Airspace Change Proposal
Stage 2b

Initial Options Appraisal

Bournemouth Airport FASI-S
ACP-2019-43

31 October 2025

CL-5663-RPT-026 V2.0

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Document reference and Version	CL-5663-RPT-026 V2.0
Date of release	31 November 2025

Change History Record

Issue	Change Reference	Date	Details
1.0	Initial Issue	08 November 2024	Initial Issue
2.0	Re submission	31 October 2025	Re submission

Executive Summary

Bournemouth Airport is participating in the UK Future Airspace Implementation (South) [FASI(S)] programme as part of the Civil Aviation Authority's Airspace Modernisation Strategy (AMS). The programme aims to modernise the UK's airspace by introducing Performance-Based Navigation (PBN) procedures, improving efficiency, reducing environmental impacts, and enhancing integration with the wider en-route network.

This Initial Options Appraisal (IOA) forms Bournemouth Airport's CAP 1616 Stage 2B submission. It builds upon the Options Development and Design Principle Evaluation (DPE) and provides a qualitative assessment of design options identified during stakeholder engagement and technical workshops. The IOA establishes the evidence base for shortlisting options to progress to the Full Options Appraisal (FOA) at Stage 3.

The appraisal considers safety, overflight, noise, emissions, operational costs, and airspace integration in accordance with CAP 1616 and CAP 2091 guidance. Noise modelling, undertaken by Bickerdike Allen Partners LLP, uses 2024 baseline and 2037 forecast data consistent with CAP 2091 Category D methodology. The assessment confirms that Bournemouth Airport remains within Category D, with no significant increase in population exposure to aircraft noise expected.

The baseline used for assessment represents the current day scenario against which all options have been compared.

At Stage 3, quantitative analyses will be undertaken to assess noise, emissions, fuel burn, economic impact, and airspace containment. Some options may be refined or combined, and previously discounted options may be revisited to optimise environmental and operational performance in coordination with ACOG, NERL, and other FASI(S) stakeholders.

Abbreviations

Abbreviation	Term	Description
ACOG	Airspace Change Organising Group	
ACP	Airspace Change Proposal	
AMS	Airspace Modernisation Strategy	
ANSP	Air Navigation Service Provider	
AONB	Area of Outstanding Natural Beauty	
AQMA	Air Quality Management Area	
ARINC	Aeronautical Information Regulation and Control	
BOH	Bournemouth airport	
BIA	Bournemouth International airport	
CAA	Civil Aviation Authority	
CAP	Civil Aviation Publication	
CAS	Controlled Airspace	
CCO	Continuous Climb Operations	
CDA	Continuous Descent Arrival	
DA	Danger Area	
DFT	Department for Transport	
DEFRA	The Department for Environment, Food and Rural Affairs	
DPE	Design Principle Evaluation	
FASI-S	Future Airspace Implementation South	
Free Flow		Free flow is a method of departure whereby a tower does not have to coordinate the release of individual aircraft.
GA	General Aviation	
GNSS	Global Navigation Satellite Systems	
ICAO	International Civil Aviation Organisation	
IAP	Instrument Approach Procedures	
IOA	Initial Options Appraisal	
LTMA	London Terminal Manoeuvring Area	

Abbreviation	Term	Description
NAP	Noise Abatement Procedure	
NERL	NATS En-Route Limited	
NM	Nautical Mile	
NP	National Park	
NTK	Noise and Track Keeping	Taken over a busy period in 2019- pre pandemic.
ONS	Office for National Statistics	
PBN	Performance-Based Navigation	
PWC	Population Weighted Centroids	Using population-weighted rather than traditional geometric centroids can result in maps with symbol placement that better reflects the underlying population characteristics of a place.
RAG	Red, Amber, Green	
Ramsar		Wetlands of international importance designated under the Ramsar Convention.
RNAV	Area Navigation	
RWY	Runway	
SAC	Special Areas of Conservation	
SID	Standard Instrument Departures	
SOU	Southampton airport	
SPA	Special Protection Area	
SSSI	Sites of Special Scientific interest	
STAR	Standard Arrival	
UK	United Kingdom	
VOR	VHF Omni-Directional Radio Range	

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1. Introduction

1.1. Overview

1.1.1. Bournemouth Airport (BOH) is in the process of completing the Airspace Change Proposal (ACP) for the Future Airspace Implementation South (FASI-S) programme which is part of the Airspace Modernisation Strategy (AMS). The purpose of which is to improve airports' arrival and departure routes and associated airspace structures.

1.1.2. This document, (Step 2B), forms part of the ACP process and should be read in conjunction with the Options Development and Design Principle Evaluation document (Step 2A).

