

Farnborough Airport FASI-S ACP

Stage 2 IOA Technical Appendix

Version	Date	
1.0	September 2024	Original
2.0	November 2024	Page 4 updated following CAA Stage 2 Gateway feedback

All options in this document are subject to change throughout the airspace change process as options are matured in detail and refined in accordance with safety requirements, network integration, design principles, appraisals, stakeholder engagement and consultation.

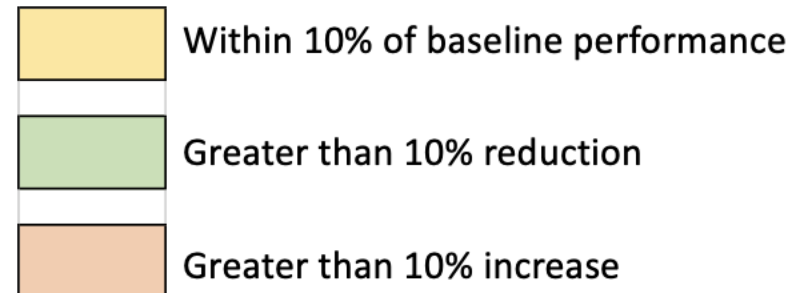
Introduction

This technical appendix supplements analysis presented in Farnborough Airport's Stage 2B Initial Options Appraisal submission document.

Further information around the development of the airspace change options, our methodology for appraisal, and the assessments undertaken for each option, are included in our Stage 2A and Stage 2B documents published on the CAA Airspace Change Portal.

Please note that all options are subject to change and refinement as we progress through the airspace change process.

Data is shown relative to the baseline, where the baseline is 100%. Owing to the immaturity of the designs and uncertainty within the wider network designs at this stage, outcomes have been categorised according to the shading to the right



GLEX 60dB L_{AMAX} and 65dB L_{AMAX}



Global Express (GLEX)


Option 1 (Do Nothing)

65dB L_{AMAX}

60dB L_{AMAX}



Option 2A

 65dB L_{AMAX}

 60dB L_{AMAX}



GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	2A
ARRIVALS	6	100%	96%
GLEX 60 dB LAMAX Population Count	24	100%	97%
DEPARTURES	6	100%	100%
GLEX 60 dB LAMAX Population Count	24	100%	100%
AVERAGE CHANGE			-2%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	2A
ARRIVALS	6	100%	93%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	100%
GLEX 65 dB LAMAX Population Count	24	100%	100%
AVERAGE CHANGE			-2%

Option 2B

65dB L_{AMAX}

60dB L_{AMAX}

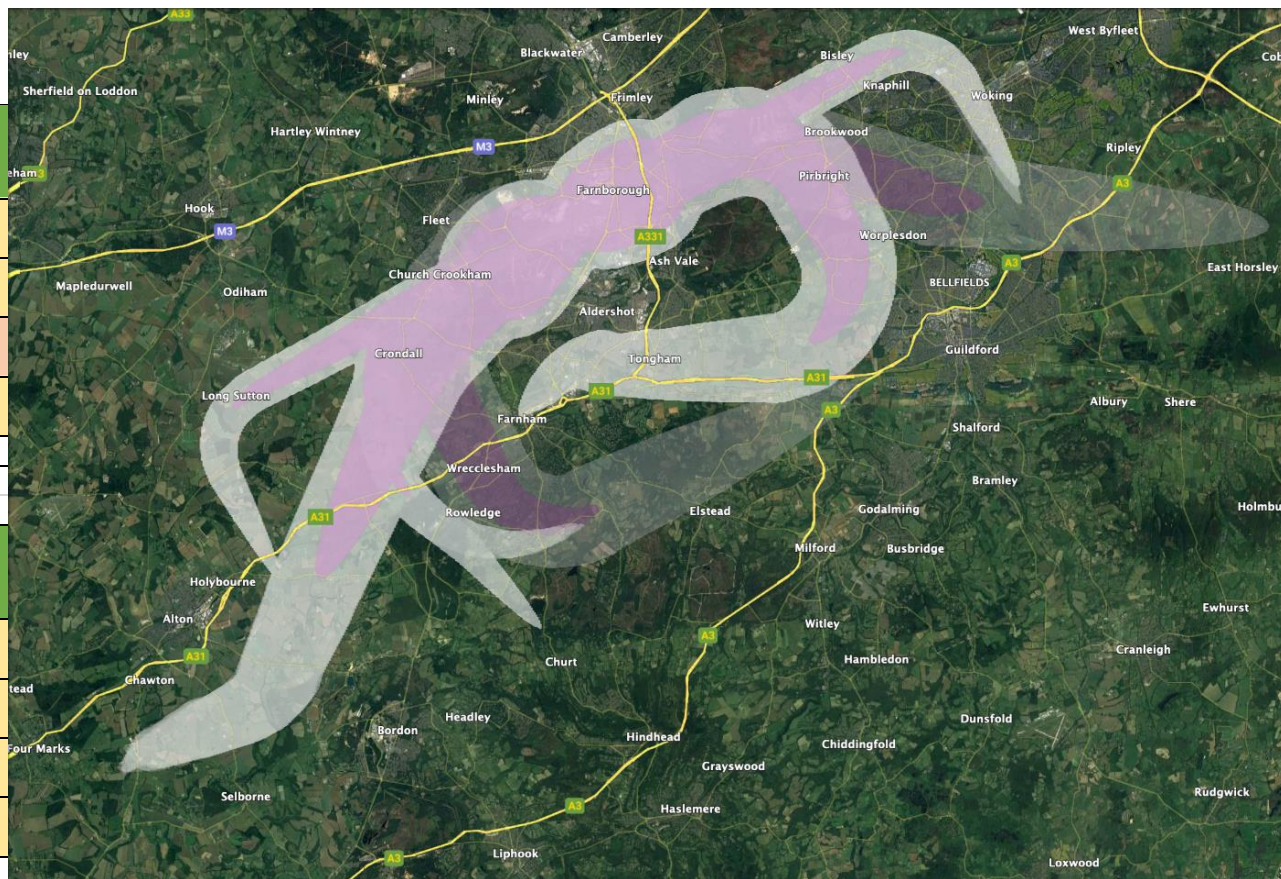


GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	2B
ARRIVALS	6	100%	96%
GLEX 60 dB LAMAX Population Count	24	100%	81%
DEPARTURES	6	100%	87%
GLEX 60 dB LAMAX Population Count	24	100%	100%
AVERAGE CHANGE			-9%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	2B
ARRIVALS	6	100%	93%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	90%
GLEX 65 dB LAMAX Population Count	24	100%	100%
AVERAGE CHANGE			-4%

Option 3A

65dB L_{AMAX}

60dB L_{AMAX}



With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	99%
	24	100%	97%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	126%
	24	100%	108%
AVERAGE CHANGE			8%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	94%
	24	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	96%
	24	100%	103%
AVERAGE CHANGE			-2%

Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	98%
	24	100%	97%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	133%
	24	100%	94%
AVERAGE CHANGE			6%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	93%
	24	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	96%
	24	100%	81%
AVERAGE CHANGE			-8%

Option 3B

65dB L_{AMAX}

60dB L_{AMAX}

With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	99%
	24	100%	81%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	126%
	24	100%	108%
AVERAGE CHANGE			4%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	94%
	24	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	96%
	24	100%	103%
AVERAGE CHANGE			-2%



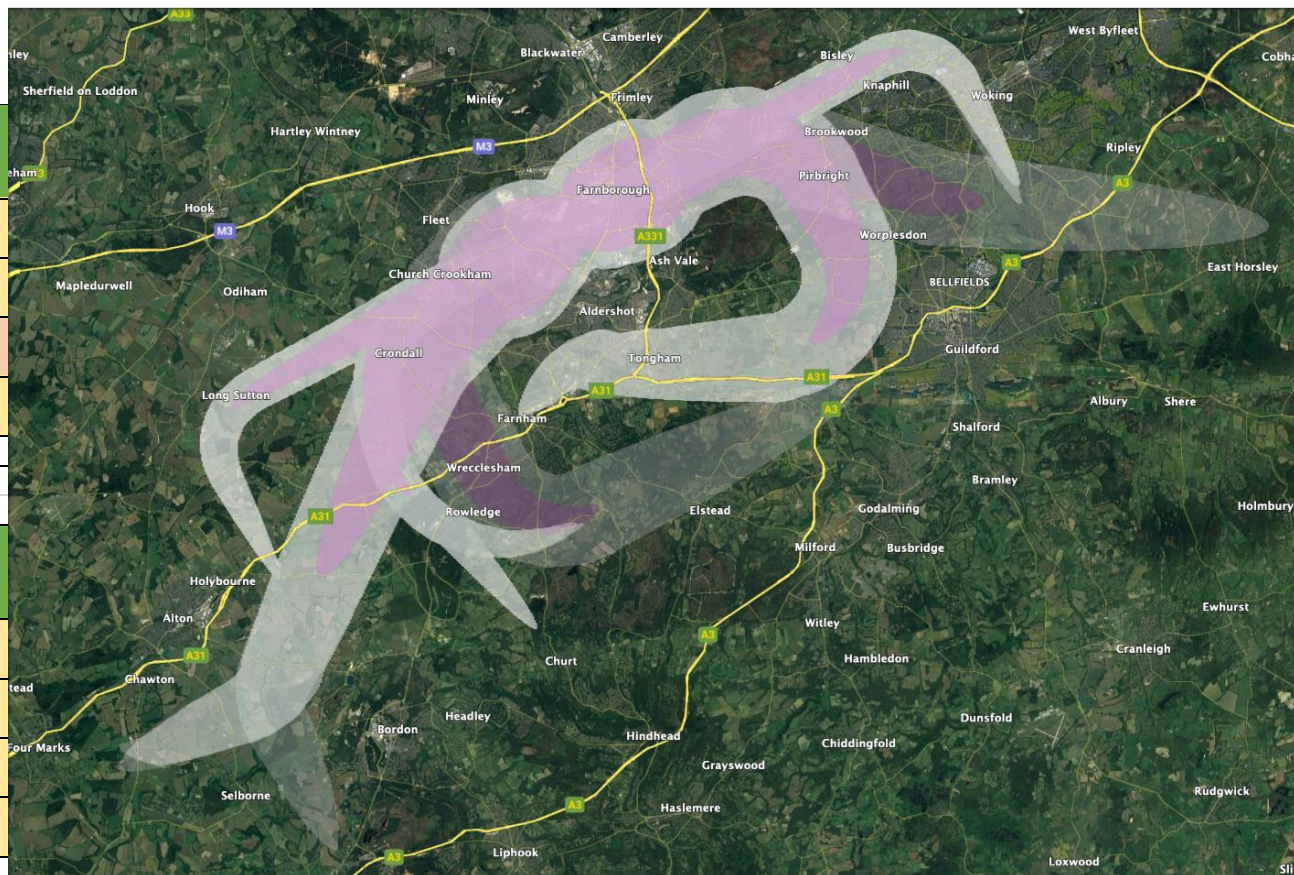
Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	98%
	24	100%	81%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	133%
	24	100%	94%
AVERAGE CHANGE			2%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	93%
	24	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	96%
	24	100%	81%
AVERAGE CHANGE			-8%

