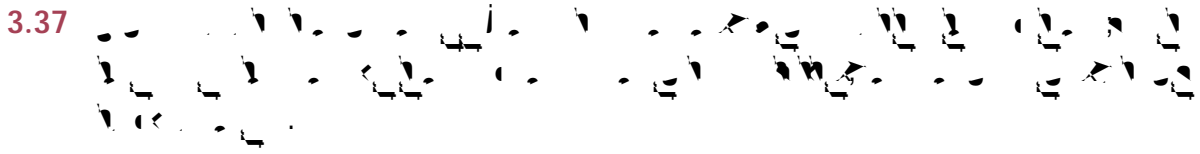
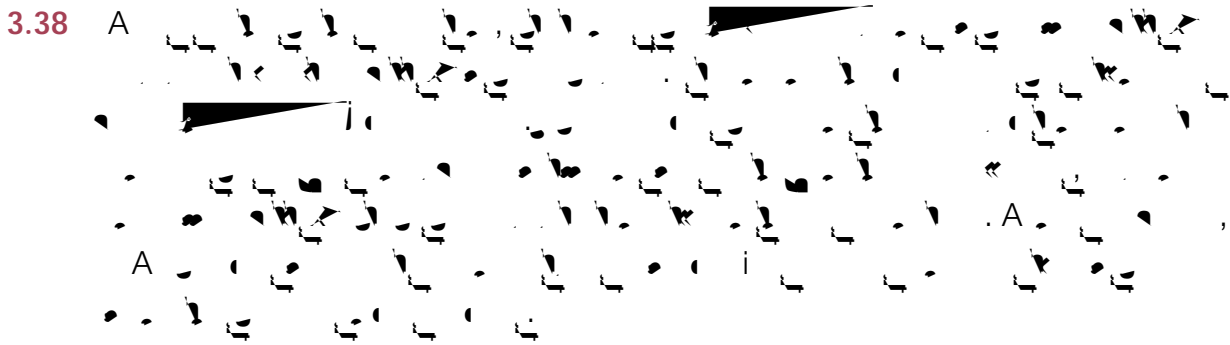


Figure 3.37



4.

4.1

Management Case – assessing the overall achievability of the proposal, including its engineering and operational viability, and the risks associated with this.

4.2

4.3

4.4

Module 14: Operational Efficiency

Module 15: Operational Risk

Module 16: Delivery

4.5

Module 4: Surface Transport,

Module 16: Delivery.

4.6

Modules 14, 15 and 16.

4.7

Runway Capacity.

Discussion Paper 7: Delivery of New

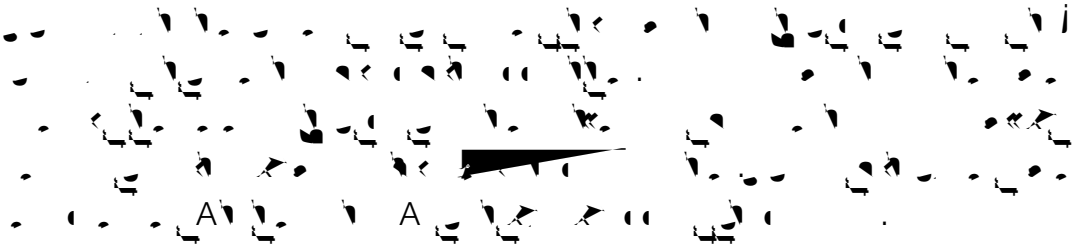
Question 1: Do the design components of the scheme as now envisaged have a credible level of potential to satisfy the Commission's assessment that there is a need for one net additional runway's worth of capacity, capable of delivering 170,000-200,000 additional air traffic movements (ATMs) annually, by 2030?

4.8

assessment of need,

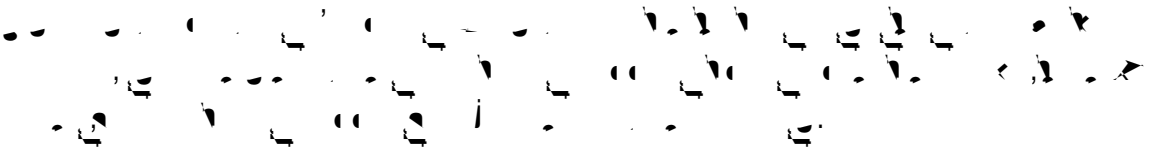
< 170,000-200,000 A

4.19



Surface Transport

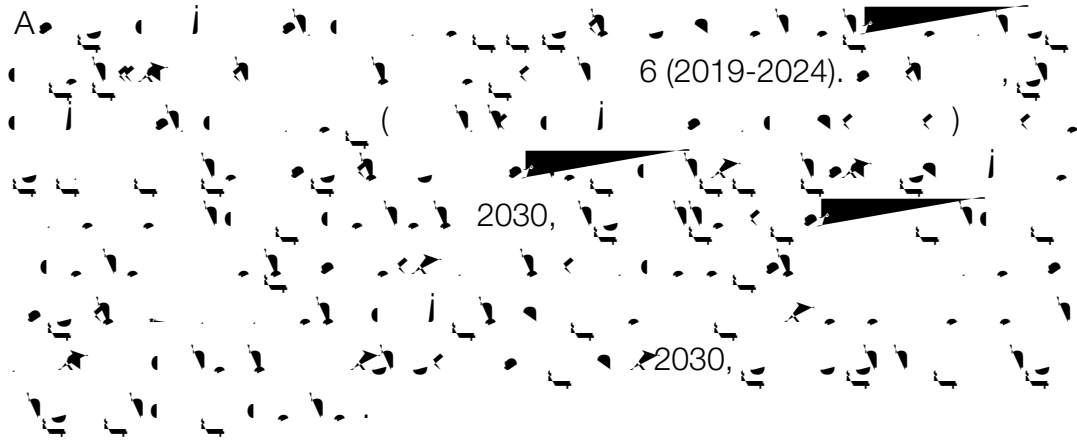
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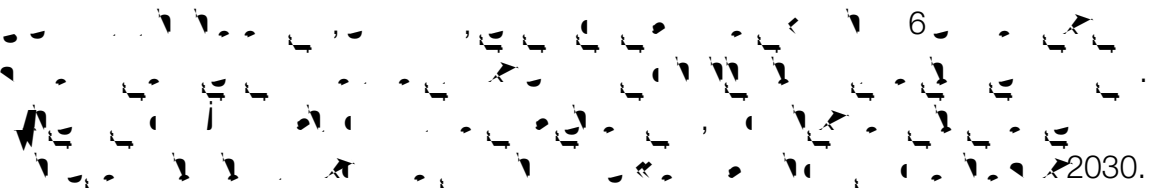
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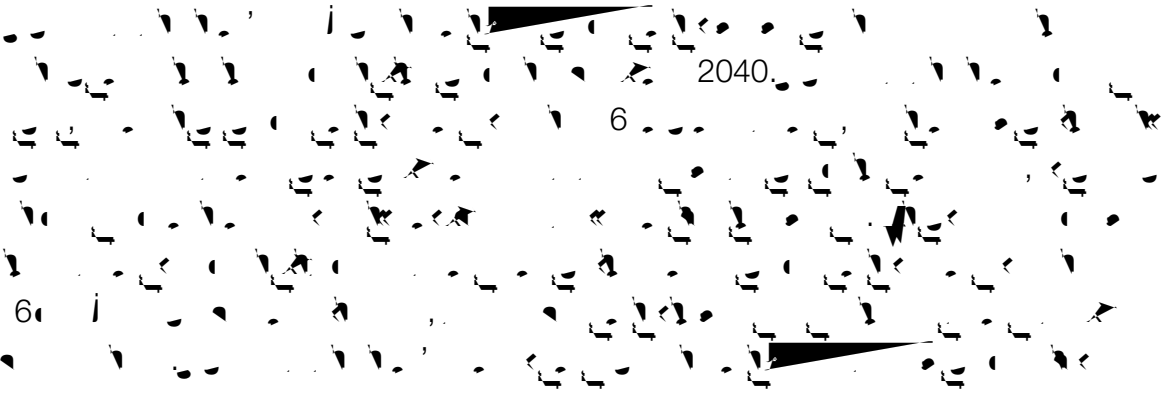
4.22



4.23



4.24



Question 3: How would the transitional steps towards the delivery of new infrastructure be managed and can the Commission be satisfied that robust structures are in place to allow these steps to proceed?

4.33 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.34 [REDACTED]

Discussion Paper 7: Delivery of New Airport Infrastructure

[REDACTED]

Airport Infrastructure

4.35 [REDACTED]

[REDACTED]

[REDACTED]

4.36 [REDACTED]

[REDACTED]

[REDACTED]

4.37 [REDACTED]

[REDACTED]

[REDACTED]

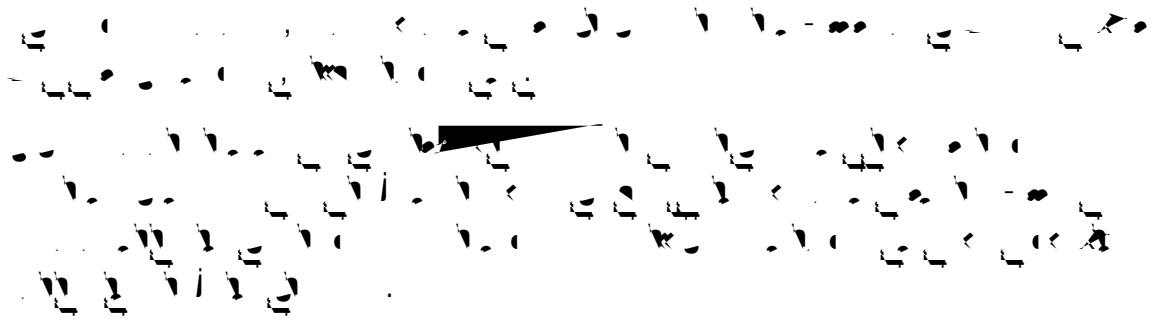
Airspace Design

4.38 [REDACTED]

[REDACTED]

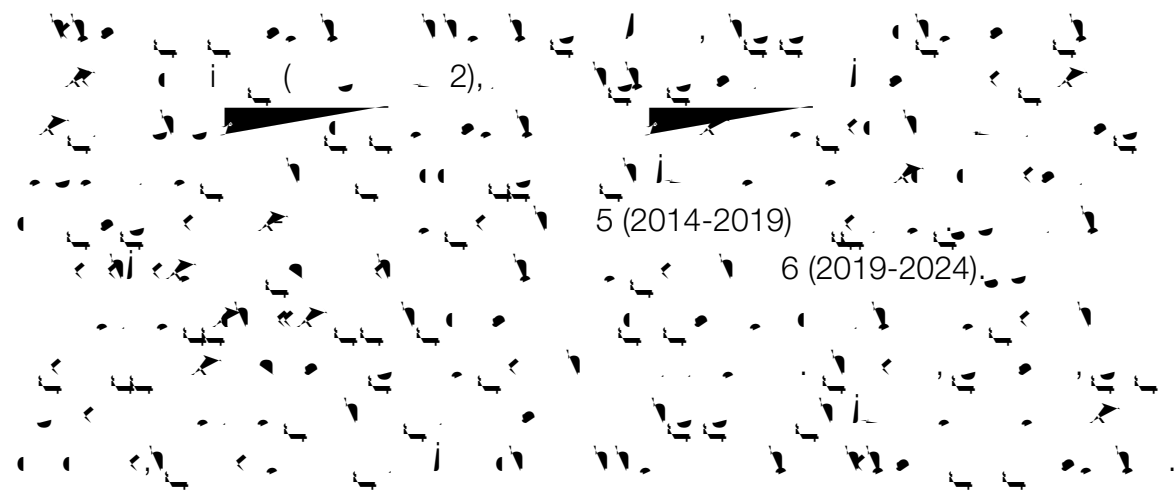
[REDACTED]

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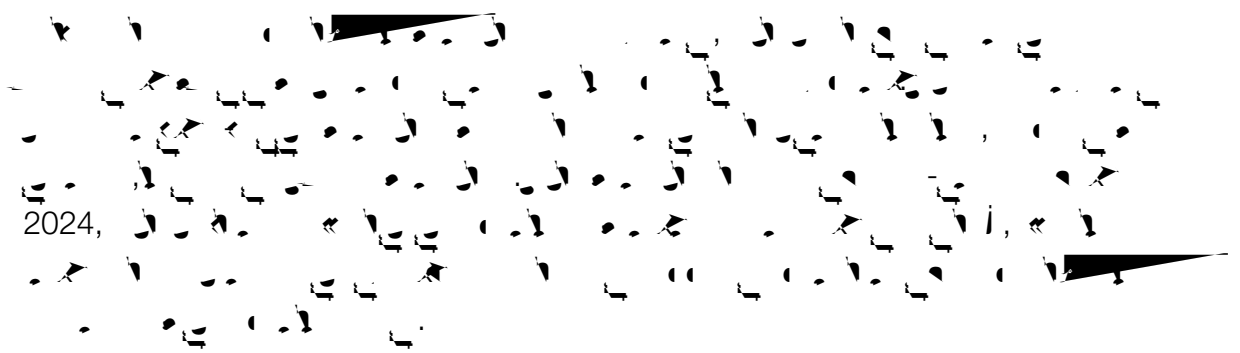