1.1.3. The Step 2A document provides a comprehensive overview of AMS, BOH's progress so far, and the Airspace Change Masterplan and how BOH fits into this. Furthermore, it explains the Design Principles developed at Stage 1, provides an account of how options were developed and provides an assessment of the Design Principles against each of the options. The latter was done with a series of stakeholder engagements.

1.1.4. Following the Design Principle Evaluation (DPE) stage, twenty options were discounted. These options were departures to and arrivals from the northwest for both runways. This decision was made as there is no connectivity to/from the enroute network, insufficient Controlled Airspace (CAS) and no business or operator requirement for Standard Instrument Departures (SIDs) and Standard Arrival procedures (STARs) in this direction[1].

1.1.5. Step 2B requires the change sponsor to conduct an Initial Options Appraisal (IOA) on the options described in Step 2A. This Initial Options Appraisal is the subject of this report.

1.1.6. The report is one of a set of documents submitted to the CAA at Gateway 2 of the CAP1616 process. The submitted documents are available on the Airspace Change Portal and comprise of:

- Options Development and Design Principle Evaluation, Stage 2A;
- Initial Options Appraisal, Stage 2B;
- Supporting material, such as stakeholder engagement presentations and surveys.

1.1.7. The report begins with a brief description of the purpose and scope of the options Appraisal process, information regarding Performance-Based Navigation (PBN) objectives as part of the AMS and some further important context regarding Bournemouth Airport. This is followed by sections that look at the options for appraisal and the Initial Options Appraisal (IOA) for each option. Finally, this report presents the results of the IOA for each design envelope for both runways, departures, and arrivals. The latter is a Red Amber Green (RAG) assessment against each of the impacts assessed in the IOA and will determine if any options are discounted at this stage.

[1] For more information see Options Development and Design Principle Evaluation Section 8, available on the ACP Portal.

1.2. Purpose and Scope

1.2.1. As part of the ACP CAP1616 process, BOH is required to complete a formal options appraisal process that assesses the benefits of the conceptual route options compared to a baseline scenario. The Step 2B requirement is to determine the relevant high-level criteria and then conduct a qualitative assessment against each of the conceptual route options. This IOA serves as the foundation for a more quantitatively oriented assessment later in the ACP CAP1616 process.

1.2.2. In addition to comparing options against the baseline, BOH are required to assess the potential costs and benefits of each conceptual option. This includes, but is not limited to, safety, noise impact, air quality, emissions, environmental considerations, efficiency, and access for other airspace users [2].

1.3. Performance-Based Navigation

1.3.1. One of the major aims of the AMS is to optimise future airspace designs to take account of modern aircraft performance and functional capabilities and make them more efficient, saving time and fuel and reducing emissions.

1.3.2. The key to achieving this is through the application of Performance-Based Navigation (PBN). In parallel, the UK navigation infrastructure can also be optimised to take advantage of the lateral navigation accuracy from Global Navigation Satellite Systems (GNSS), while retaining adequate conventional ground-based navigation aids to ensure both resilience and contingency measures.

1.3.3. PBN is being adopted world-wide. Airspace will be modernised through International, Regional and State level initiatives, including regulations. It impacts both the high-level airways and the lower-level arrival and departure routes into and out of airports and Instrument Approach Procedures (IAP).

1.3.4. European-wide legislation: Commission Implementing Regulation EU 2018/1048, PBN-IR[3] was developed to drive the deployment of PBN in the European region to meet the international vision laid down by the International Civil Aviation Organisation (ICAO).

1.4. Further Context

1.4.1. BOH has already commenced the modernisation of its airspace having submitted a proposal for the implementation of RNAV Approaches[4]. The Instrument Landing System (ILS) (CAT I) serving RWY 08 is obsolete and needs to be replaced. Unrecoverable failure of the ILS on RWY 08 will have serious operational consequences denying easterly Precision Approaches and increasing dependence on RWY 26. In addition, the FASI(S) programme may result in more requirements for the airport to implement new arrival transitions, to enable aircraft to establish on an IAP.

[2] A guide to expected approach to key analysis for ACPs is in CAP1616 Appendix E, table E2
[3] Commission Implementing Regulation EU 2018/1048, PBN-IR.
[4] Bournemouth Airport RNAV Approaches ACP-2018-40

1.4.2. It is possible that, in the development of options for new departure and arrival profiles for the other airports in the region, the existing airspace configuration may also require re-configuration. This will be managed as part of the FASI(S) programme as all the airports within the cluster progress through the CAP1616 process.