Option 4A

65dB L_{AMAX}

60dB L_{AMAX}



With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS	6	100%	100%
GLEX 60 dB LAMAX Population Count	24	100%	97%
DEPARTURES	6	100%	126%
GLEX 60 dB LAMAX Population Count	24	100%	108%
AVERAGE CHANGE			8%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS	6	100%	95%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	96%
GLEX 65 dB LAMAX Population Count	24	100%	103%
AVERAGE CHANGE			-2%

Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS	6	100%	99%
GLEX 60 dB LAMAX Population Count	24	100%	97%
DEPARTURES	6	100%	133%
GLEX 60 dB LAMAX Population Count	24	100%	93%
AVERAGE CHANGE			6%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS	6	100%	94%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	96%
GLEX 65 dB LAMAX Population Count	24	100%	81%
AVERAGE CHANGE			-7%

Option 4B

65dB L_{AMAX}

60dB L_{AMAX}



With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	100%
	24	100%	82%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	126%
	24	100%	108%
AVERAGE CHANGE			4%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	95%
	24	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	96%
	24	100%	103%
AVERAGE CHANGE			-2%

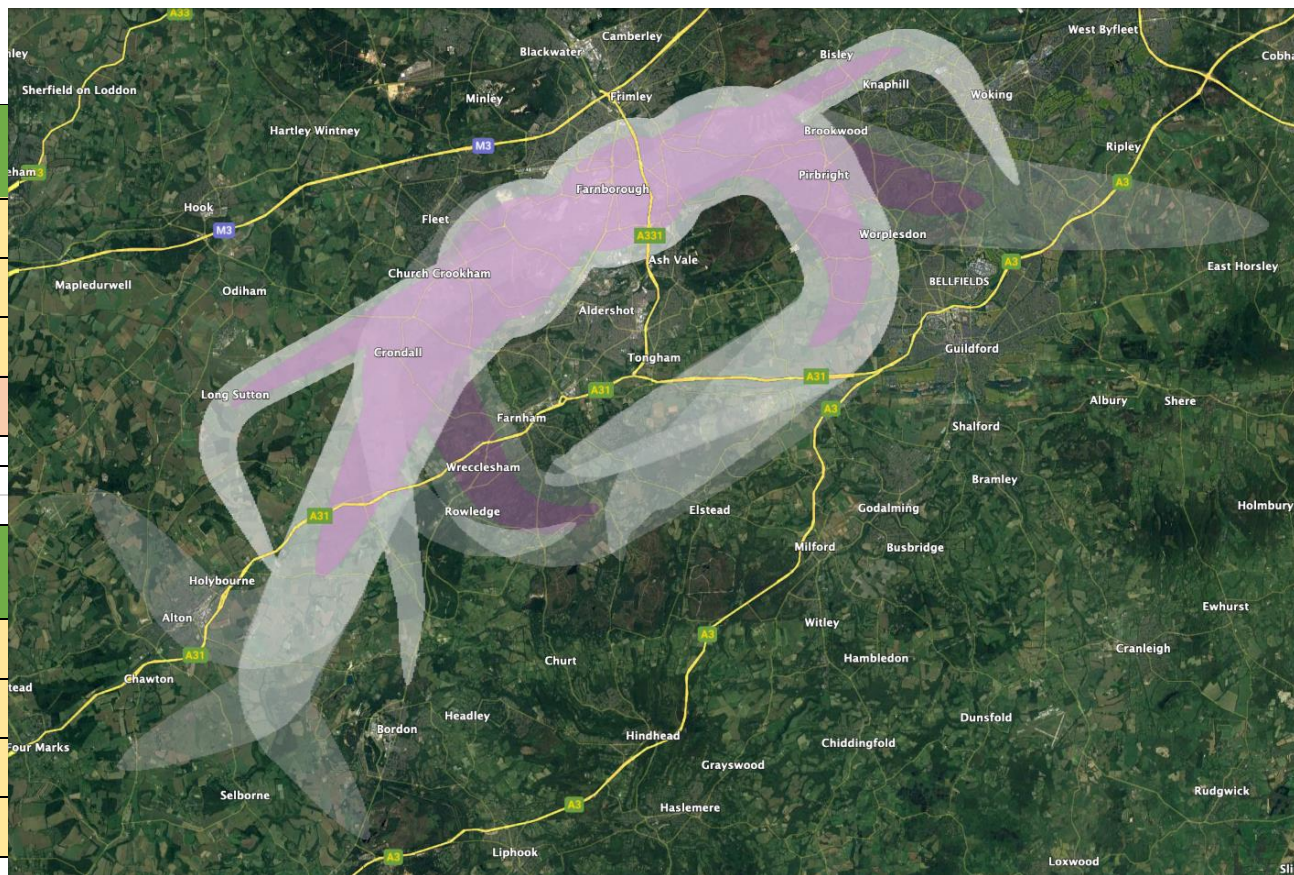
Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	99%
	24	100%	81%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	133%
	24	100%	94%
AVERAGE CHANGE			2%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	94%
	24	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	96%
	24	100%	81%
AVERAGE CHANGE			-7%

Option 5A

65dB L_{AMAX}

60dB L_{AMAX}



With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS	6	100%	100%
GLEX 60 dB LAMAX Population Count	24	100%	97%
DEPARTURES	6	100%	99%
GLEX 60 dB LAMAX Population Count	24	100%	116%
AVERAGE CHANGE			3%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS	6	100%	94%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	98%
GLEX 65 dB LAMAX Population Count	24	100%	103%
AVERAGE CHANGE			-1%

Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS	6	100%	99%
GLEX 60 dB LAMAX Population Count	24	100%	97%
DEPARTURES	6	100%	97%
GLEX 60 dB LAMAX Population Count	24	100%	105%
AVERAGE CHANGE			0%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS	6	100%	94%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	98%
GLEX 65 dB LAMAX Population Count	24	100%	81%
AVERAGE CHANGE			-7%

Option 5B

65dB L_{AMAX}

60dB L_{AMAX}



With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS	6	100%	100%
GLEX 60 dB LAMAX Population Count	24	100%	82%
DEPARTURES	6	100%	94%
GLEX 60 dB LAMAX Population Count	24	100%	116%
AVERAGE CHANGE			-2%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS	6	100%	95%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	89%
GLEX 65 dB LAMAX Population Count	24	100%	103%
AVERAGE CHANGE			-3%

Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS	6	100%	99%
GLEX 60 dB LAMAX Population Count	24	100%	81%
DEPARTURES	6	100%	91%
GLEX 60 dB LAMAX Population Count	24	100%	105%
AVERAGE CHANGE			-6%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS	6	100%	94%
GLEX 65 dB LAMAX Population Count	24	100%	100%
DEPARTURES	6	100%	86%
GLEX 65 dB LAMAX Population Count	24	100%	81%
AVERAGE CHANGE			-10%

GLEX 60dB L_{AMAX} and 70dB L_{AMAX}

With low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	96%	96%	99%	99%	100%	100%	100%	100%
	24	100%	97%	81%	97%	81%	97%	82%	97%	82%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	100%	87%	126%	126%	126%	126%	99%	94%
	24	100%	100%	100%	108%	108%	108%	108%	116%	116%
AVERAGE CHANGE			-2%	-9%	8%	4%	8%	4%	3%	-2%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	93%	93%	94%	94%	95%	95%	94%	95%
	24	100%	100%	100%	100%	100%	100%	100%	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	100%	90%	96%	96%	96%	96%	98%	89%
	24	100%	100%	100%	103%	103%	103%	103%	103%	103%
AVERAGE CHANGE			-2%	-4%	-2%	-2%	-2%	-2%	-1%	-3%