Surface Transport

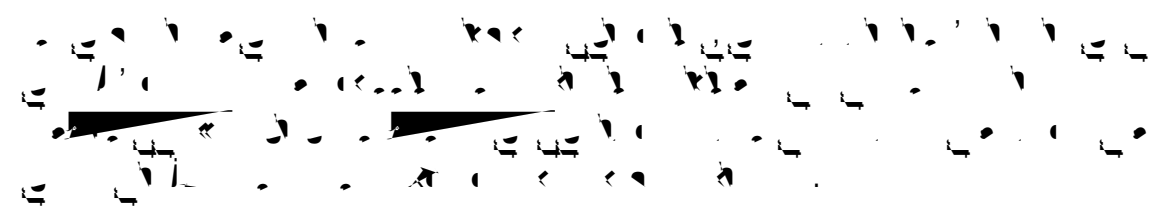
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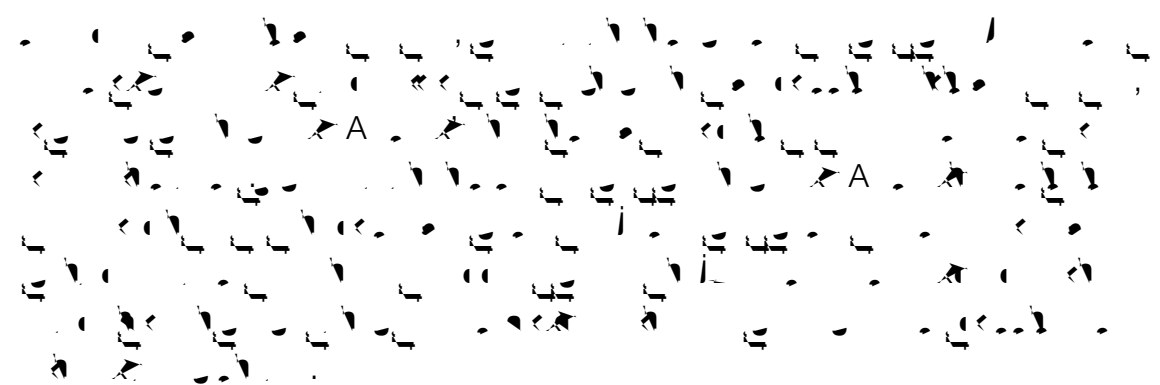
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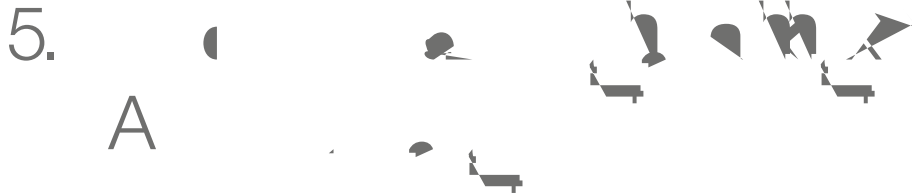
[Redacted text] assessment of need.

4.46

A. [Redacted text]

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[Redacted text] 2025 [Redacted text]



5.1 *Environmental Impact Assessment (EIA) as a tool for decision-making*

an opportunity to consider ways by which the plan can contribute to improvements in environmental, social and economic conditions, as well as a means of identifying and mitigating any potential adverse effects that the plan might otherwise have. By doing so, it can help make sure that the proposals in the plan are the most appropriate.⁵⁸



58 *Environmental Impact Assessment (EIA) as a tool for decision-making*

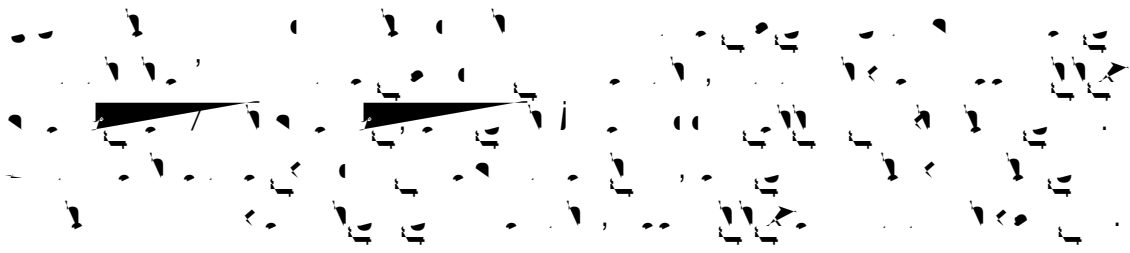
6. A 



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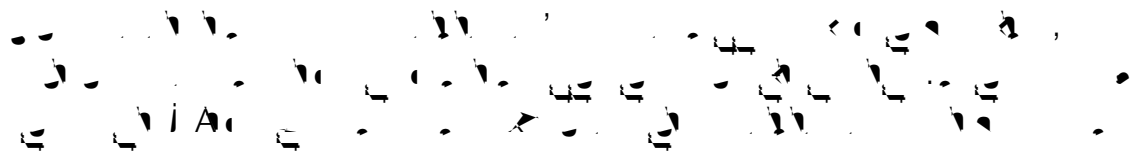


6.3

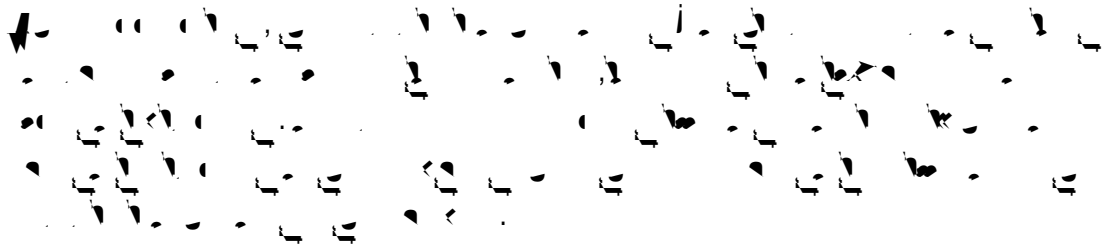
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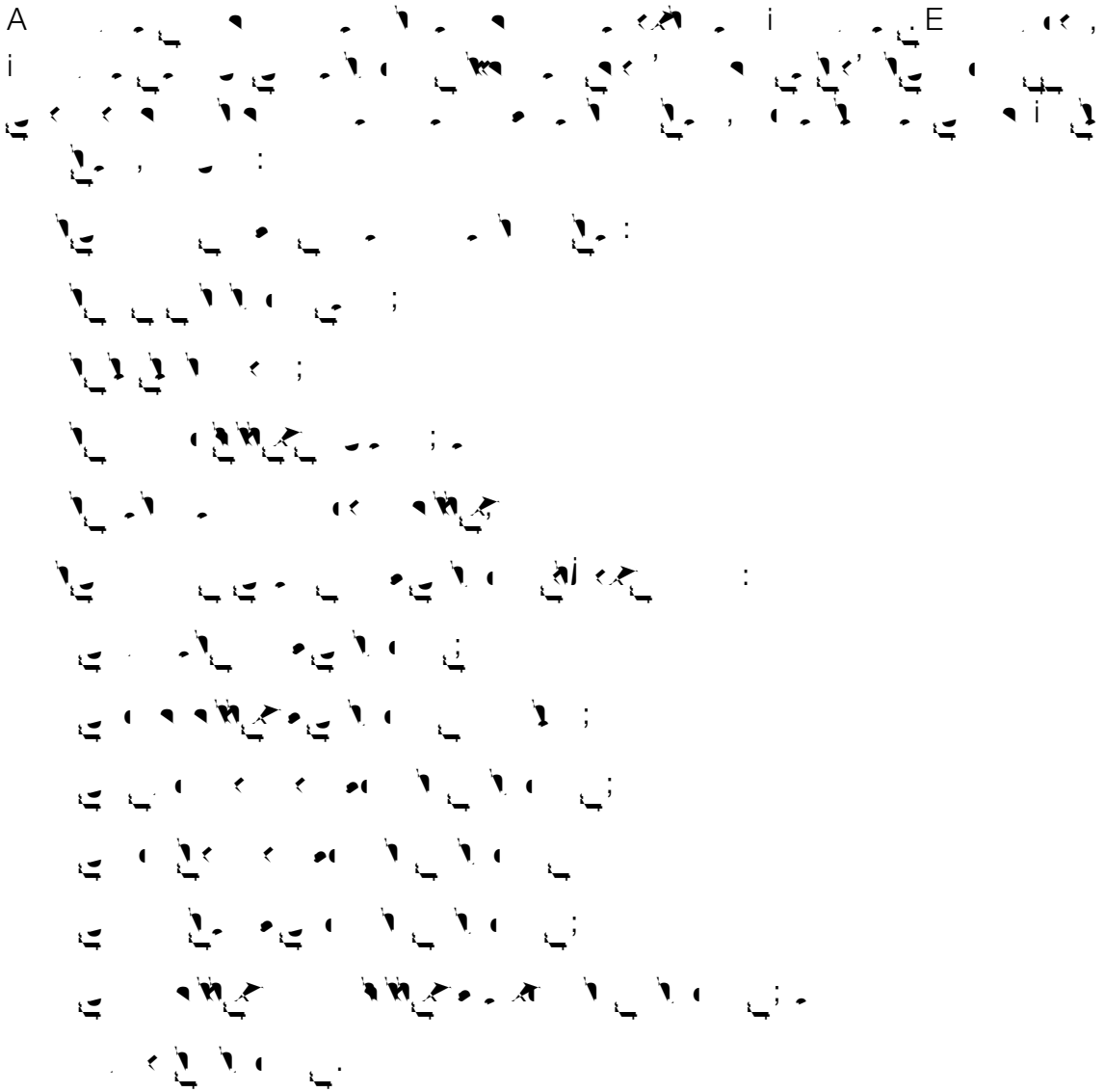
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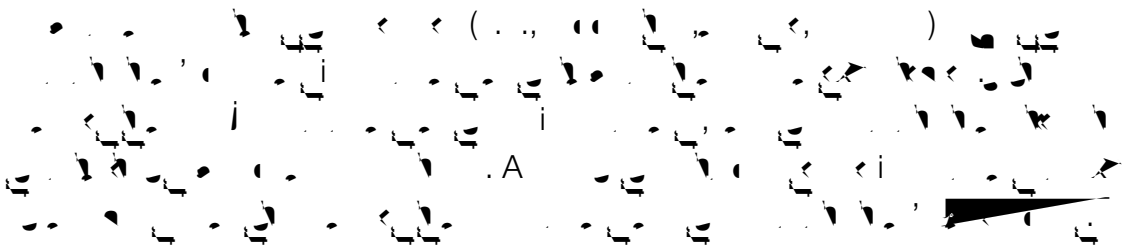
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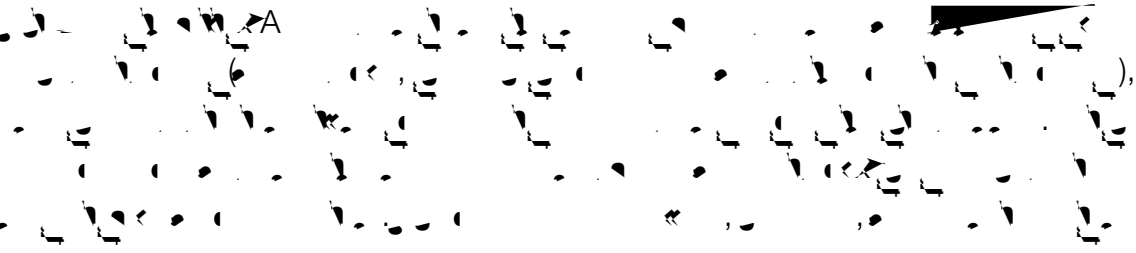
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6.9



6.10



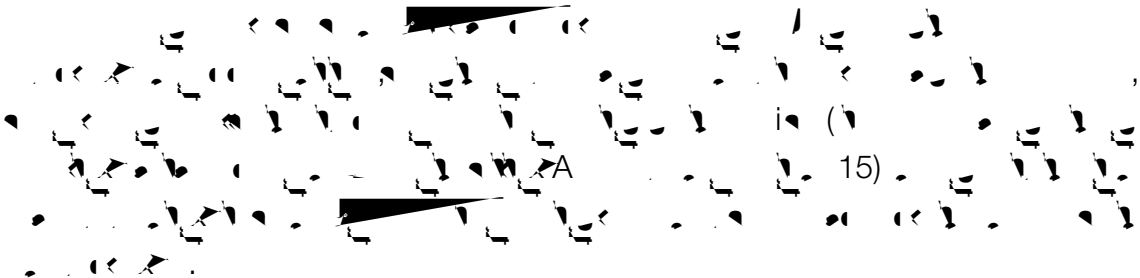
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7.1



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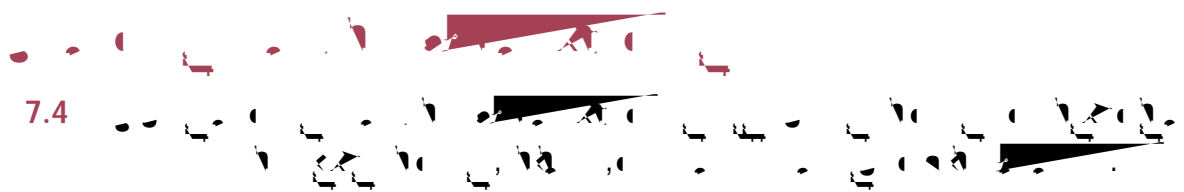


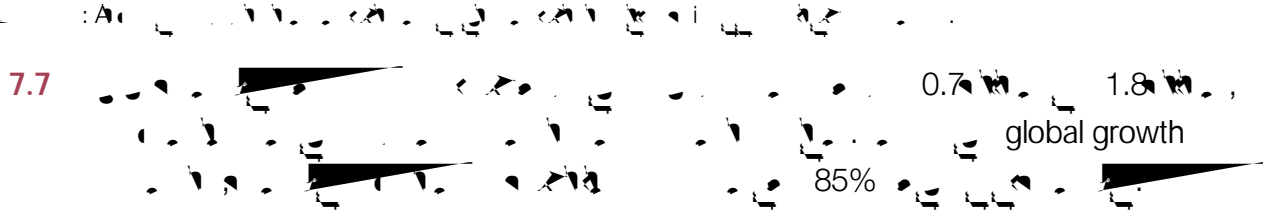
Table 7.1: Passenger, producer and government impacts, present value, (£ billion, 2014 prices)⁶⁰

7.6

Table 7.2: Total benefits from reduced delays, across scenarios, present value (£ billion), 2014 prices

	Total benefits	Total benefits (exc. foreign)
A	1.04	0.99
global growth	0.73	0.70
85%	1.81	1.43
global growth	1.13	0.93
85%	1.63	1.37

7.7



7.8



Table 7.3: PV GDP impacts all scenarios (£ billion, 2014 prices)

	Total impacts (exc. construction)
A	89
Scenario 1	115
Scenario 2	63
Scenario 3	127
Scenario 4	42

Source: Authors' calculations.