1.5. Options under Appraisal

1.5.1. This section describes the departures and arrivals for both runways. Each sub-section begins with a detailed description of the baseline for each design envelope followed by a brief description of the options.

1.5.2. Images in this section depict the options as swathes (more information can be found in the 'Options Development and Design Principle Evaluation' document on the ACP Portal). All options are illustrated alongside the baseline and Do-Minimum within each design envelope, over OS map and over the En-route (ENR) chart to 25 Nautical Miles (nm), on the latter danger and restricted areas are also shown. Together, this information helps to inform the evaluation of safety concerns for all options. All images shown over OS maps also depict the Noise Preferential Routes (NPR)[5], these are the blue and yellow shapes. For arrivals, the images are shown over google earth imagery with the RNP T-Bar, this is the white line image which represents the positions of aircraft on final approach to each runway.

1.5.3. Each section begins with a reminder of the options under consideration by runway and by departures and arrivals. All Northwest options have been discounted following the Design Principle Evaluation stage, step 2a, see Section 1.1.4.

1.6. Runway 08 Departures

1.6.1. All options for consideration in this IOA document are detailed in the table below for RWY 08 departures followed by images of the swathes for each design envelope over OS map and en-route charts.

Northeast	East	South
D08-NE-B Baseline	**D08-E-C Baseline**	**D08-S-B Baseline**
D08-NE-Do Minimum	D08-E-D	D08-S-Do Minimum
D08-NE-A	D08-E-Do Minimum	D08-S-A

Table 1: 08 Departure options

1.6.2. Northeast Design Envelope

The baseline for the Northeast departures design envelope typically route straight ahead bearing left. The baseline is named D08-NE-B Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. This baseline was

[5] Noise Preferential Route is an area surrounding the conventional departure route which is +/– 1.5km. Aircraft are required to remain within this area up to a minimum altitude, usually 4,000ft. See Options Development and DPE document for more information about Bournemouth Airports NPRs.

established due to new track data from 16th June-15th September 2023, henceforth 'summer 2023 data', and first presented to stakeholders as a baseline in November 2023, however in previous stakeholder engagement sessions (December 2022) this baseline was presented as option D08-ESE-A and feedback from the first round of engagement was retained for this new baseline option in step 2a of this ACP [6]. In October 2025, the Do-Minimum option, D08-NE-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV SID procedures to today's operation for departures. The other option in this design envelope, D08-NE-A, routes farther north than the baseline; this option is the same in all stakeholder engagements in all but name, formerly named D08-ESE-A.

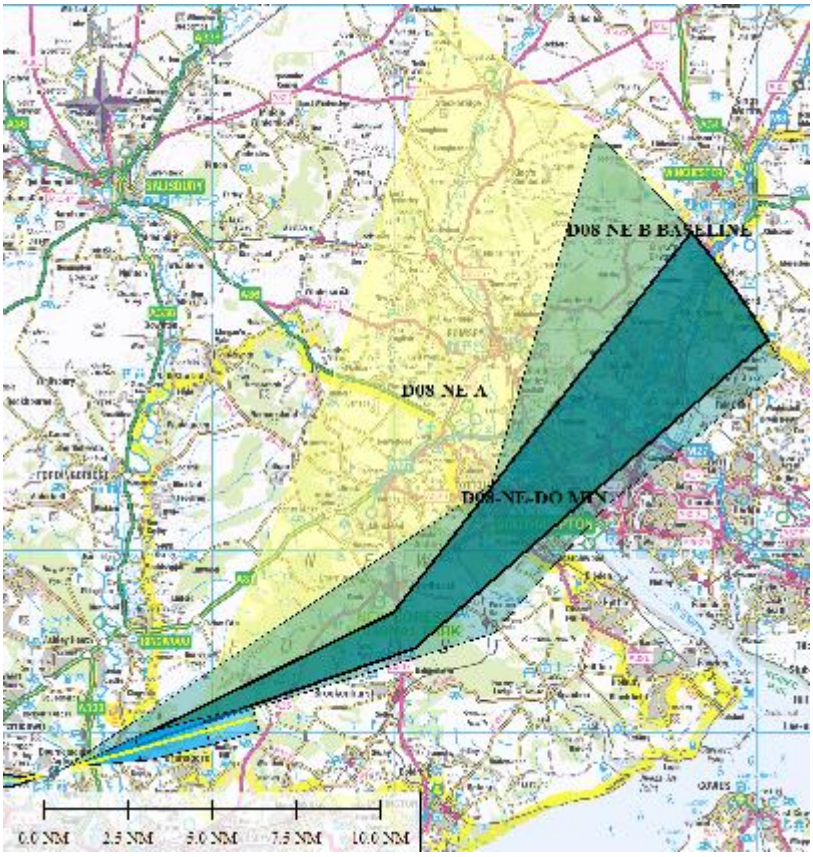


Figure 1: Northeast Design Envelope 08 Departures over OS map

[6] See Options Development and Design Principle Evaluation document, Step 2a.