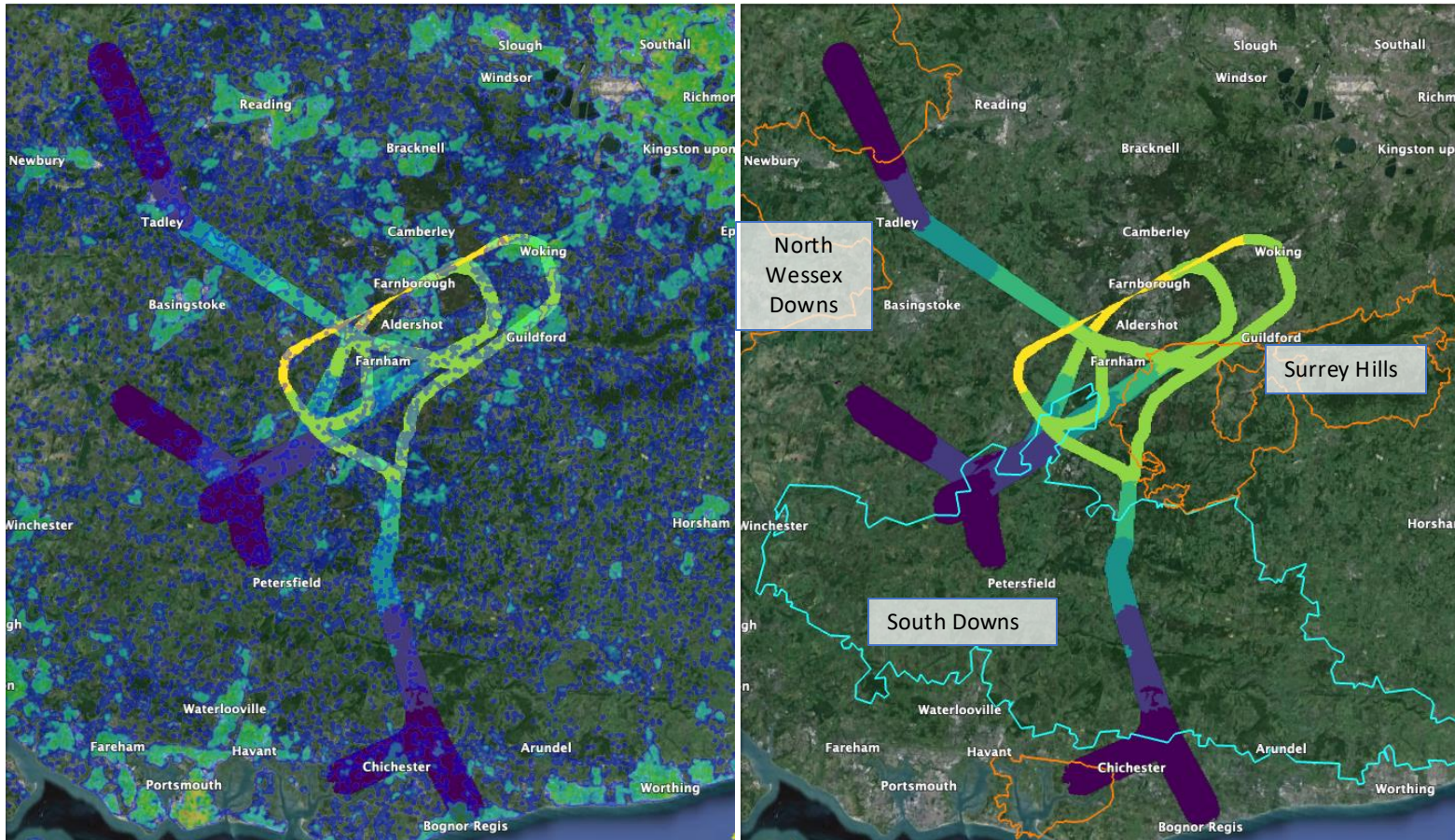
Without low level EGKB routes

GLEX 60dB LAMAX	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS GLEX 60 dB LAMAX Population Count	6	100%	96%	95%	98%	98%	99%	99%	99%	99%
	24	100%	97%	81%	97%	81%	97%	81%	97%	81%
DEPARTURES GLEX 60 dB LAMAX Population Count	6	100%	100%	87%	133%	133%	133%	133%	97%	91%
	24	100%	100%	100%	94%	94%	93%	94%	105%	105%
AVERAGE CHANGE			-2%	-9%	6%	2%	6%	2%	0%	-6%
GLEX 65dB LAMAX	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS GLEX 65 dB LAMAX Population Count	6	100%	92%	92%	93%	93%	94%	94%	94%	94%
	24	100%	100%	100%	100%	100%	100%	100%	100%	100%
DEPARTURES GLEX 65 dB LAMAX Population Count	6	100%	100%	90%	96%	96%	96%	96%	98%	86%
	24	100%	100%	100%	81%	81%	81%	81%	81%	81%
AVERAGE CHANGE			-2%	-4%	-8%	-8%	-7%	-7%	-7%	-10%

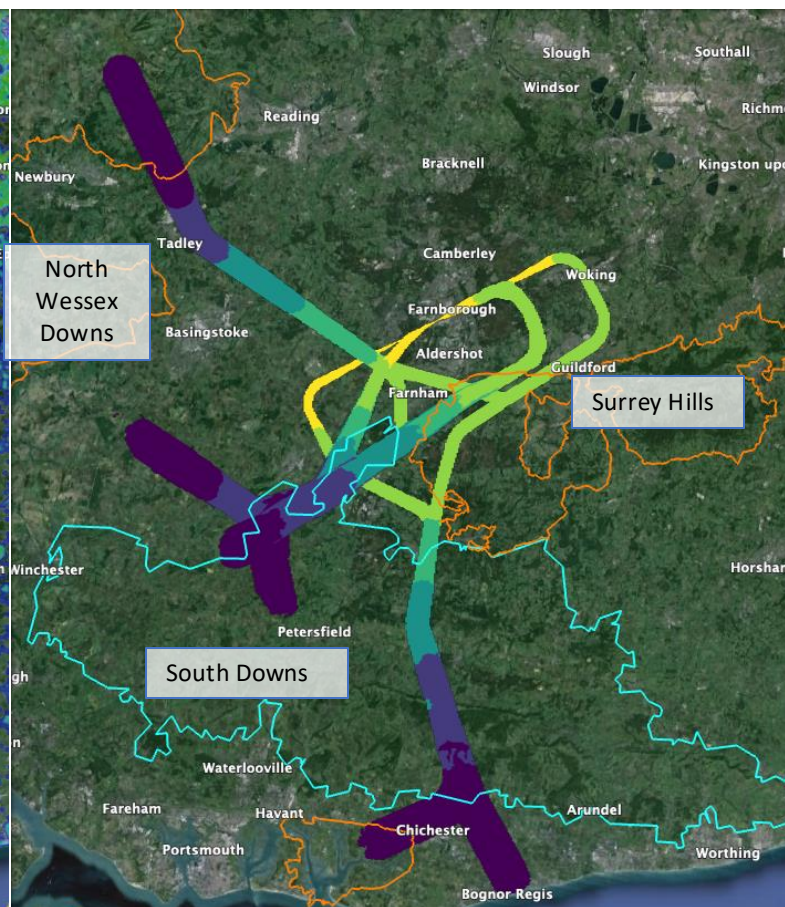
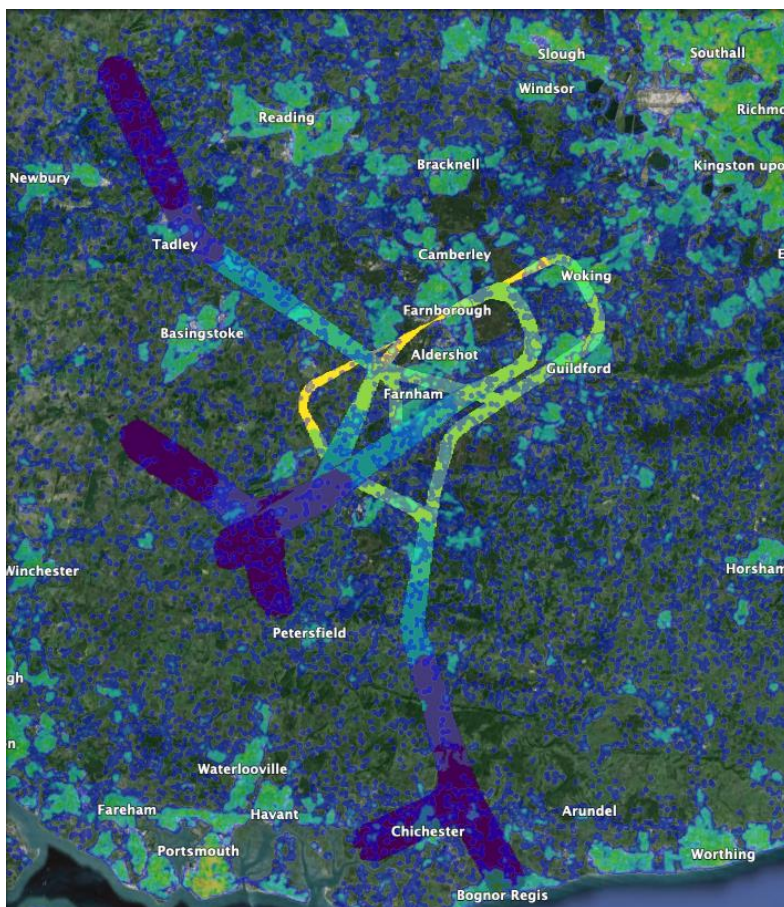
Overflight Statistics

Population, AONBs and National Parks

Option 1 (Do Nothing)