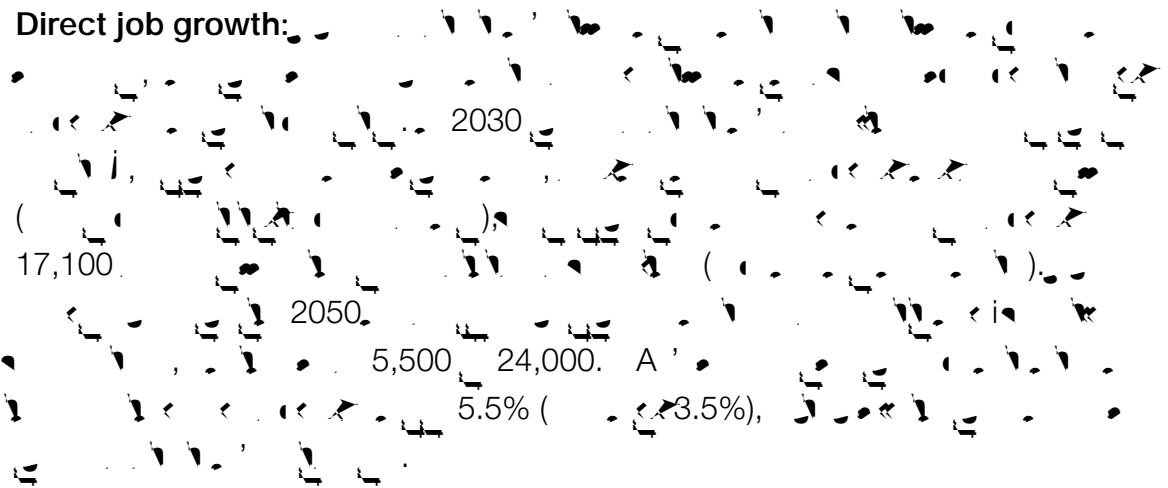
7.11

8. A

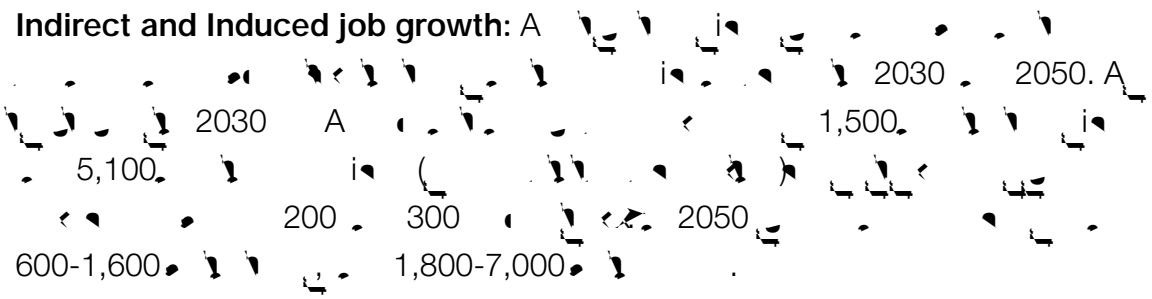


8.3  low-cost is king
global fragmentation

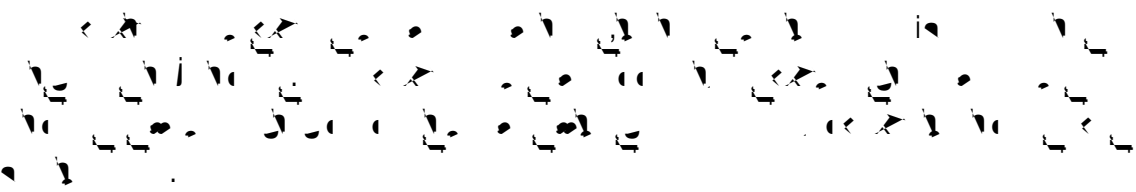
8.4 

8.5 Direct job growth: 

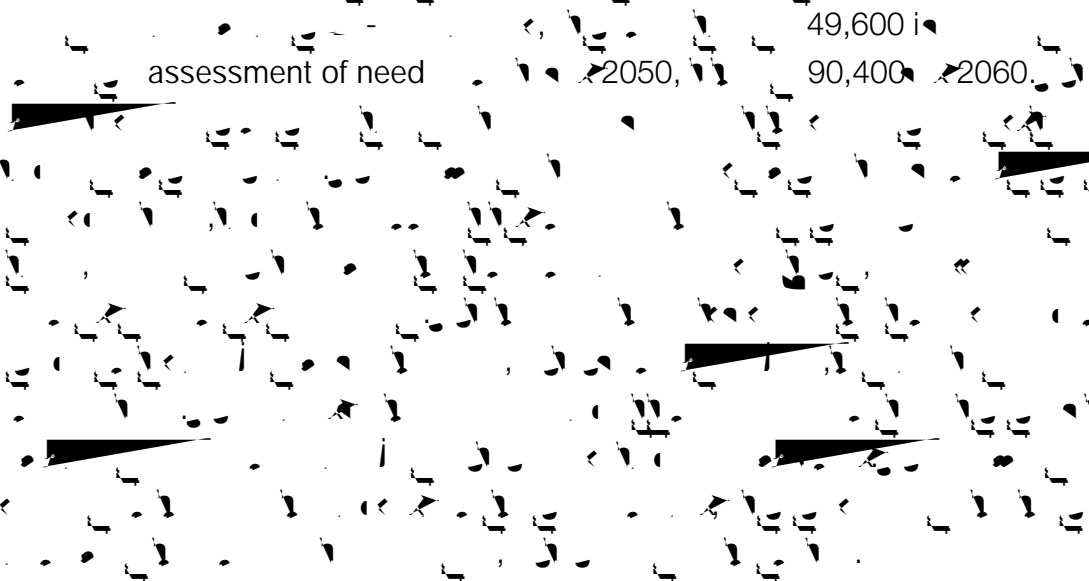
Year	2030	2050
Direct job growth	17,100	24,000
Change	-	5,500 (24.0%)
Rate	-	5.5% (3.5%)

8.6 Indirect and Induced job growth: 

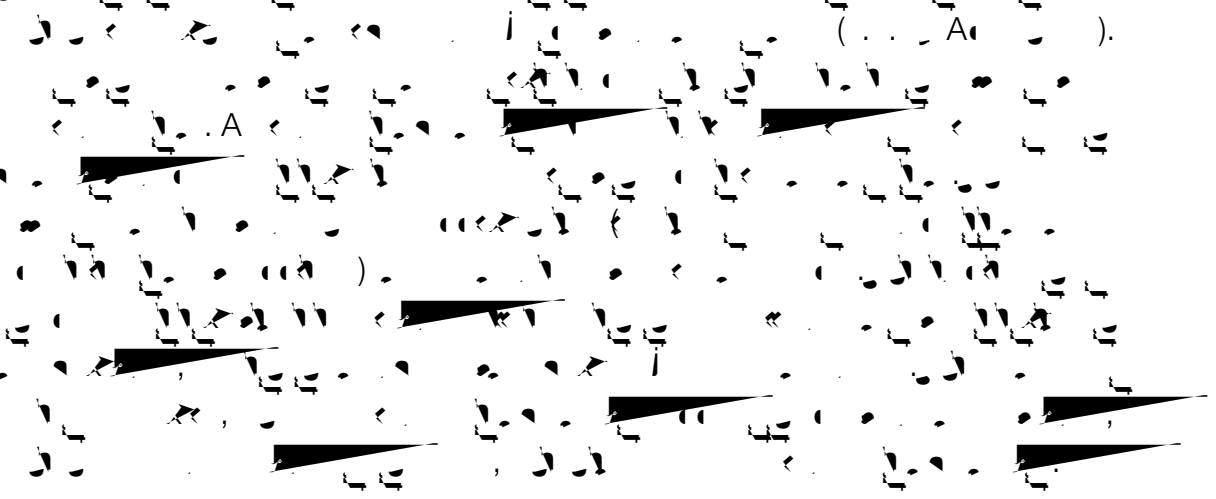
Year	2030	2050
Indirect and Induced job growth	5,100	1,500
Change	-	200-300
Range	600-1,600	1,800-7,000