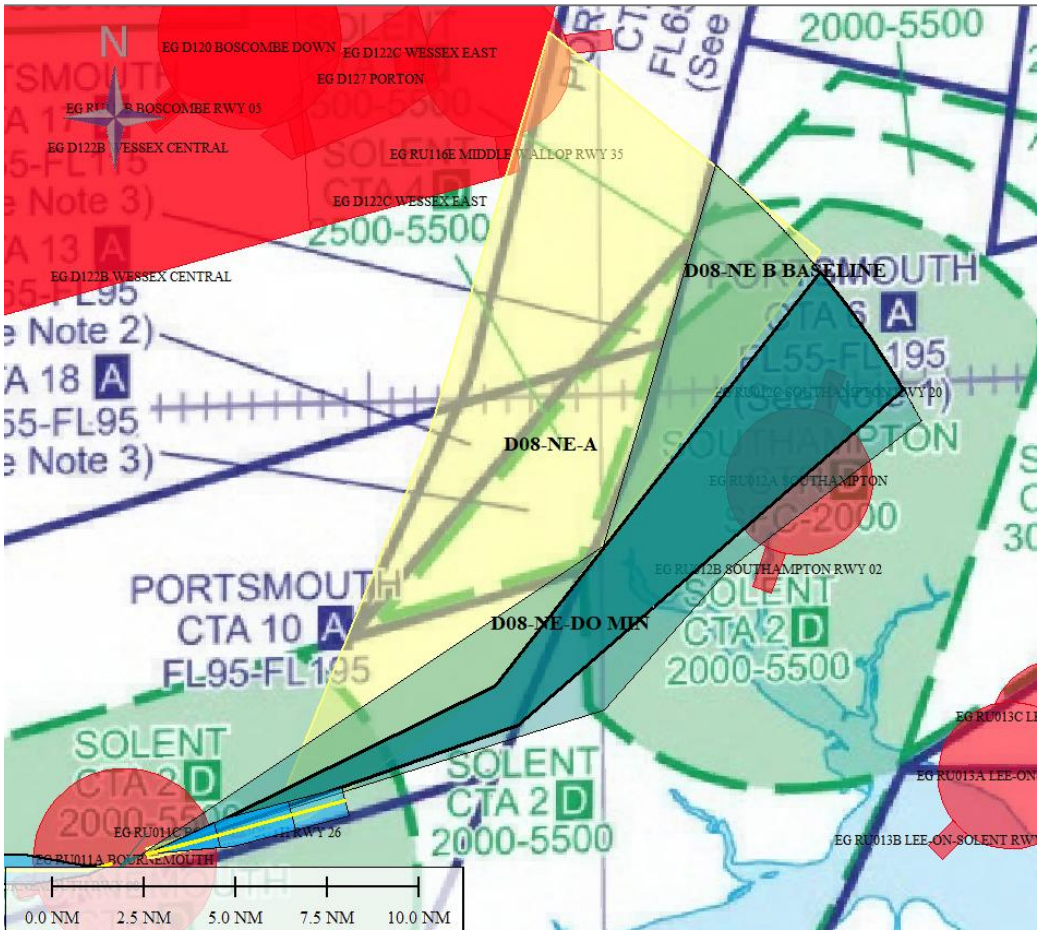


Figure 2: Northeast Design Envelope 08 Departures over ENR chart.

1.6.3. East Design Envelope

The baseline for the East departures design envelope typically route straight ahead to the east. The baseline is named D08-E-C Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. In October 2025, the Do-Minimum option, D08-E-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV SID procedures to today's operation for departures. This baseline and the option D08-E-D are the same for all stakeholder engagements in December 2022, November 2023 and October 2025, however the design envelope has been renamed East rather than East Southeast.