Option 2A

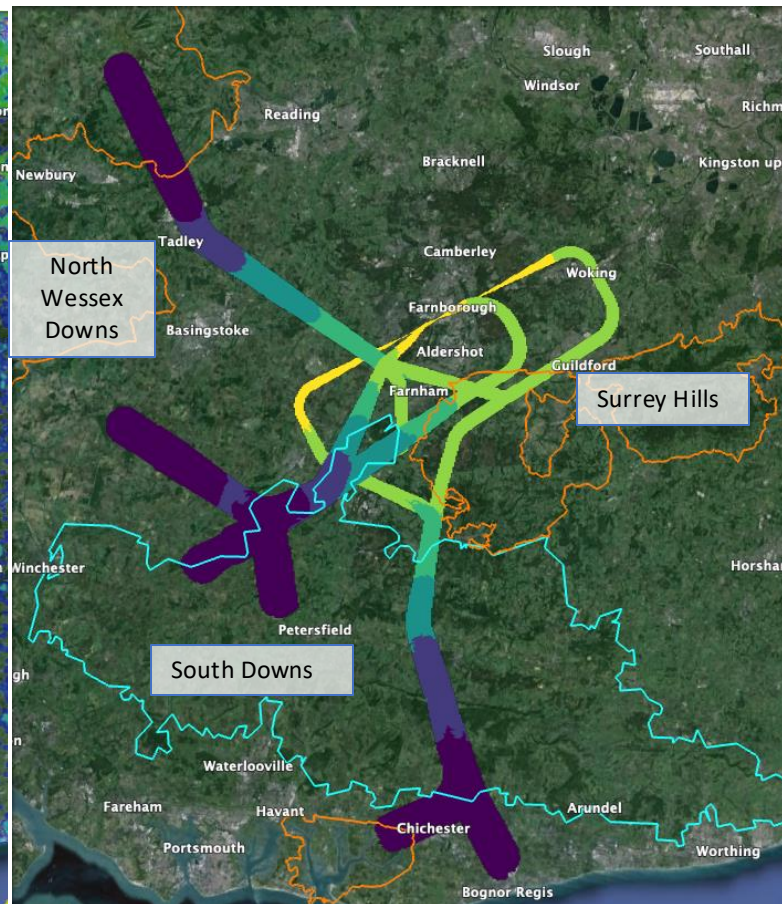
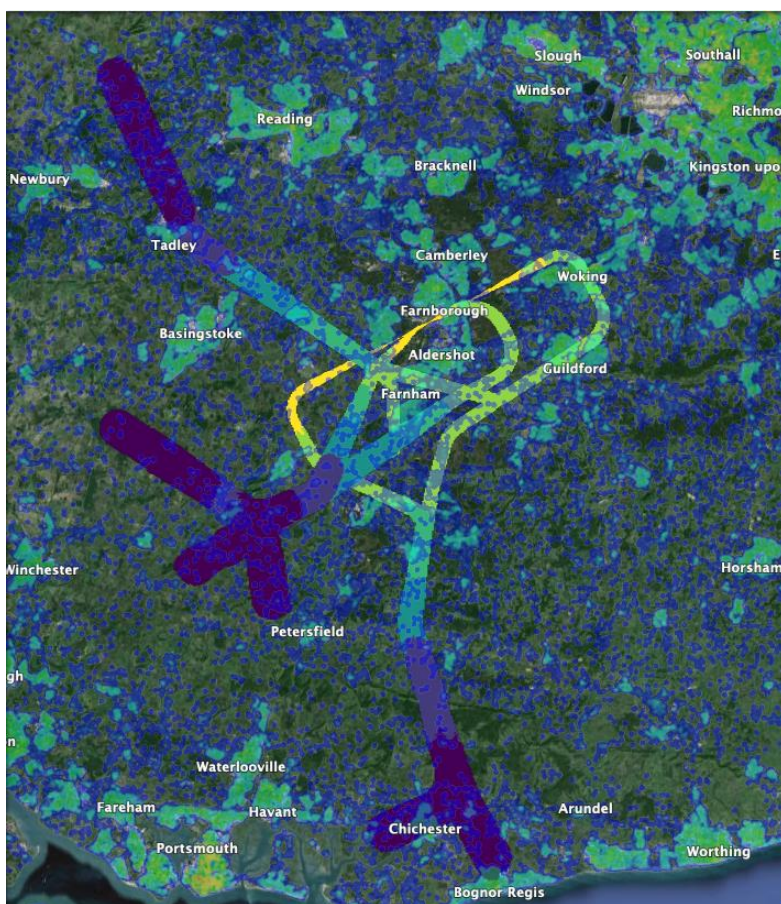


Overflight Population	RUNWAY	1 Do nothing Baseline	2A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	99%
	24	100%	101%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	100%
	24	100%	100%
AVERAGE CHANGE			0%

Overflight AONB	RUNWAY	1 Do nothing Baseline	2A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	98%
	24	100%	94%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	100%
	24	100%	100%
AVERAGE CHANGE			-2%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	2A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	96%
	24	100%	149%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	111%
	24	100%	122%
AVERAGE CHANGE			19%

Option 2B



Overflight Population	RUNWAY	1 Do nothing Baseline	2B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	102%
	24	100%	96%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	92%
	24	100%	100%
AVERAGE CHANGE			-3%
Overflight AONB	RUNWAY	1 Do nothing Baseline	2B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	91%
	24	100%	88%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	81%
	24	100%	100%
AVERAGE CHANGE			-10%
Overflight Nat Park	RUNWAY	1 Do nothing Baseline	2B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	98%
	24	100%	155%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	132%
	24	100%	121%
AVERAGE CHANGE			27%

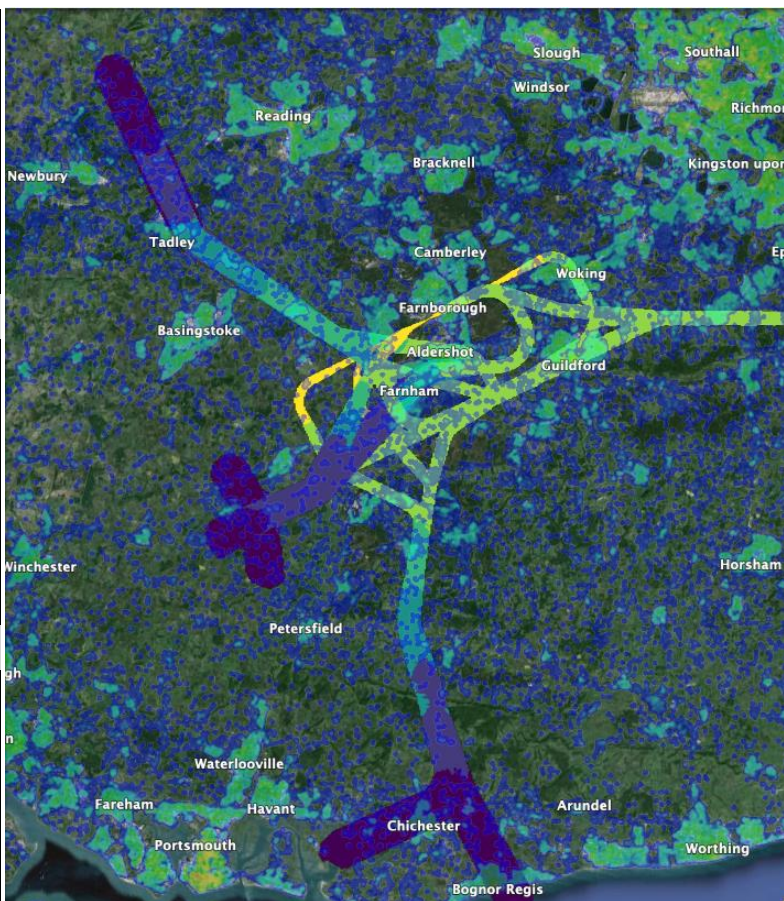
Option 3A

With low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	138%
	24	100%	89%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	211%
	24	100%	193%
AVERAGE CHANGE			58%

Overflight AONB	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	152%
	24	100%	78%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	6%
	24	100%	104%
AVERAGE CHANGE			-15%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	71%
	24	100%	119%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	91%
	24	100%	78%
AVERAGE CHANGE			-10%

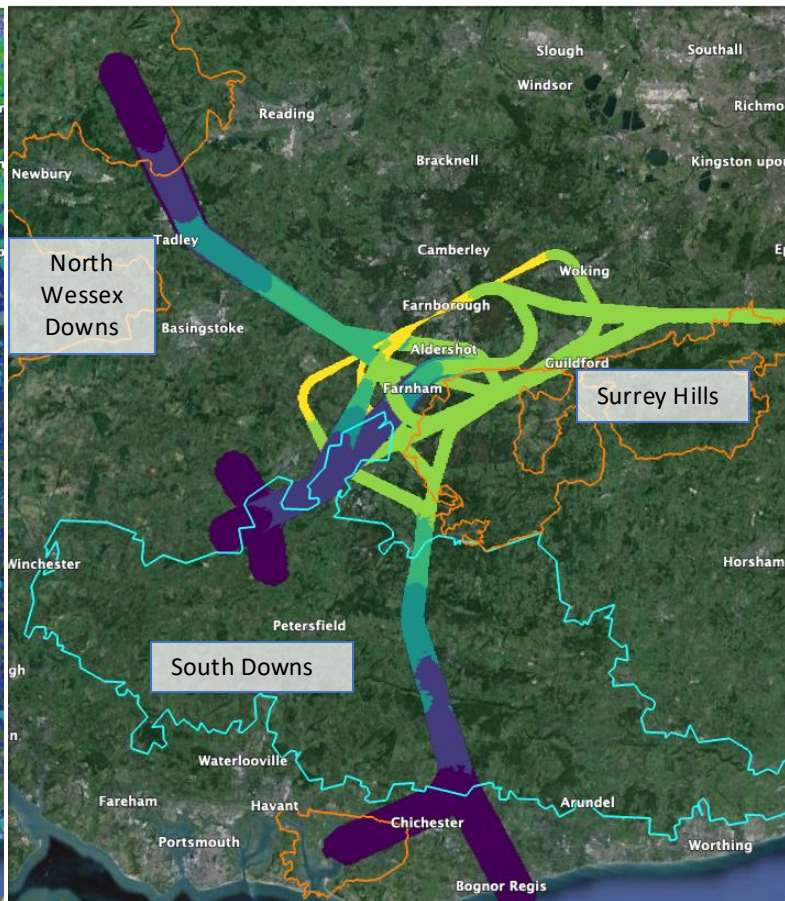


Without low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	134%
	24	100%	101%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	262%
	24	100%	74%
AVERAGE CHANGE			43%

Overflight AONB	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	149%
	24	100%	94%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	8%
	24	100%	104%
AVERAGE CHANGE			-11%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	3A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	89%
	24	100%	149%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	122%
	24	100%	104%
AVERAGE CHANGE			16%