8.7 

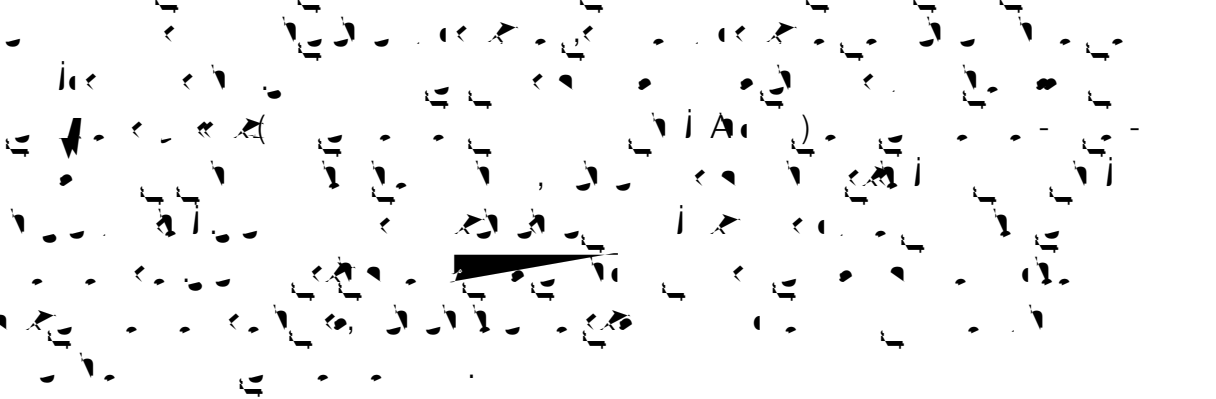
8.9 Catalytic effects: A



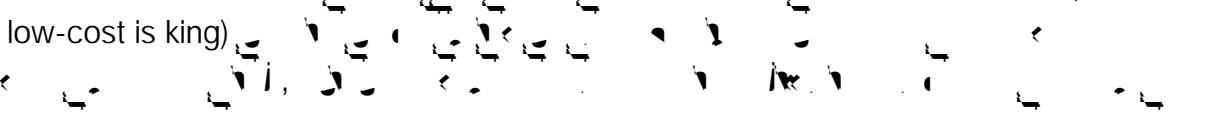
8.10

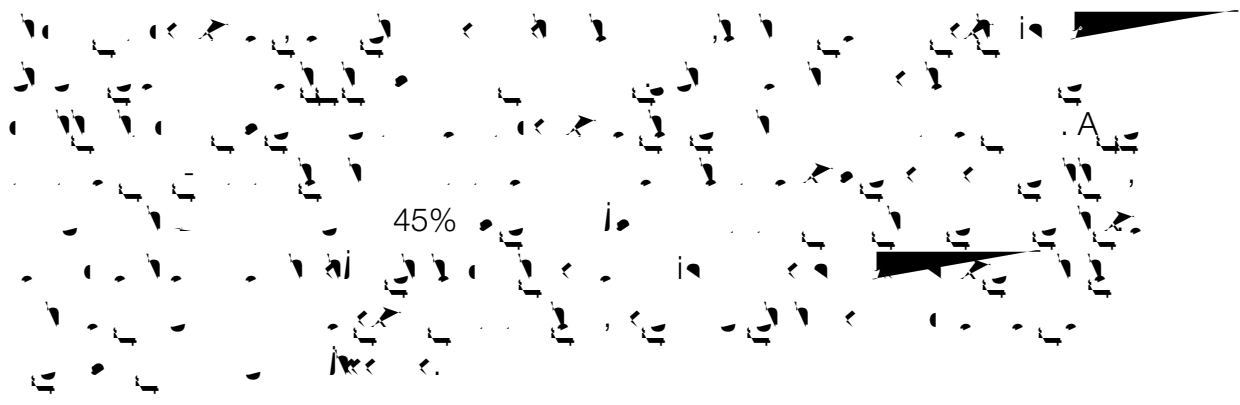


8.11

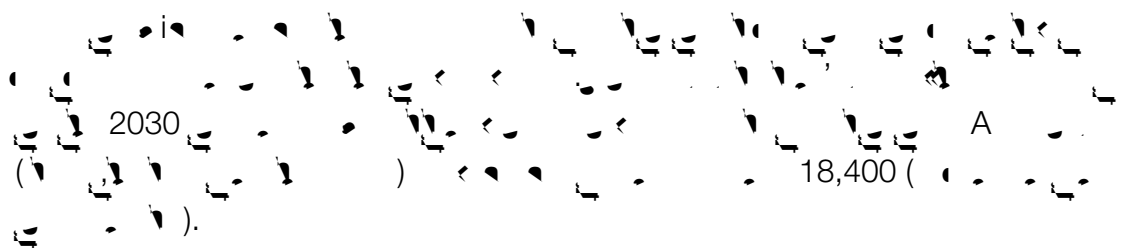


8.12

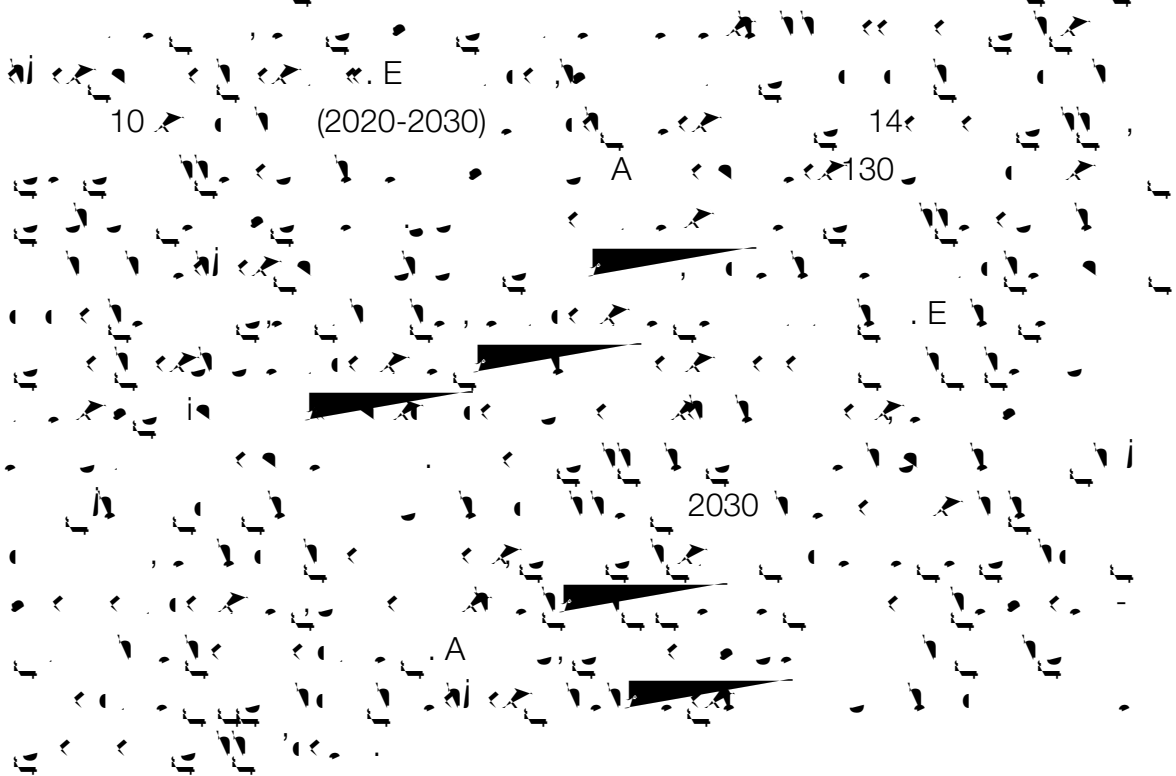




8.13

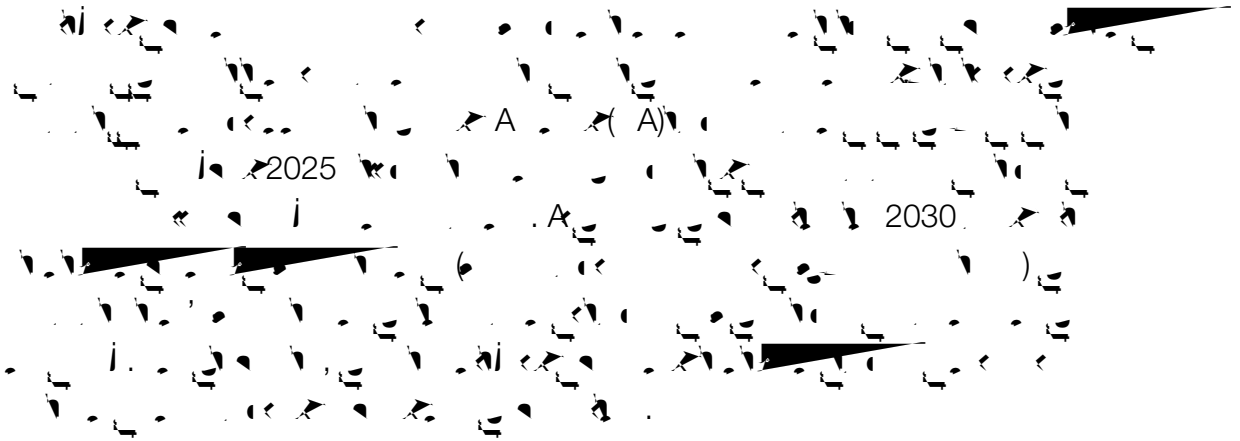


8.14

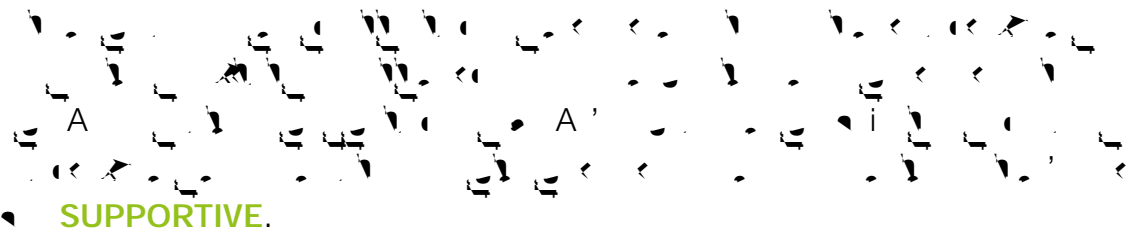


8.15

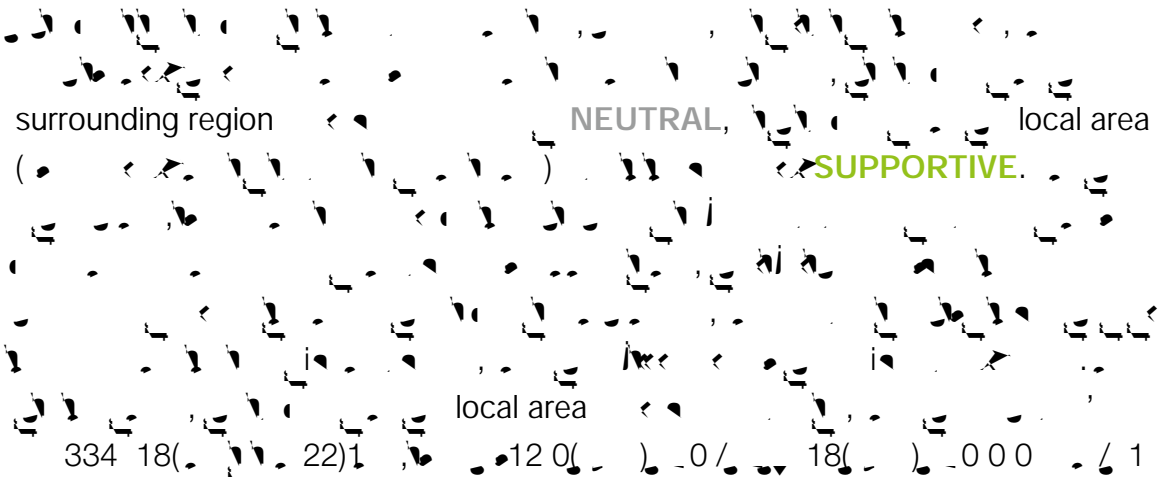




8.22



8.23



9. A

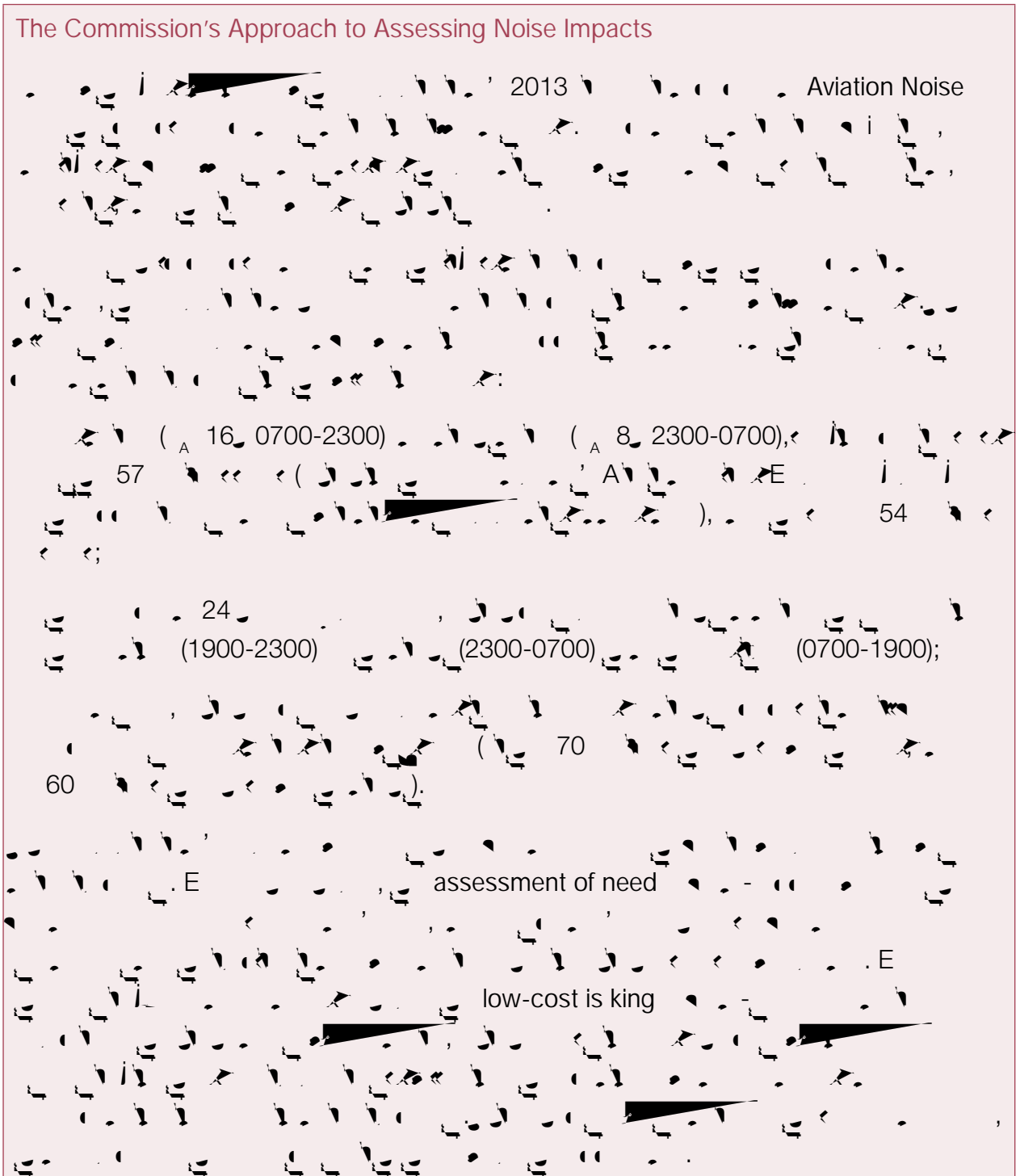


Figure 9.1: In the do something scenario, higher numbers of people are forecast to fall within the airport's noise footprint using both day and night measures



F
C
C

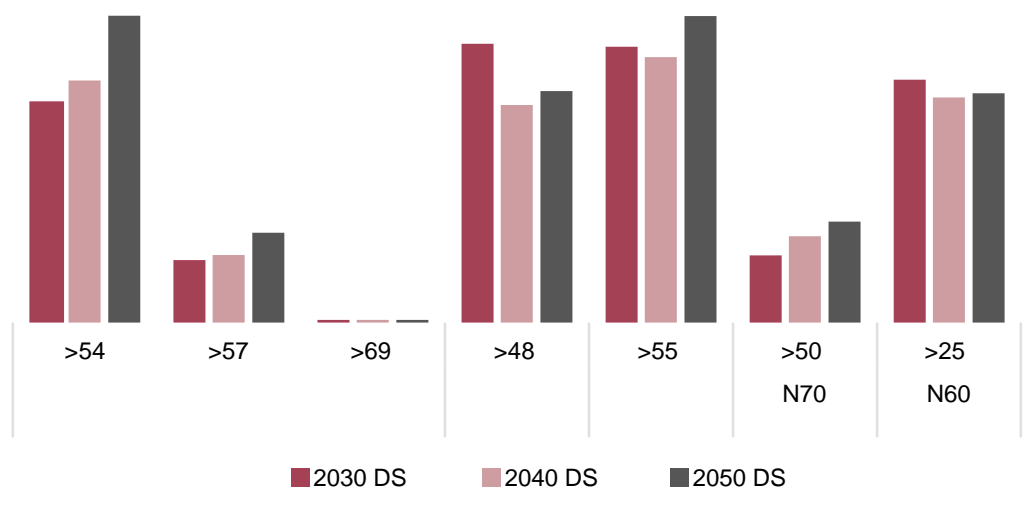
Figure 9.4: The population is predicted to increase marginally in most areas under the contours impacted by Gatwick Airport Second Runway except over northern reaches of Crawley

Figures 9.5 and 9.6: In 2040 and 2050, like 2030, higher numbers of people are forecast to fall within the noise footprint of the airport, across most



Figure 9.7: Increases in ATMs do not lead to a uniform growth in noise levels from 2030 to 2050

Gatwick Airport Second Runway, do something in 2030, 2040 and 2050, low end forecast (assessment of need, carbon-capped)



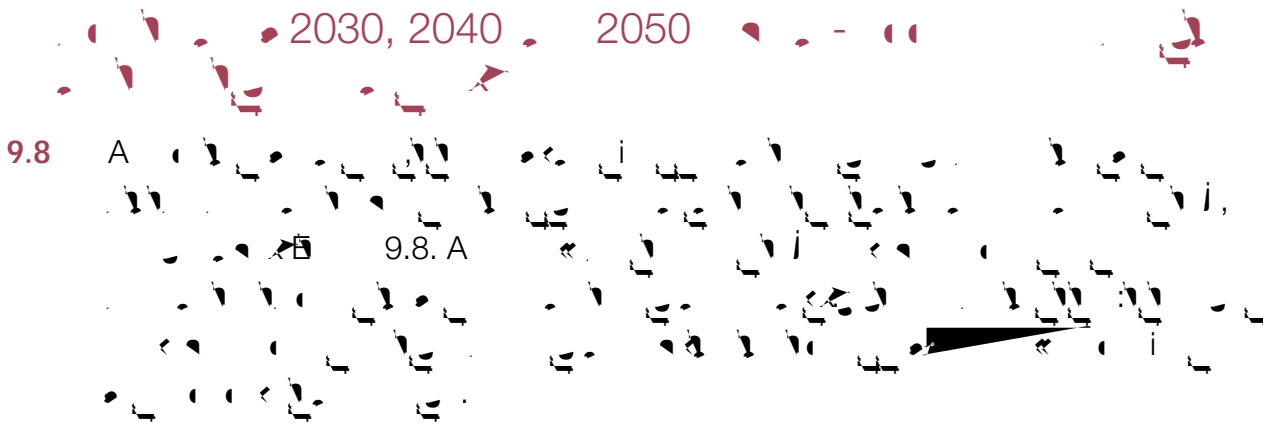
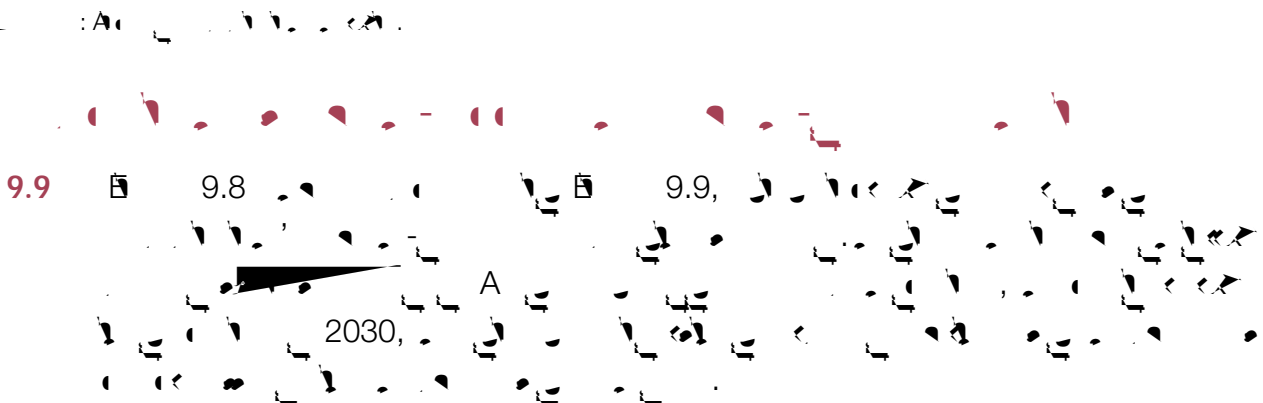
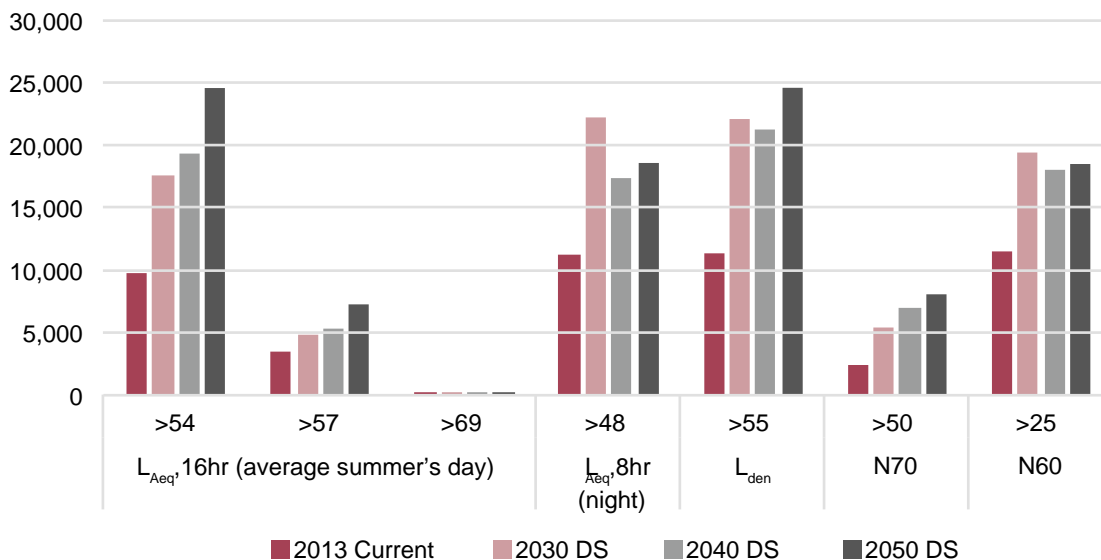
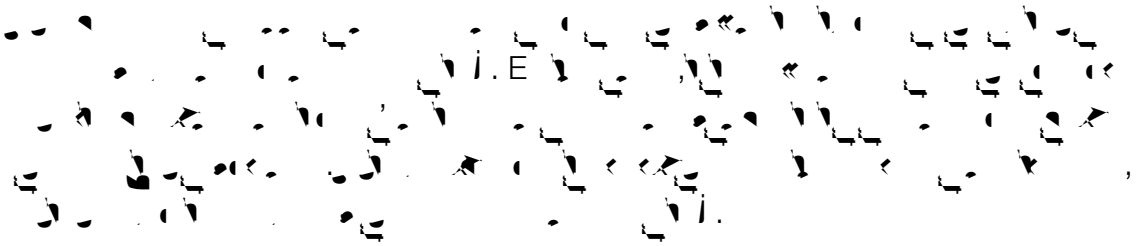


Figure 9.8: Across all metrics, the scheme is forecast to impact more people in 2050 than Gatwick Airport does currently

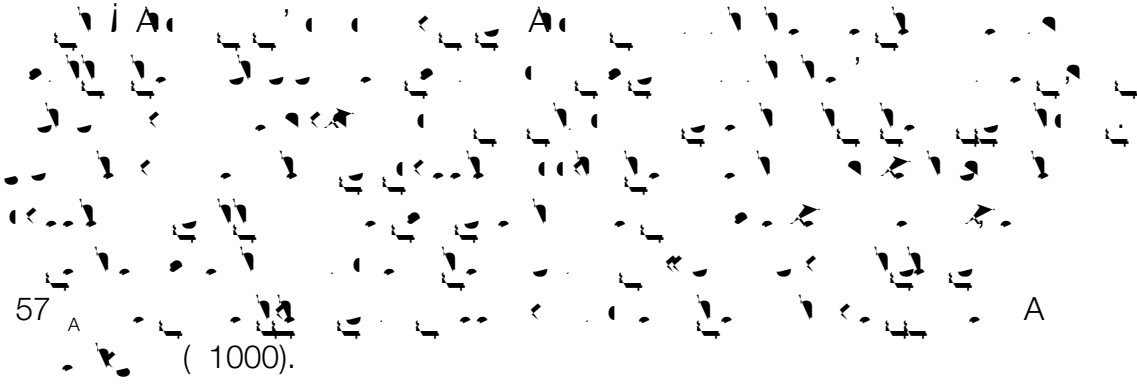
Gatwick Airport Second Runway, current day scenario versus do something in 2030, 2040 and 2050, low end forecast (assessment of need, carbon-capped)