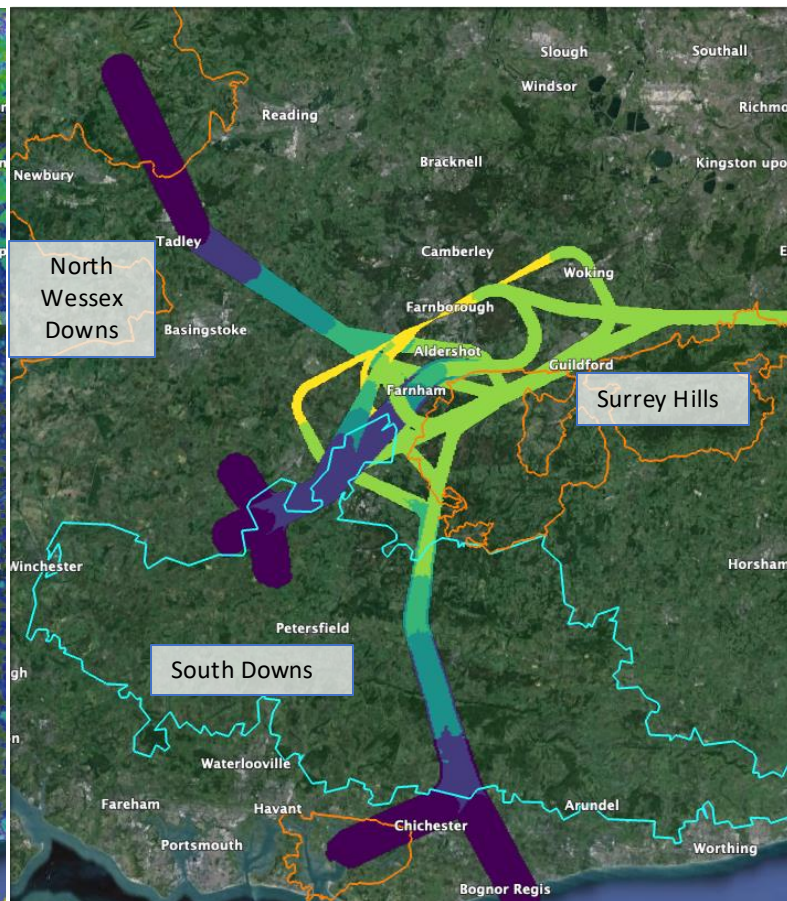
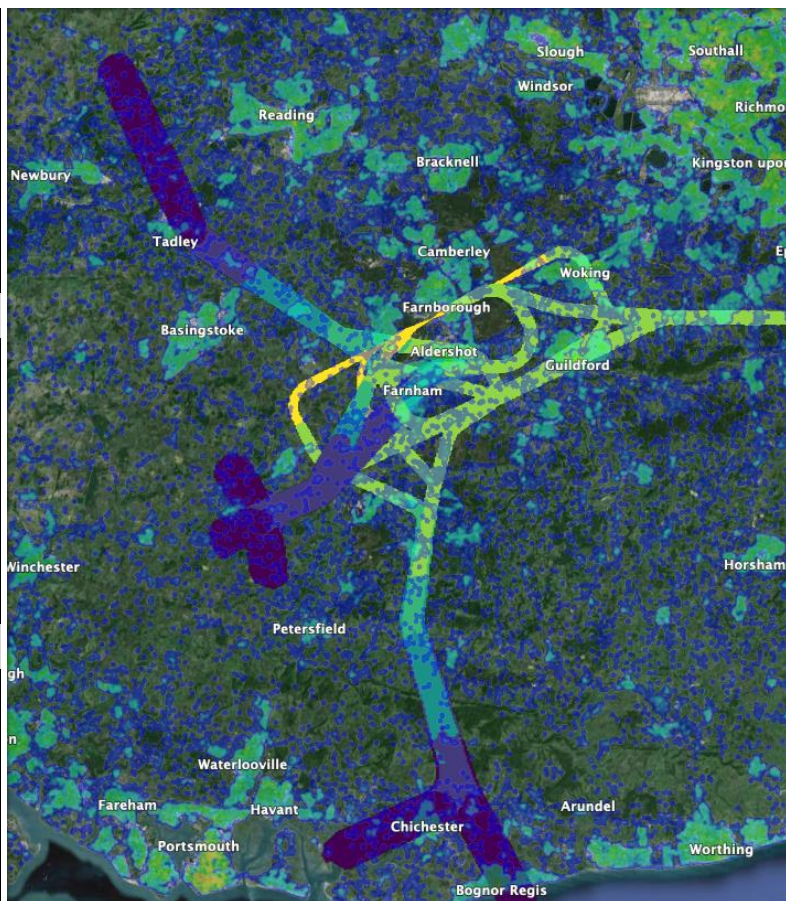
Option 3B

With low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	139%
	24	100%	84%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	211%
	24	100%	193%
AVERAGE CHANGE			57%

Overflight AONB	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	149%
	24	100%	72%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	6%
	24	100%	104%
AVERAGE CHANGE			-17%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	72%
	24	100%	124%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	91%
	24	100%	78%
AVERAGE CHANGE			-9%



Without low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	135%
	24	100%	95%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	262%
	24	100%	74%
AVERAGE CHANGE			41%

Overflight AONB	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	146%
	24	100%	88%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	8%
	24	100%	104%
AVERAGE CHANGE			-14%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	3B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	90%
	24	100%	149%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	122%
	24	100%	104%
AVERAGE CHANGE			16%

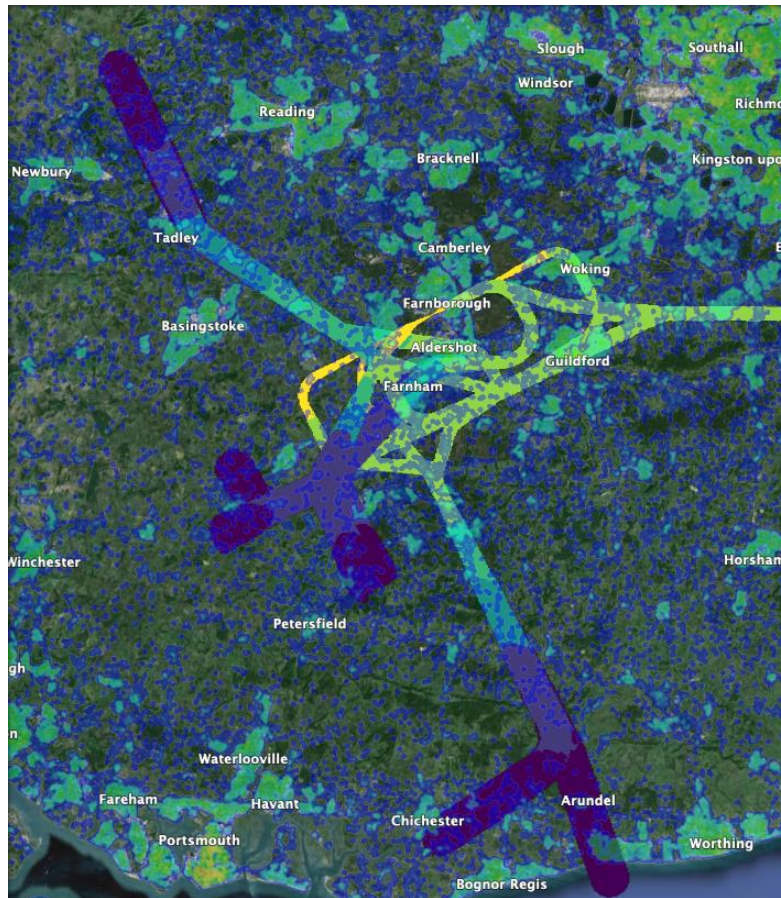
Option 4A

With low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	130%
	24	100%	84%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	217%
	24	100%	217%
AVERAGE CHANGE			62%

Overflight AONB	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	135%
	24	100%	70%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	6%
	24	100%	105%
AVERAGE CHANGE			-21%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	88%
	24	100%	145%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	84%
	24	100%	70%
AVERAGE CHANGE			-3%

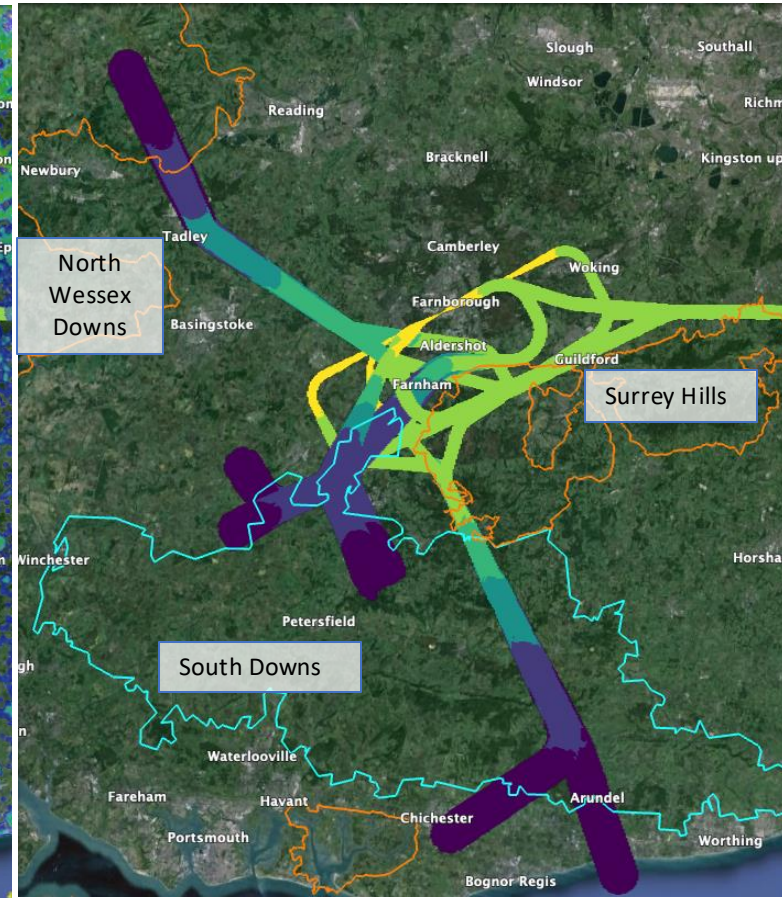


Without low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	123%
	24	100%	94%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	270%
	24	100%	106%
AVERAGE CHANGE			48%

Overflight AONB	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	128%
	24	100%	85%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	8%
	24	100%	105%
AVERAGE CHANGE			-19%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	4A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	110%
	24	100%	181%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	112%
	24	100%	93%
AVERAGE CHANGE			24%