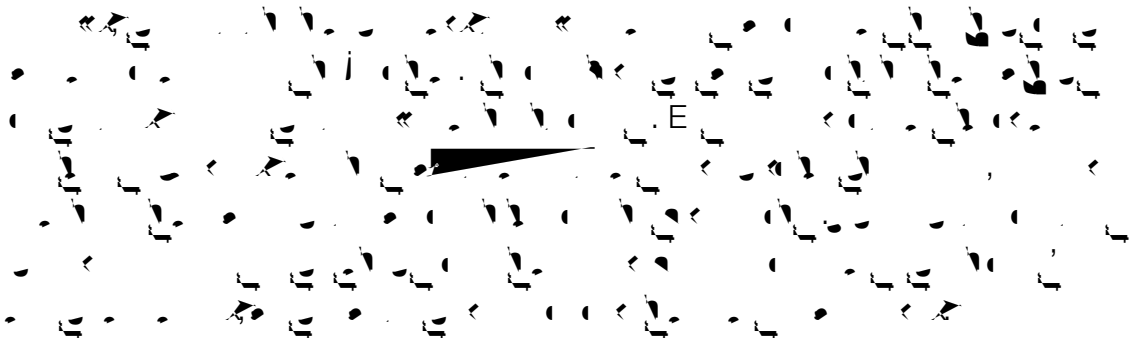
9.14



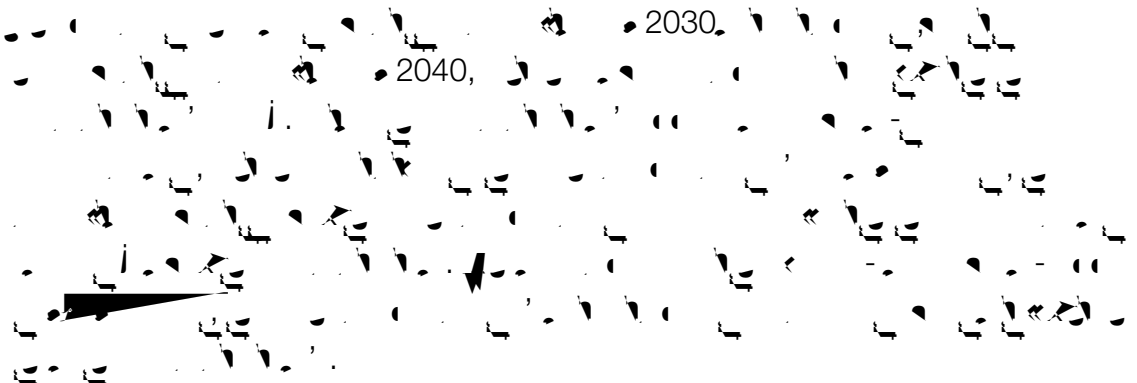
9.15



9.16



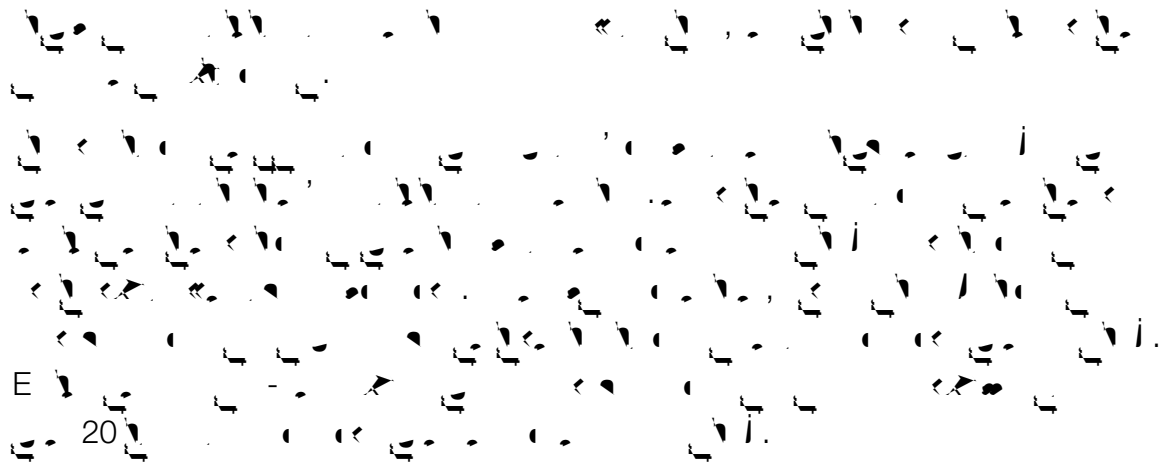
9.17



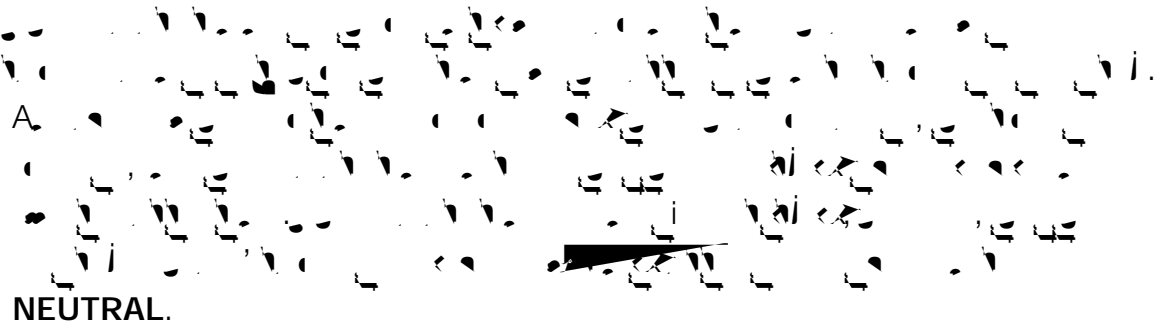
9.18

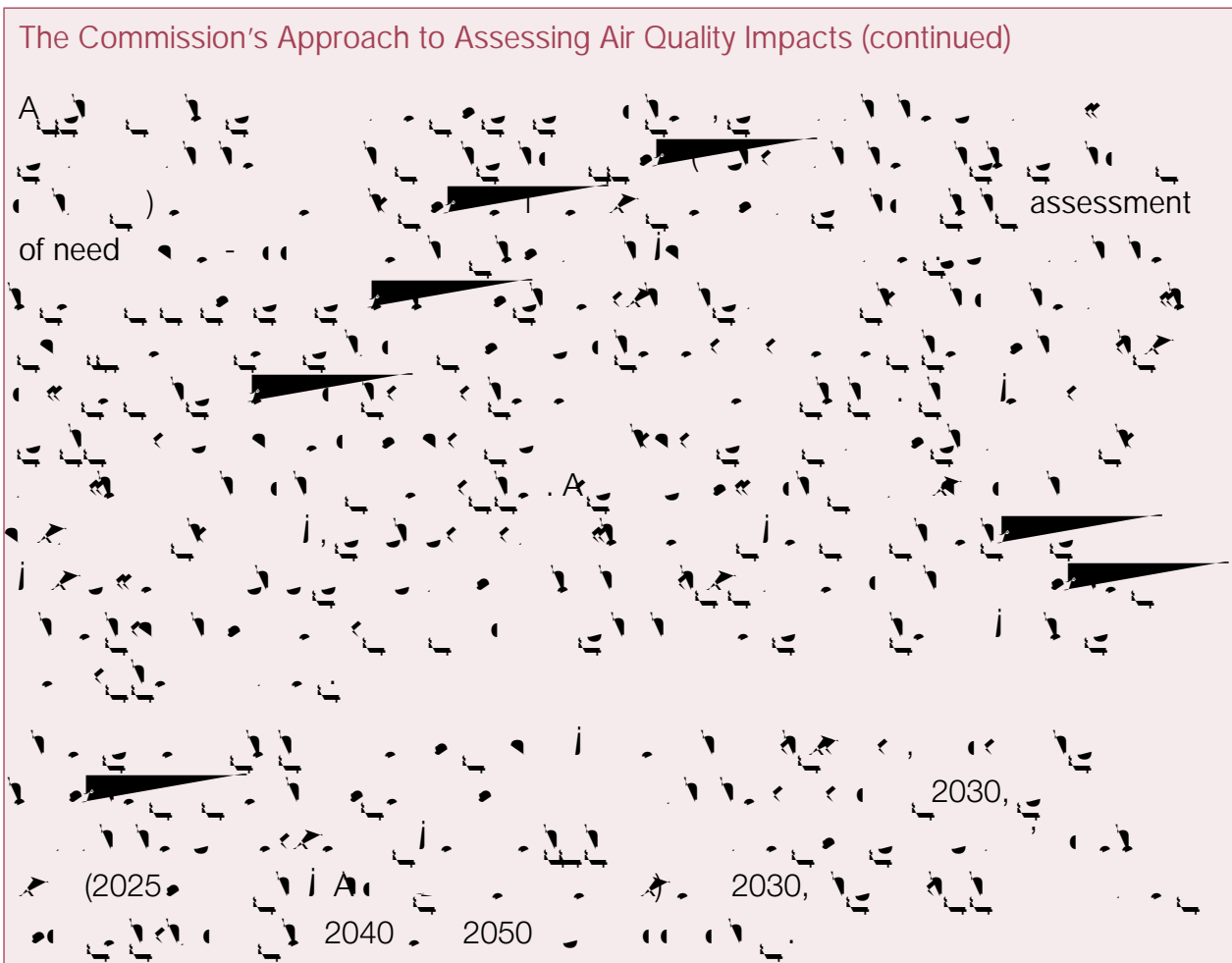


9.19



9.20

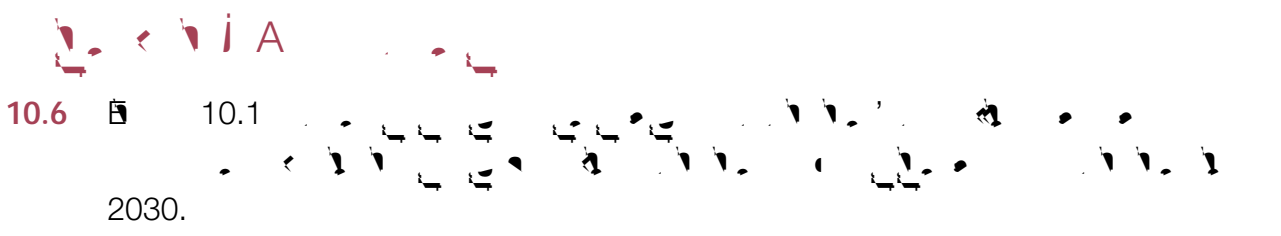
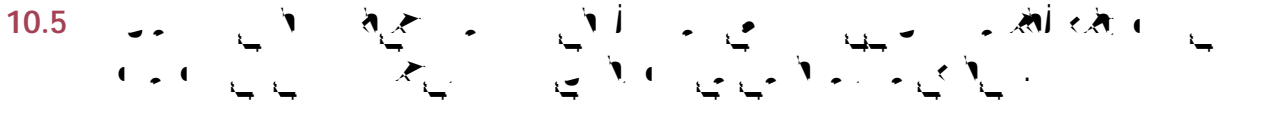
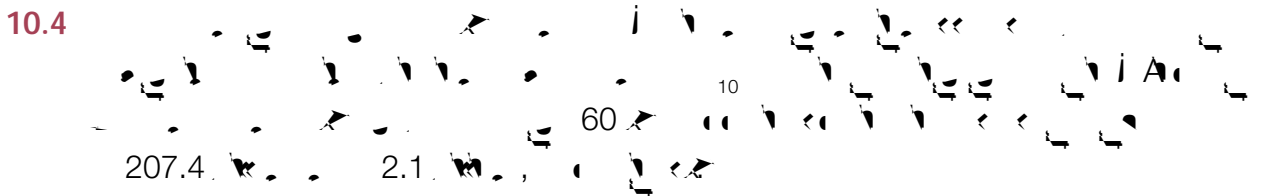
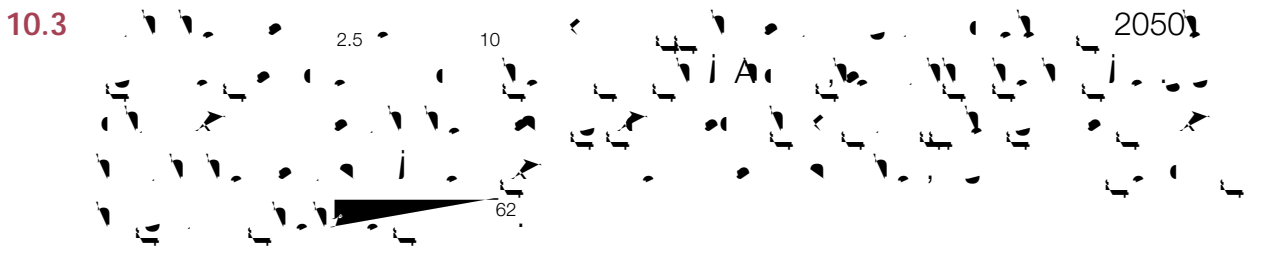
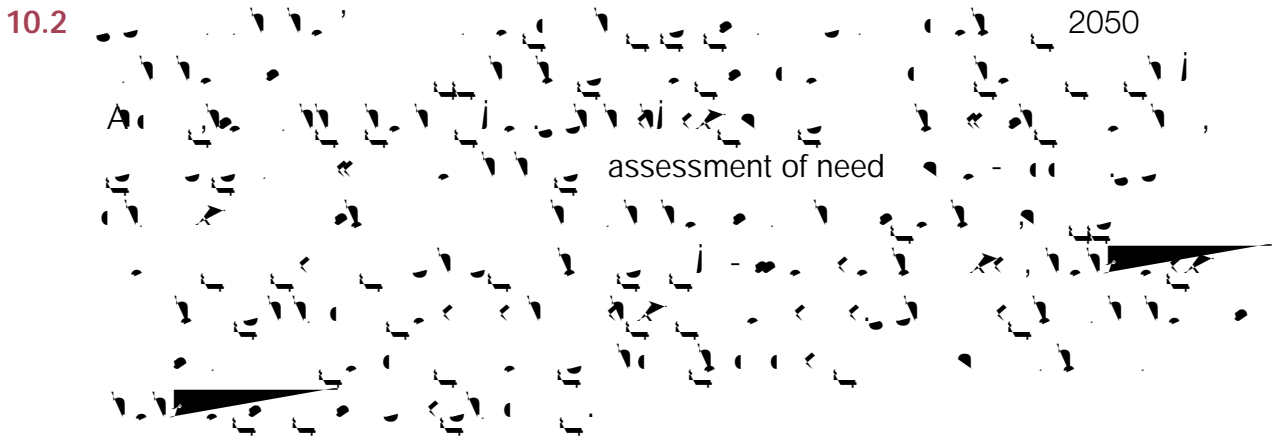




10.1 Air Quality Impacts Assessment for the Proposed Project

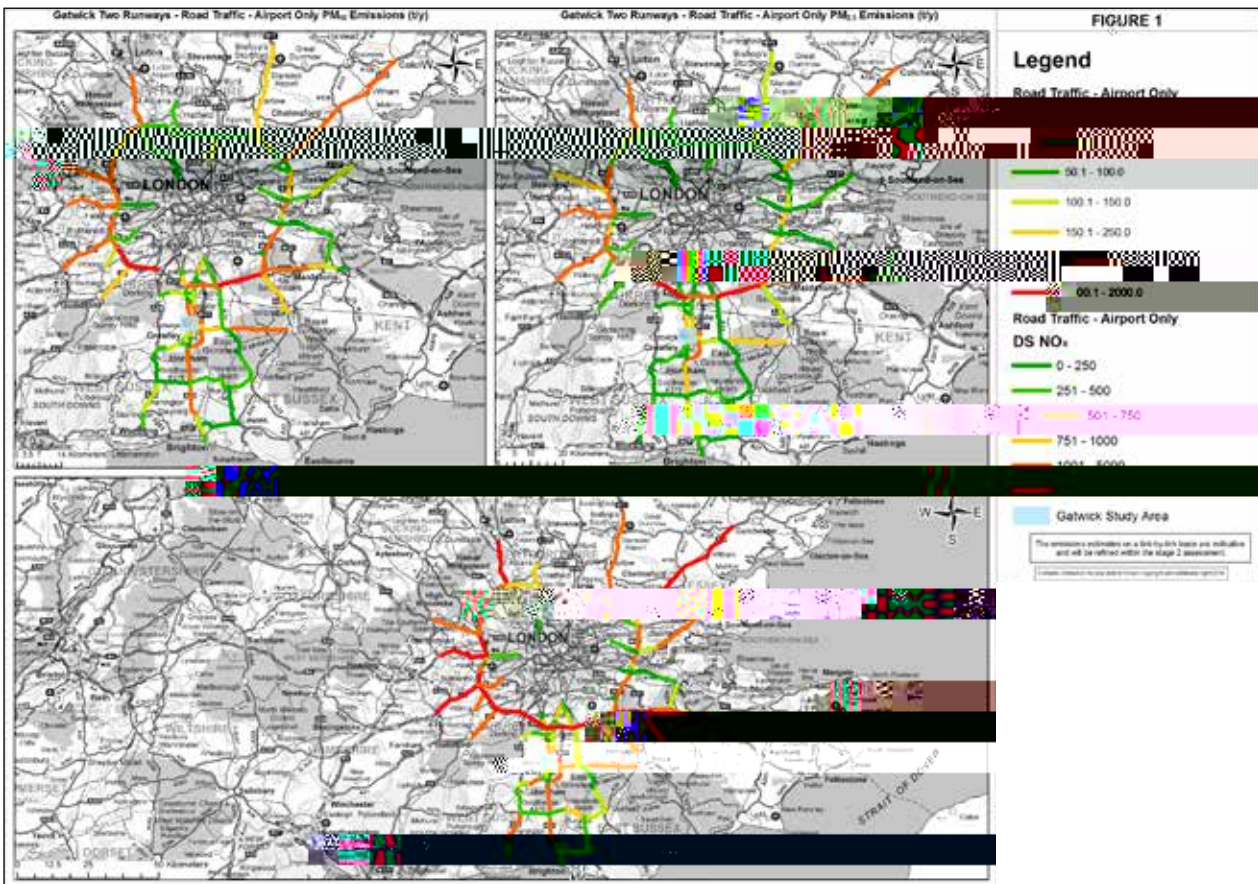
Table 10.1: Baseline NO_x, PM₁₀, PM_{2.5} annual projected mass emissions by source

Pollutant t/y	NO _x			PM ₁₀			PM _{2.5}		
	2030	2040	2050	2030	2040	2050	2030	2040	2050
Air Quality Assessment of Need	3,473.50	3,429.60	3,020.90	14.9	15.4	14.8	14.9	15.4	14.8
Air Quality Assessment of Impacts				18.2	17.6	16.5	12.7	12.4	11.6
Air Quality Assessment of Impacts and Mitigation Measures	475.3	468.2	452.1	18.3	18.4	18.8	18.3	18.4	18.8
Air Quality Assessment of Impacts and Mitigation Measures (2030, 2040, 2050)	176.8	169.9	165.1	10.9	10.5	10.2	9.5	9.1	8.8
Air Quality Assessment of Impacts and Mitigation Measures (2030, 2040, 2050) and Air Quality Assessment of Impacts and Mitigation Measures (2030, 2040, 2050)	261.8	281.9	296.9	28.7	30.9	32.6	16.9	18.2	19.1
Air Quality Assessment of Impacts and Mitigation Measures (2030, 2040, 2050) and Air Quality Assessment of Impacts and Mitigation Measures (2030, 2040, 2050) and Air Quality Assessment of Impacts and Mitigation Measures (2030, 2040, 2050)	4,387.40	4,349.60	3,935.00	91	92.9	92.8	72.3	73.5	73.1



62 E A (2.5) =727

Figure 10.1: Map of study area and baseline emissions for 2030



10.7

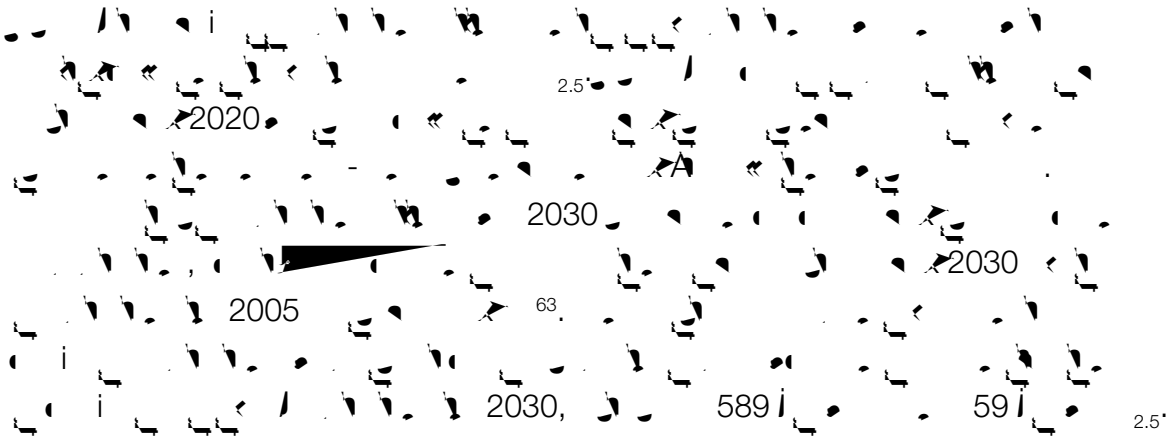
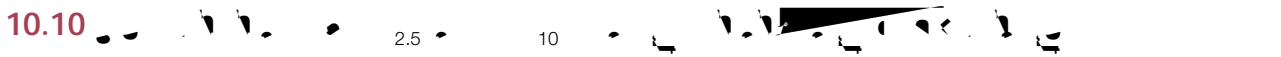
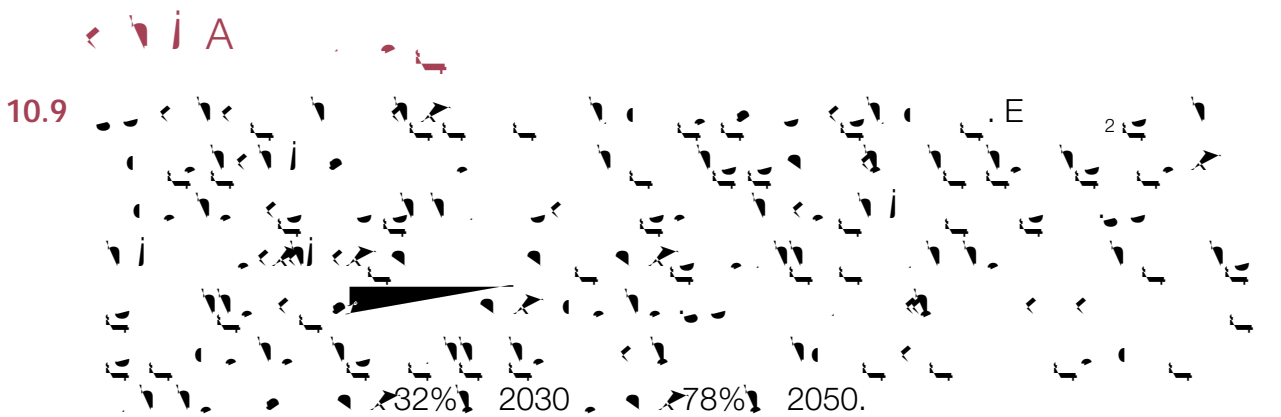
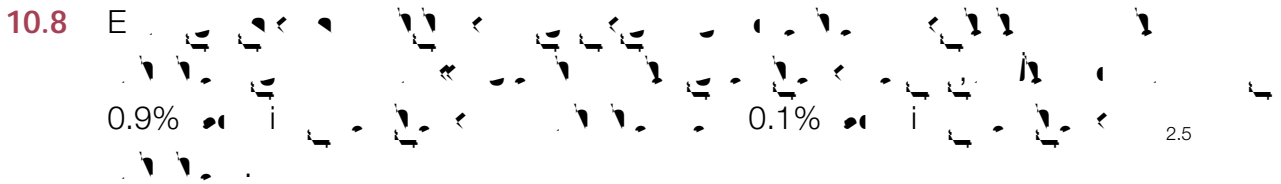


Table 10.2: Annual Mass Emissions of Gothenburg Protocol pollutants and projections, kt/y

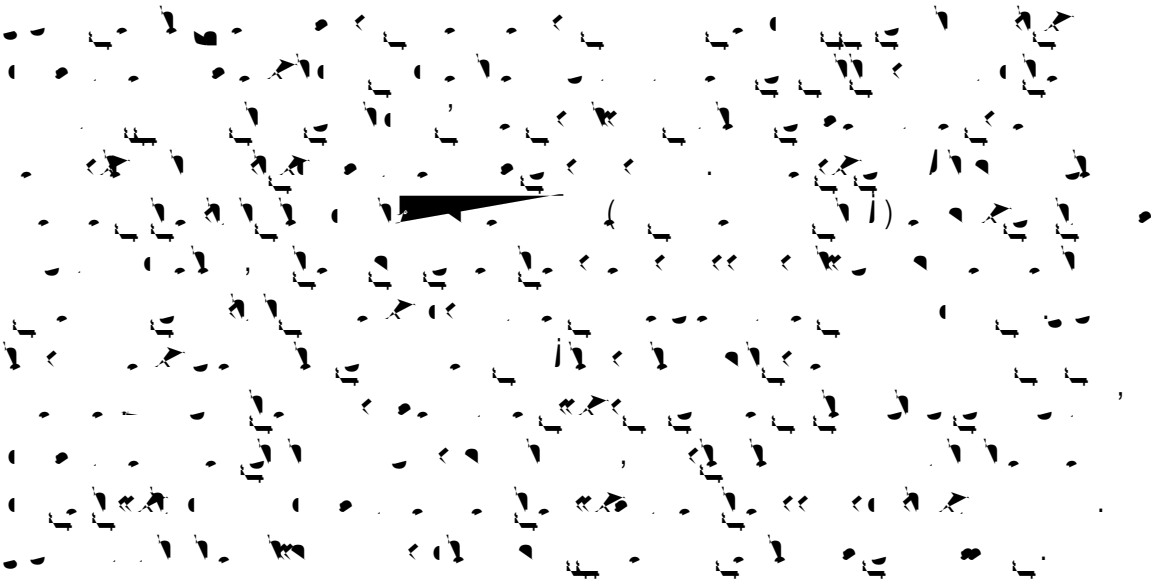
	NO _x	PM _{2.5}
2020	711	57
A 2030	589	59
A 2030	4.4	0.072
A 2030	0.6	0.013
2030	0.9	0.1



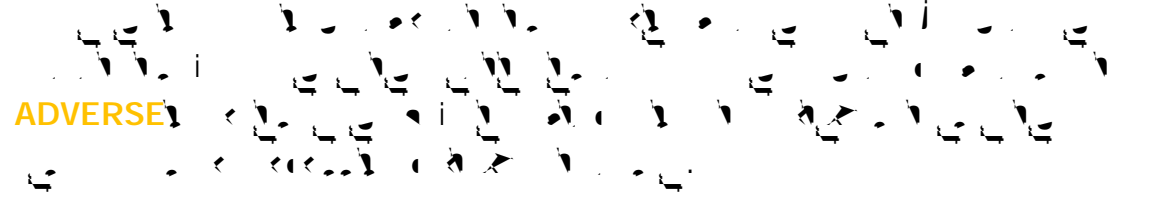
10.16



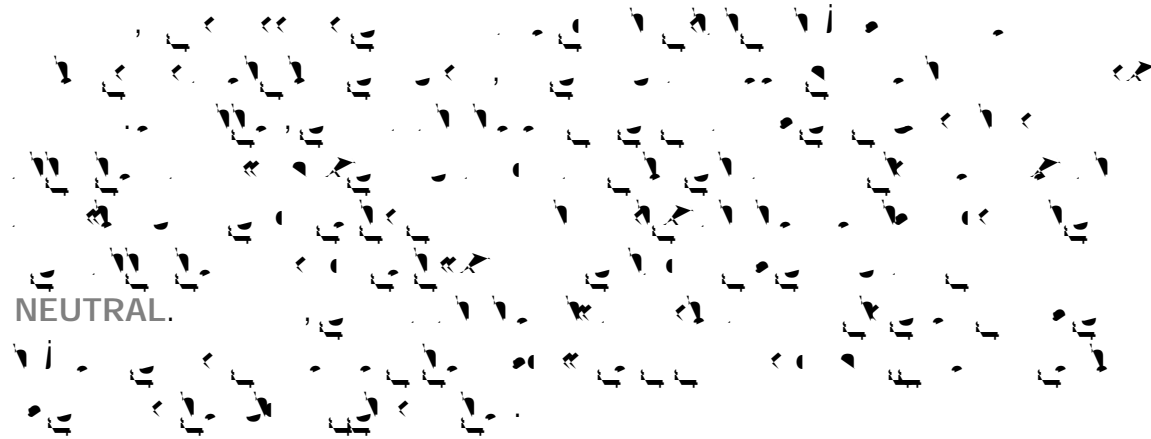
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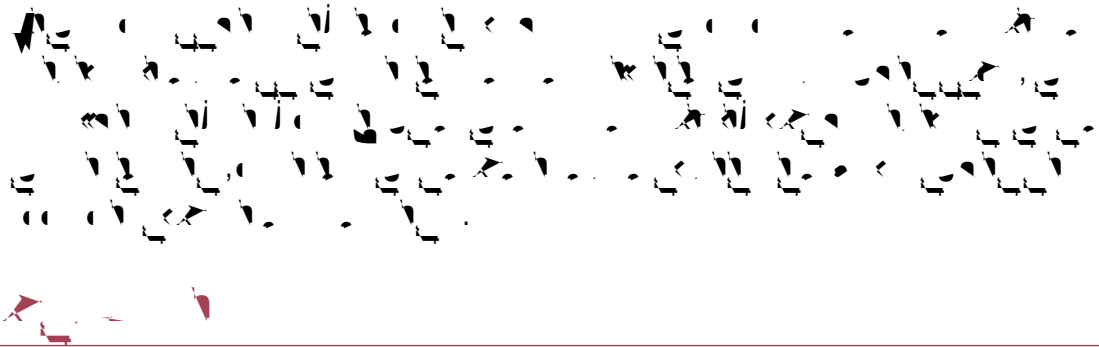
10.18



10.19



11.4



What are ecosystem services?

 This block contains the same aerial photograph as above, but with a red rectangular box overlaid on the right side. Inside the red box, there is a white rectangular box. The white box contains the text 'What are ecosystem services?' and a large, faint, light blue watermark that reads 'A'. The red box highlights the building and the road area.

11.5

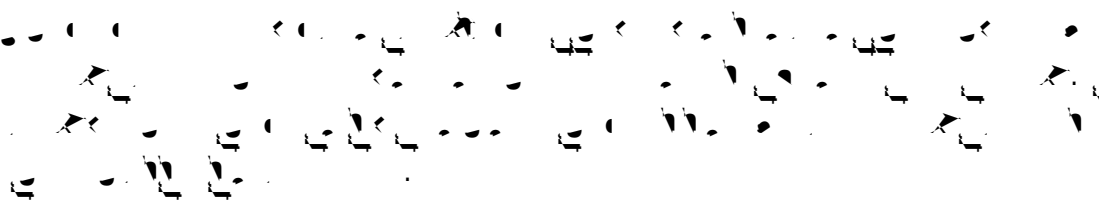


Table 11.2: Monetisation of ecosystem services impacts with respect to the LGW-2R scheme



ADVERSE.⁶⁴

64


A 

Table 12.1: Carbon assessment findings for Gatwick Airport under the LGW-2R proposal, change in mtCO₂

Area of Emissions	2030	2040	2050	Additional tCO ₂ over 60 year appraisal period	Total CO ₂ over 60 year appraisal period
Air travel	0.3	0.7	1.5	69.0	307.3
Ground movements component	0.02	0.05	0.09	4.4	12.7
Passenger surface access	0.03	0.07	0.1	6.6	25.1
Airport operations energy & fuel use	0.01	0.01	0.01	0.8	2.4
Total operational CO₂ emissions	0.4	0.8	1.6	76.2	334.7
Construction of airport facilities & SA infrastructure*	- /	- /	- /	3.9	6.9

* - /

12.6

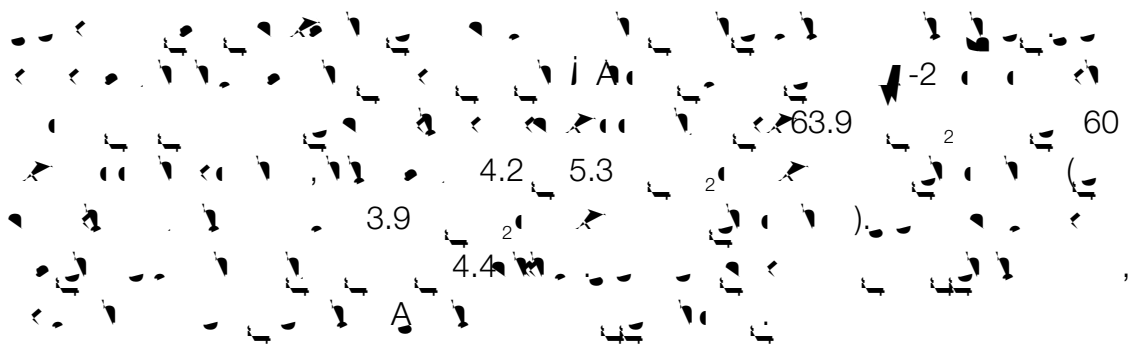
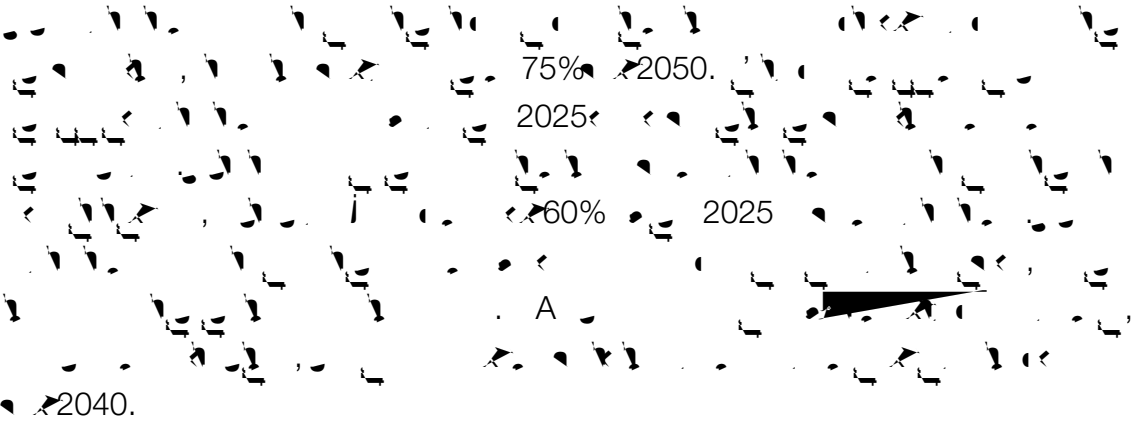