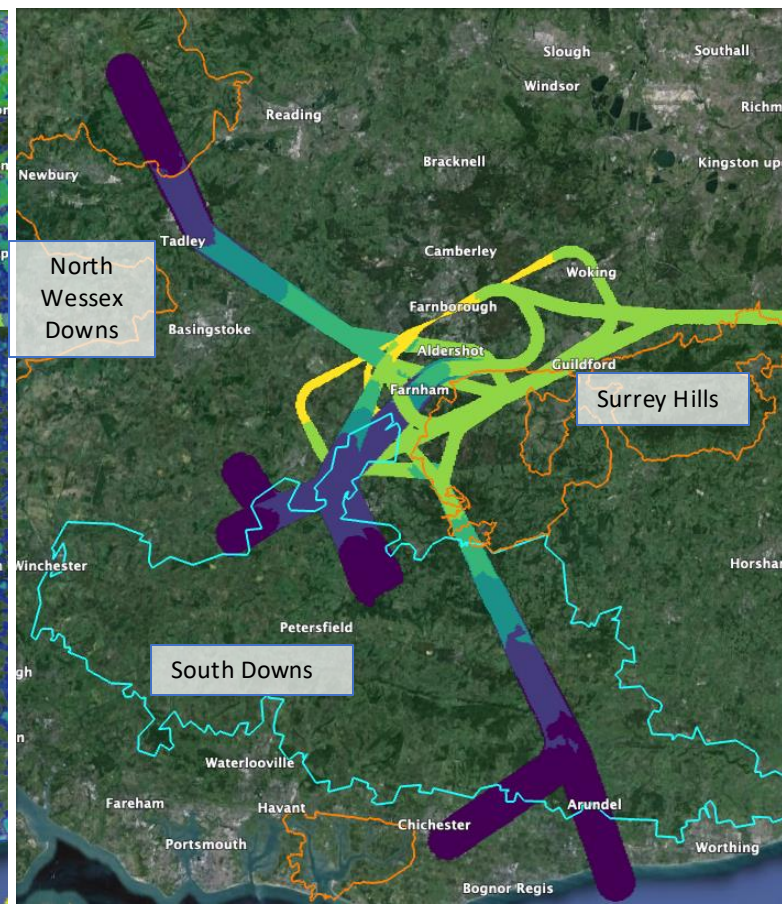
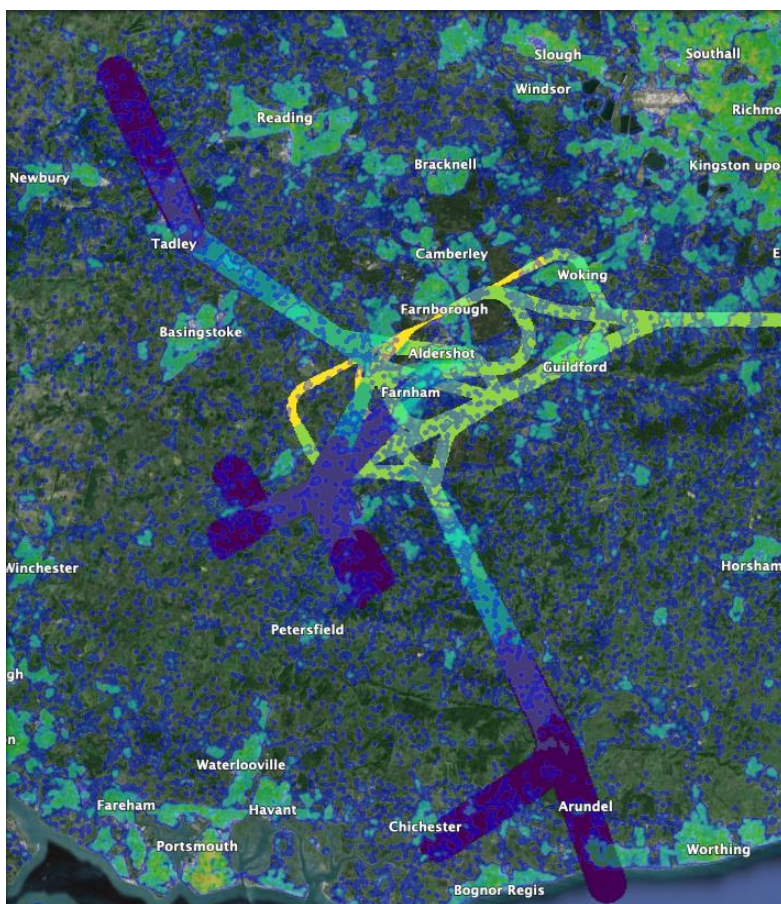
Option 4B

With low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	131%
	24	100%	81%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	217%
	24	100%	217%
AVERAGE CHANGE			61%

Overflight AONB	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	135%
	24	100%	72%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	6%
	24	100%	105%
AVERAGE CHANGE			-21%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	88%
	24	100%	151%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	84%
	24	100%	70%
AVERAGE CHANGE			-2%



Without low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	124%
	24	100%	90%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	270%
	24	100%	106%
AVERAGE CHANGE			48%

Overflight AONB	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	127%
	24	100%	87%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	8%
	24	100%	105%
AVERAGE CHANGE			-18%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	4B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	111%
	24	100%	189%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	112%
	24	100%	93%
AVERAGE CHANGE			26%

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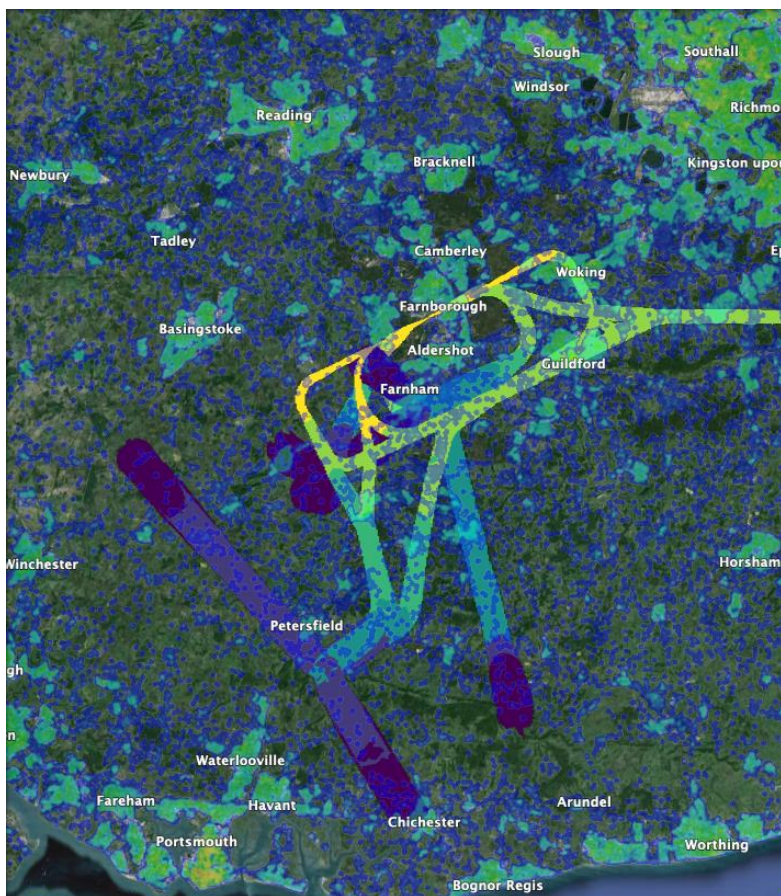
Option 5A

With low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	97%
	24	100%	58%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	104%
	24	100%	231%
AVERAGE CHANGE			23%

Overflight AONB	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	53%
	24	100%	46%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	126%
	24	100%	105%
AVERAGE CHANGE			-17%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	116%
	24	100%	174%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	40%
	24	100%	30%
AVERAGE CHANGE			-10%

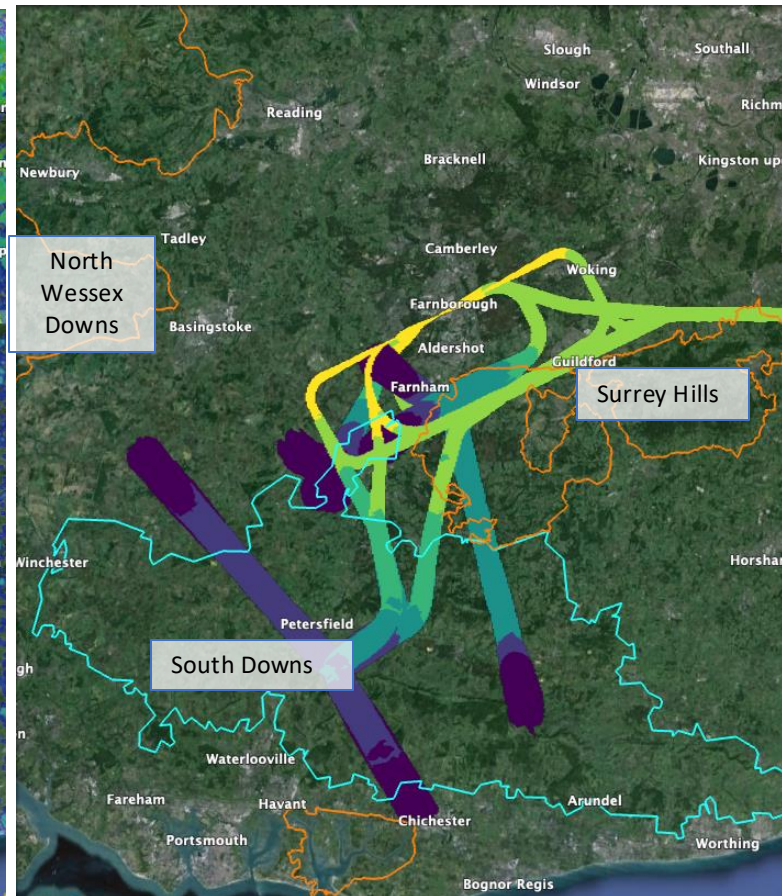


Without low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	69%
	24	100%	65%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	120%
	24	100%	125%
AVERAGE CHANGE			-5%

Overflight AONB	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	0%
	24	100%	63%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	169%
	24	100%	105%
AVERAGE CHANGE			-16%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	5A
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	169%
	24	100%	261%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	53%
	24	100%	40%
AVERAGE CHANGE			31%



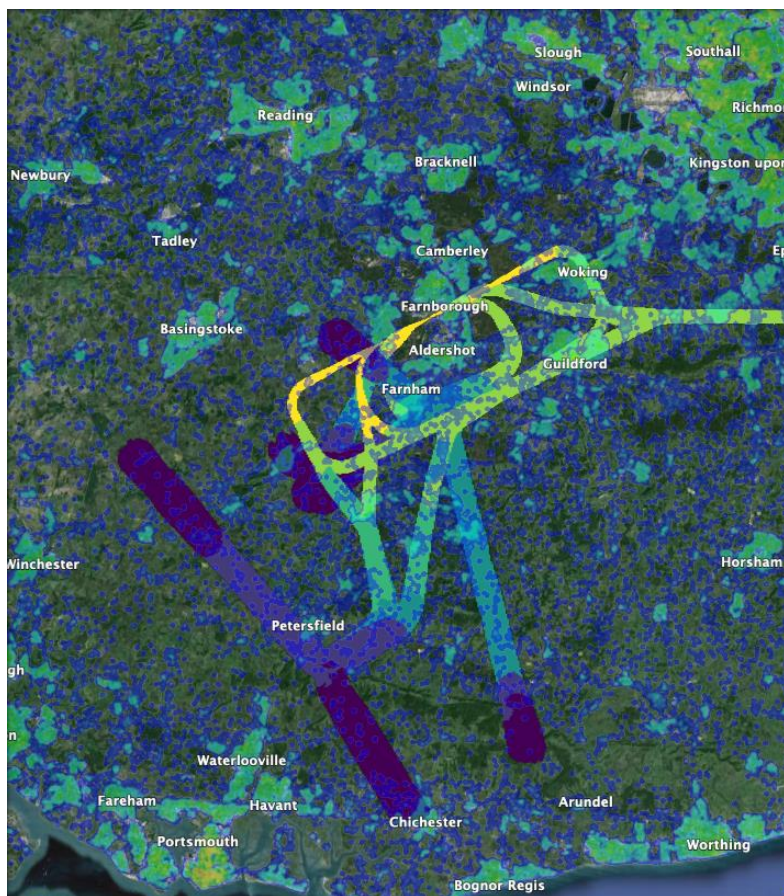
Option 5B

With low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	97%
	24	100%	60%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	91%
	24	100%	231%
AVERAGE CHANGE			20%

Overflight AONB	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	53%
	24	100%	47%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	113%
	24	100%	105%
AVERAGE CHANGE			-20%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	117%
	24	100%	178%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	51%
	24	100%	30%
AVERAGE CHANGE			-6%

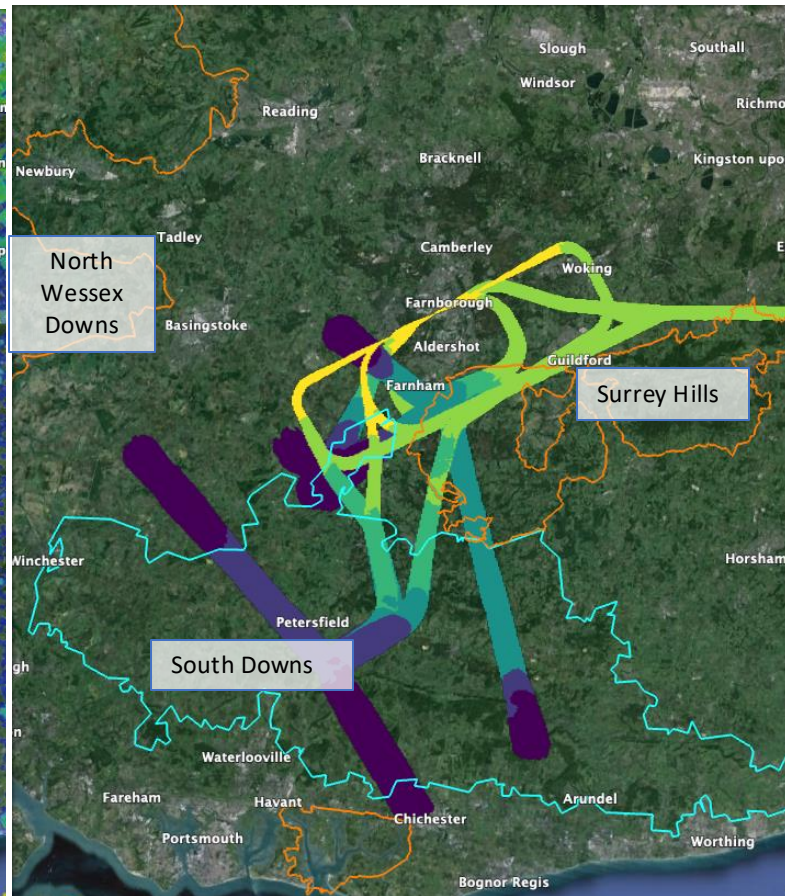


Without low level EGKB routes

Overflight Population	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	68%
	24	100%	68%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	103%
	24	100%	125%
AVERAGE CHANGE			-9%

Overflight AONB	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	0%
	24	100%	65%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	151%
	24	100%	105%
AVERAGE CHANGE			-20%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	5B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	170%
	24	100%	266%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	68%
	24	100%	40%
AVERAGE CHANGE			36%



With low level EGKB routes

Without low level EGKB routes

Overflight Population

Overflight Population	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	99%	102%	138%	139%	130%	131%	97%	97%
	24	100%	101%	96%	89%	84%	84%	81%	58%	60%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	100%	92%	211%	211%	217%	217%	104%	91%
	24	100%	100%	100%	193%	193%	217%	217%	231%	231%
AVERAGE CHANGE			0%	-3%	58%	57%	62%	61%	23%	20%

Overflight Population	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS Overflight (0-7000ft) Population Count	6	100%	99%	102%	134%	135%	123%	124%	69%	68%
	24	100%	101%	96%	101%	95%	94%	90%	65%	68%
DEPARTURES Overflight (0-7000ft) Population Count	6	100%	100%	92%	262%	262%	270%	270%	120%	103%
	24	100%	100%	100%	74%	74%	106%	106%	125%	125%
AVERAGE CHANGE			0%	-3%	43%	41%	48%	48%	-5%	-9%

Overflight AONB

Overflight AONB	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	98%	91%	152%	149%	135%	135%	53%	53%
	24	100%	94%	88%	78%	72%	70%	72%	46%	47%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	100%	81%	6%	6%	6%	6%	126%	113%
	24	100%	100%	100%	104%	104%	105%	105%	105%	105%
AVERAGE CHANGE			-2%	-10%	-15%	-17%	-21%	-21%	-17%	-20%

Overflight AONB	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS Overflight (0-7000ft) AONB Area (km2)	6	100%	98%	91%	149%	146%	128%	127%	0%	0%
	24	100%	94%	88%	94%	88%	85%	87%	63%	65%
DEPARTURES Overflight (0-7000ft) AONB Area (km2)	6	100%	100%	81%	8%	8%	8%	8%	169%	151%
	24	100%	100%	100%	104%	104%	105%	105%	105%	105%
AVERAGE CHANGE			-2%	-10%	-11%	-14%	-19%	-18%	-16%	-20%

Overflight National Park

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	96%	98%	71%	72%	88%	88%	116%	117%
	24	100%	149%	155%	119%	124%	145%	151%	174%	178%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	111%	132%	91%	91%	84%	84%	40%	51%
	24	100%	122%	121%	78%	78%	70%	70%	30%	30%
AVERAGE CHANGE			19%	27%	-10%	-9%	-3%	-2%	-10%	-6%

Overflight Nat Park	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
ARRIVALS Overflight (0-7000ft) NP Area (km2)	6	100%	96%	98%	89%	90%	110%	111%	169%	170%
	24	100%	149%	155%	149%	149%	181%	189%	261%	266%
DEPARTURES Overflight (0-7000ft) NP Area (km2)	6	100%	111%	132%	122%	122%	112%	112%	53%	68%
	24	100%	122%	121%	104%	104%	93%	93%	40%	40%
AVERAGE CHANGE			19%	27%	16%	16%	24%	26%	31%	36%

Overflight Statistics 0-7000ft

Other Noise Sensitive Receptors (NSRs)

Education, Healthcare and Places of Worship

With low level EGKB routes

Without low level EGKB routes

Overflight NSRs Arrivals	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
Heathcare Count (0-7000ft)	6	100%	97%	98%	146%	146%	140%	140%	103%	100%
	24	100%	105%	108%	91%	91%	83%	92%	48%	64%
Education Count (0-7000ft)	6	100%	94%	93%	143%	143%	139%	139%	126%	121%
	24	100%	94%	100%	80%	82%	76%	84%	54%	63%
Places of Worship Count (0-7000ft)	6	100%	102%	100%	132%	131%	137%	137%	102%	100%
	24	100%	108%	115%	94%	96%	93%	104%	63%	80%
AVERAGE CHANGE			0%	2%	14%	15%	11%	16%	-17%	-12%

Overflight NSRs Departures	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
Heathcare Count (0-7000ft)	6	100%	100%	119%	233%	233%	244%	244%	153%	161%
	24	100%	100%	100%	206%	206%	253%	253%	275%	275%
Education Count (0-7000ft)	6	100%	100%	84%	189%	189%	193%	193%	120%	107%
	24	100%	100%	100%	402%	402%	433%	433%	430%	430%
Places of Worship Count (0-7000ft)	6	100%	100%	95%	152%	152%	150%	150%	92%	87%
	24	100%	100%	100%	129%	129%	141%	141%	143%	143%
AVERAGE CHANGE			0%	0%	119%	119%	136%	136%	102%	100%

Overflight NSRs Arrivals	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
Heathcare Count (0-7000ft)	6	100%	97%	98%	136%	136%	129%	129%	65%	60%
	24	100%	105%	108%	105%	105%	95%	103%	55%	70%
Education Count (0-7000ft)	6	100%	94%	93%	118%	117%	113%	113%	74%	66%
	24	100%	94%	100%	94%	97%	89%	97%	70%	79%
Places of Worship Count (0-7000ft)	6	100%	102%	100%	118%	117%	125%	125%	63%	61%
	24	100%	108%	115%	108%	111%	106%	117%	74%	94%
AVERAGE CHANGE			0%	2%	13%	14%	10%	14%	-33%	-28%