Figure 12.1⁶⁵

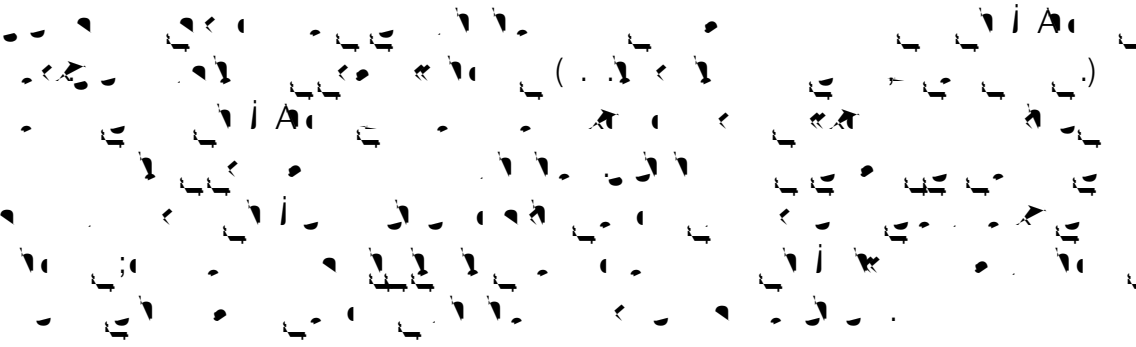
Figure 12.2⁶⁶

.....

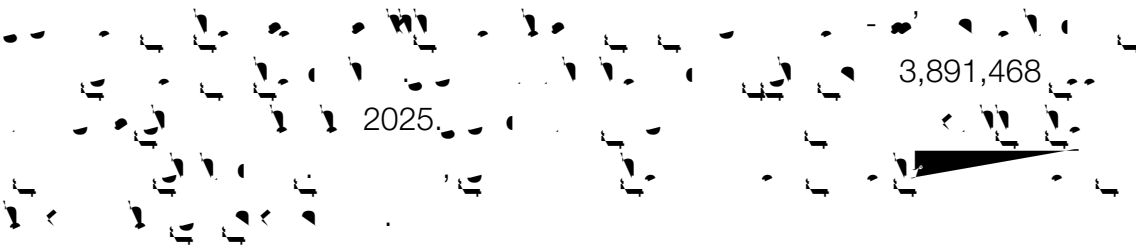
12.10



12.11



12.12



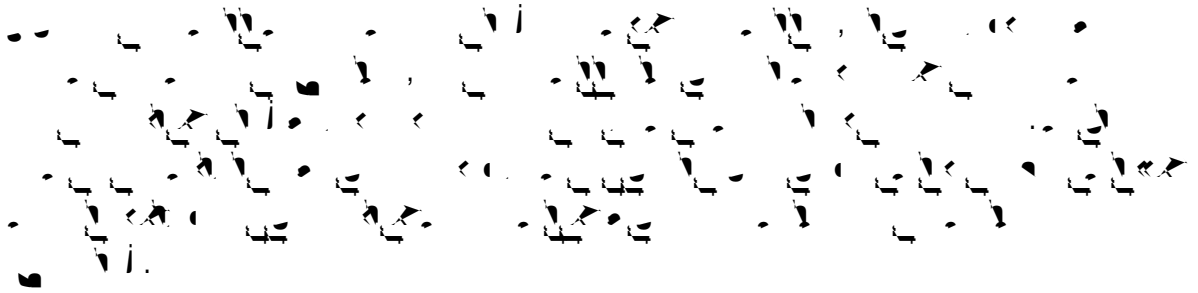
12.13

ADVERSE
ADVERSE
HIGHLY

13. A



13.1



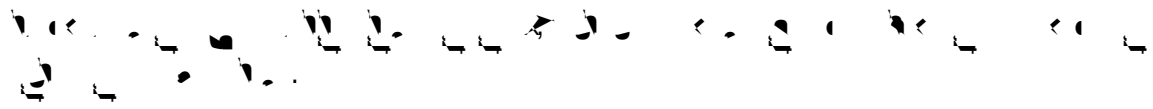
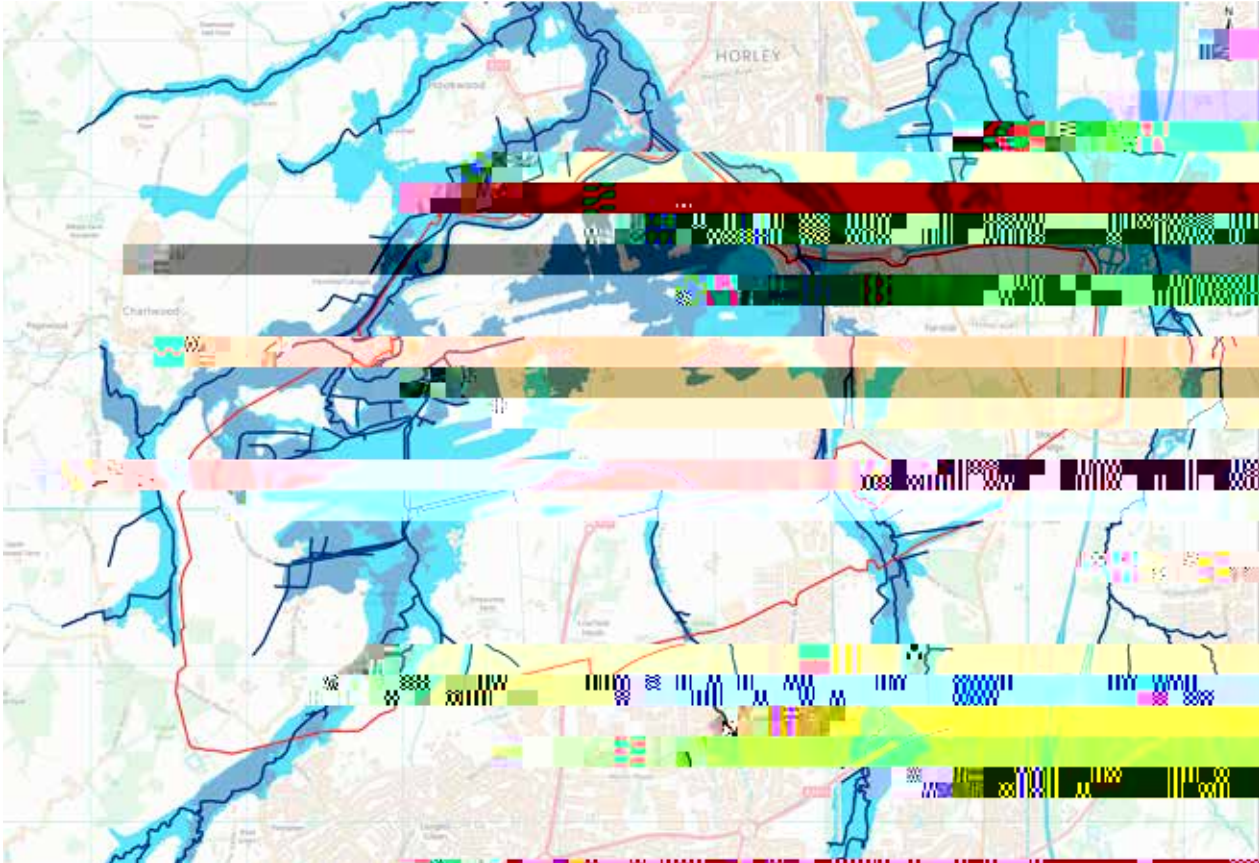


Figure 13.1: Environment Agency Indicative Flood Map showing Scheme Boundary (red line)



Key to flood risk map:

	ER	3	1% (1 in 100)	
	ER	2	1% (1 in 100) to 0.1% (1 in 1,000)	
	ER	1	0.1% (1 in 1,000)	
	ER		(none indicated on map)	



13.5



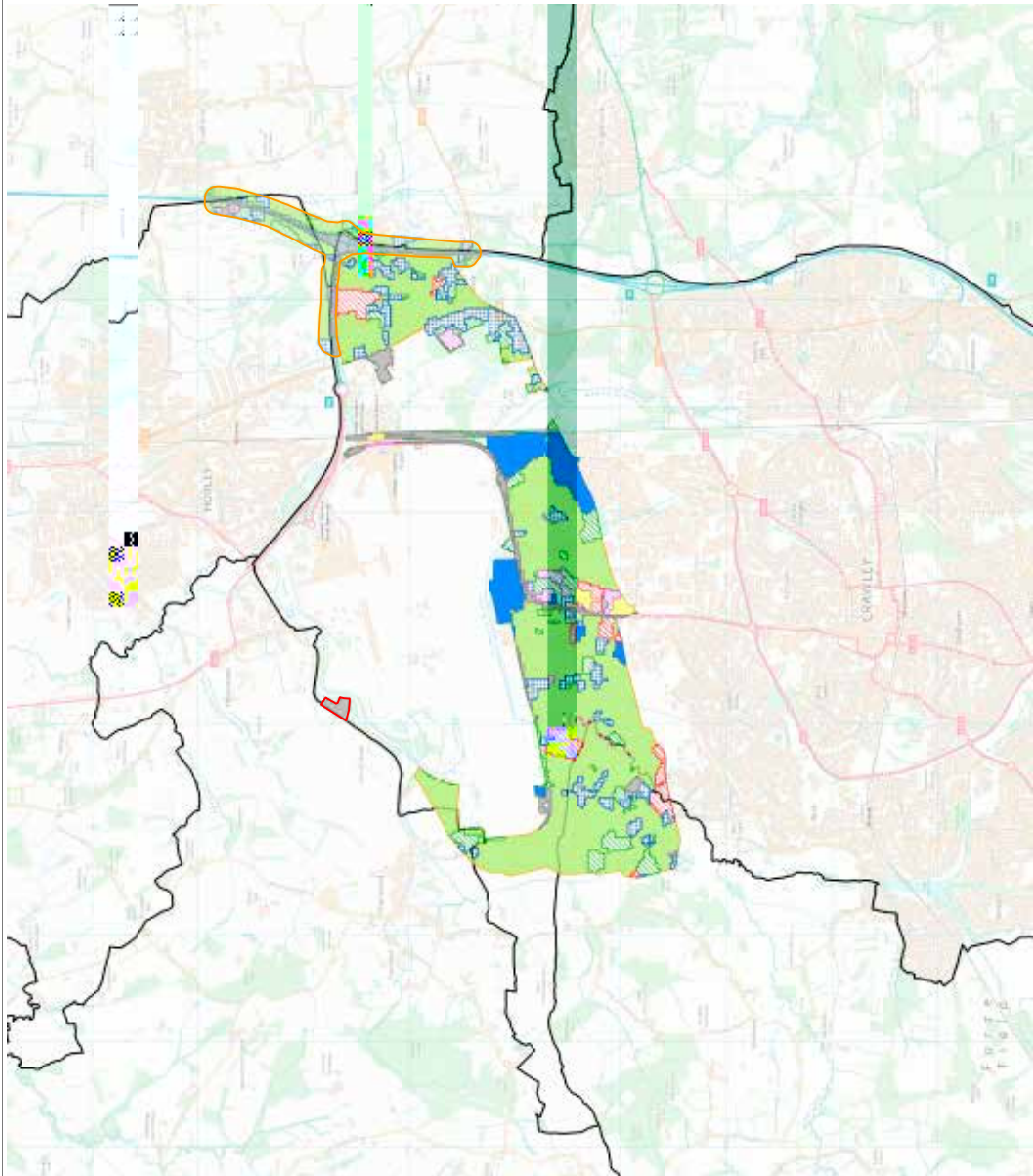
14. A

14.1

14.2

The diagram consists of a grid of nodes connected by arrows. The nodes are arranged in a roughly rectangular pattern. Several nodes are labeled with numbers: 624, 78, 168, and 60. There are also nodes labeled with letters: A and E. The arrows indicate a flow or relationship between the nodes, generally pointing from left to right and top to bottom. The overall structure appears to be a directed graph or a flowchart.

Figure 14.2: LGW-2R land take by land type

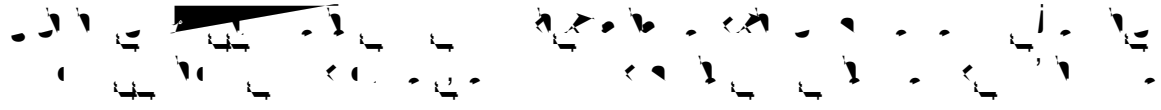


14.8 14.9 14.10

15. A



15.1



Contact Information

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Email: airports.enquiries@airports.gsi.gov.uk