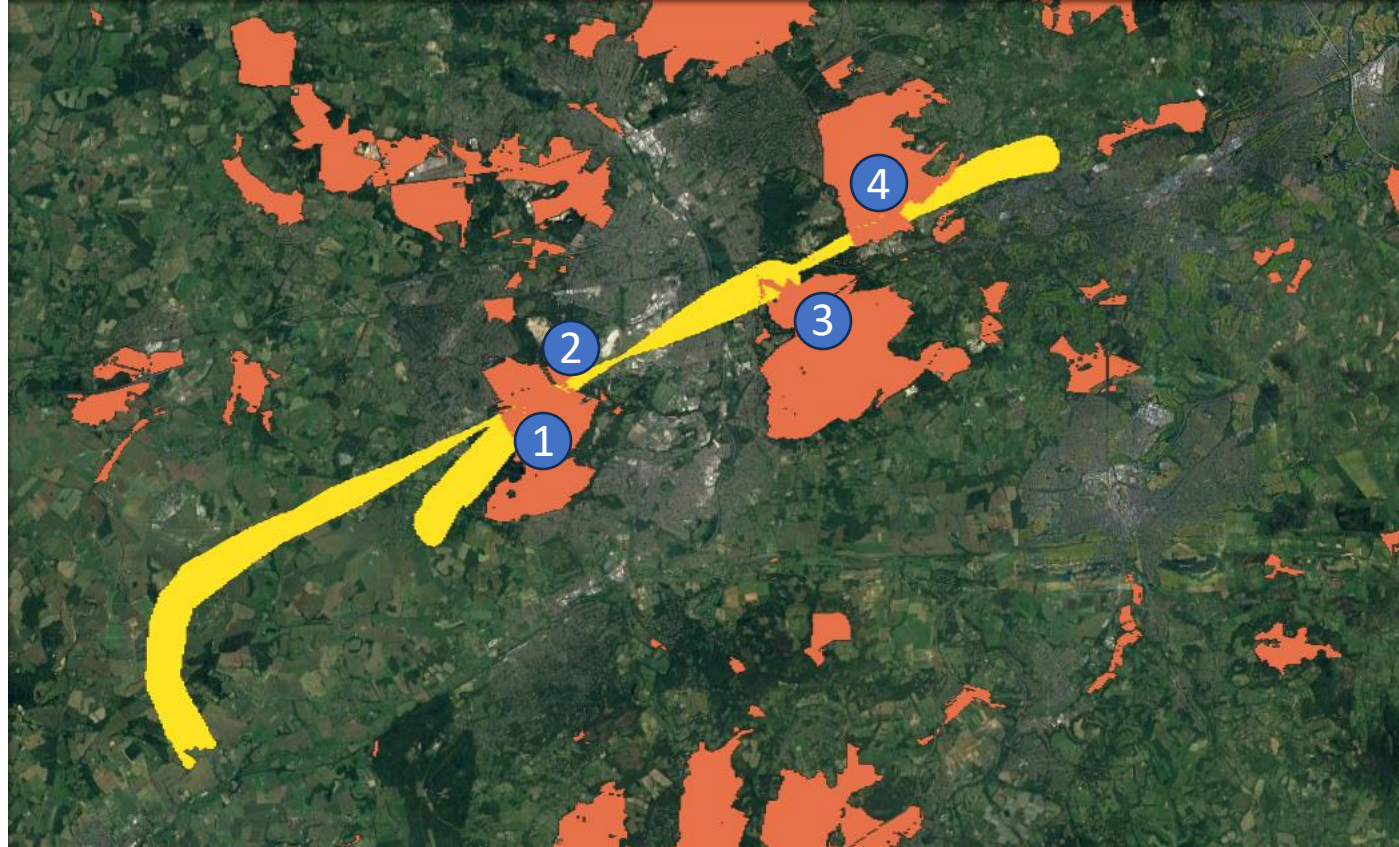
Overflight NSRs Departures	RUNWAY	1 Do nothing Baseline	2A	2B	3A	3B	4A	4B	5A	5B
Heathcare Count (0-7000ft)	6	100%	100%	119%	290%	290%	304%	304%	183%	194%
	24	100%	100%	100%	93%	93%	156%	156%	185%	185%
Education Count (0-7000ft)	6	100%	100%	84%	233%	233%	238%	238%	141%	122%
	24	100%	100%	100%	95%	95%	136%	136%	132%	132%
Places of Worship Count (0-7000ft)	6	100%	100%	95%	191%	191%	188%	188%	111%	104%
	24	100%	100%	100%	84%	84%	100%	100%	102%	102%
AVERAGE CHANGE			0%	0%	64%	64%	87%	87%	42%	40%

Biodiversity

Sites of Special Scientific Interest,
Special Areas of Conservation
RAMSAR and Special Protection Areas

Option 1 (Do Nothing)

1.
Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2.
Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3.
Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC
4.
Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC



Option 2A

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC



Option 2B

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC



Option 3A

1.
Thames Basin Heaths SPA
Bourley and Long Valley SSSI

2.
Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI

3.
Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC

4.
Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC



Option 3B

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC



Option 4A

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC



Option 4B

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright & Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath SSSI
Thursley, Ash, Pirbright & Chobham SAC



Option 5A

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright & Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath SSSI
Thursley, Ash, Pirbright & Chobham SAC
5. Bentley Station Meadow SSSI



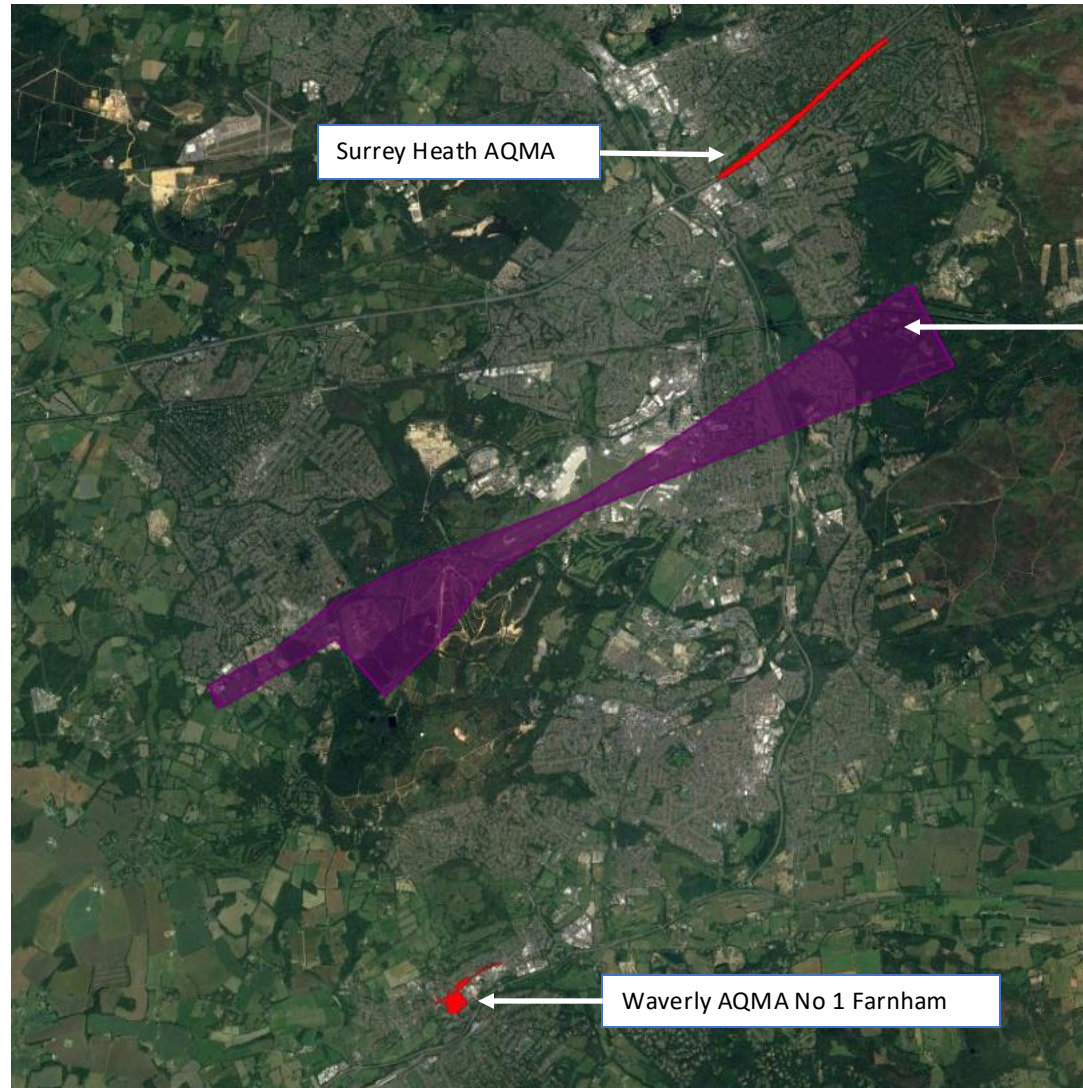
Option 5B

1. Thames Basin Heaths SPA
Bourley and Long Valley SSSI
2. Thames Basin Heaths SPA
Eelmoor Marsh SSSI
Basingstoke Canal SSSI
3. Thames Basin Heaths SPA
Ash to Brookwood Heaths SSSI
Basingstoke Canal SSSI
Thursley, Ash, Pirbright &
Chobham SAC
4. Thames Basin Heaths SPA
Colony Bog and Bagshot Heath
SSSI
Thursley, Ash, Pirbright &
Chobham SAC
5. Bentley Station Meadow SSSI



Air Quality

Air Quality – All Options



Track Milage Comparisons

Track Mileage Comparisons

Option	Estimated annual mileage (nm) difference
1A Do Nothing	0.0
2A	+2174
2B	+7530
3A	-161143
3B	-146684
4A	-214094
4B	-206910
5A	-73949
5B	-69945

Ahead of the Curve