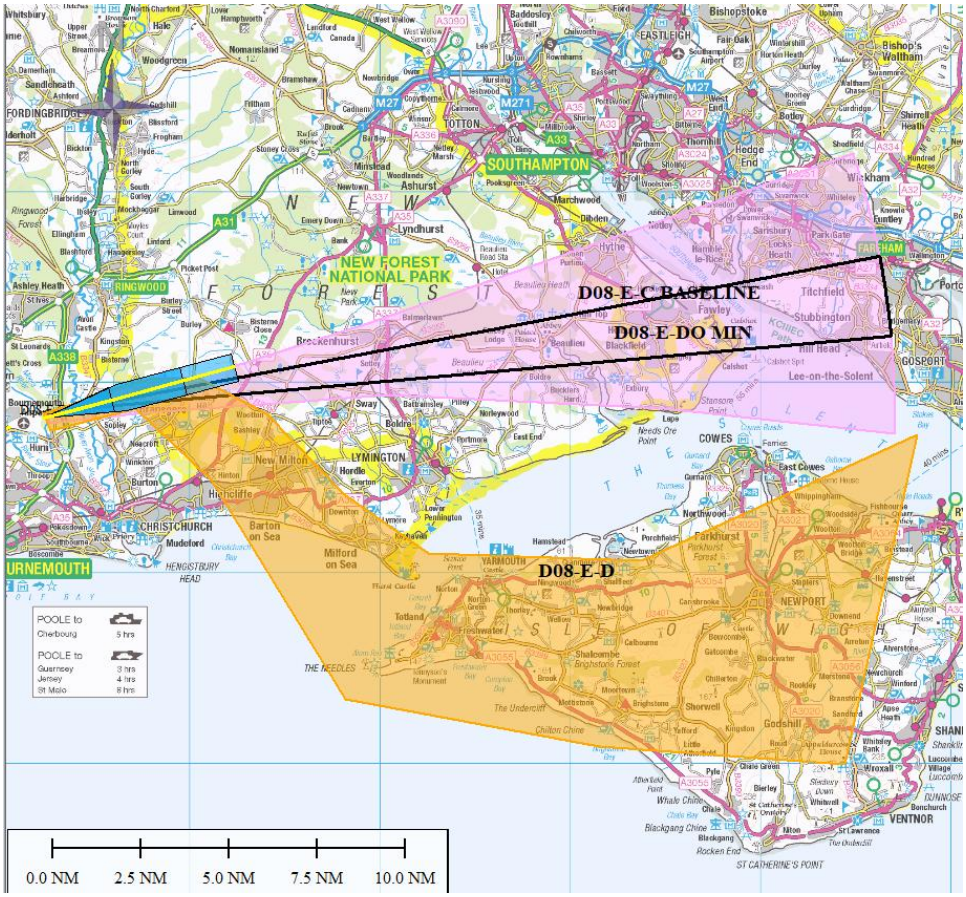


Figure 3: East Design Envelope 08 Departures over OS map.

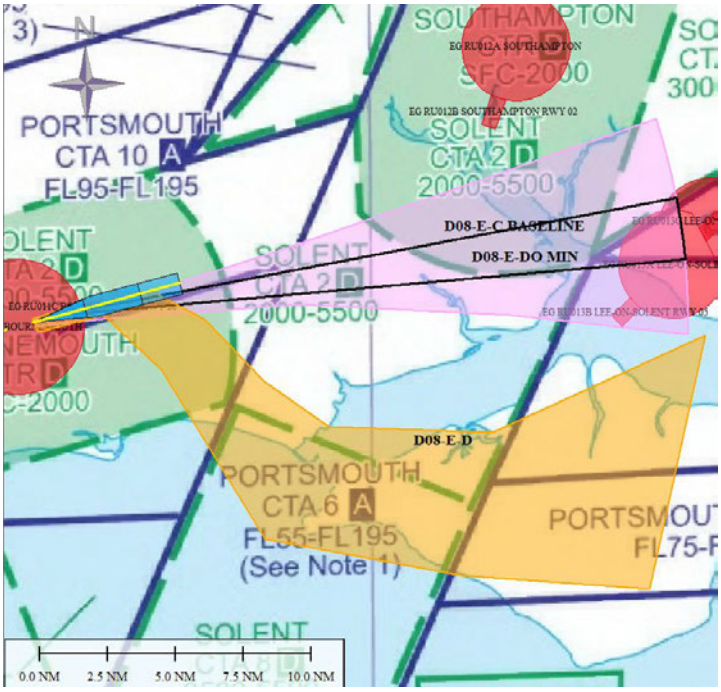


Figure 4: East Design Envelope 08 Departures over ENR chart.

1.6.4. South Design Envelope

The baseline for the South departures design envelope typically route straight ahead before turning right to the south. The baseline is named D08-S-B Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. The baseline was redrawn using summer 2023 data however largely covers the previous baseline and option C (D08-S-C) from the first engagement with stakeholders, this option has been removed as a result. Option A is the same for all stakeholder engagements. In October 2025, the Do-Minimum option, D08-S-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV SID procedures to today's operation for departures.

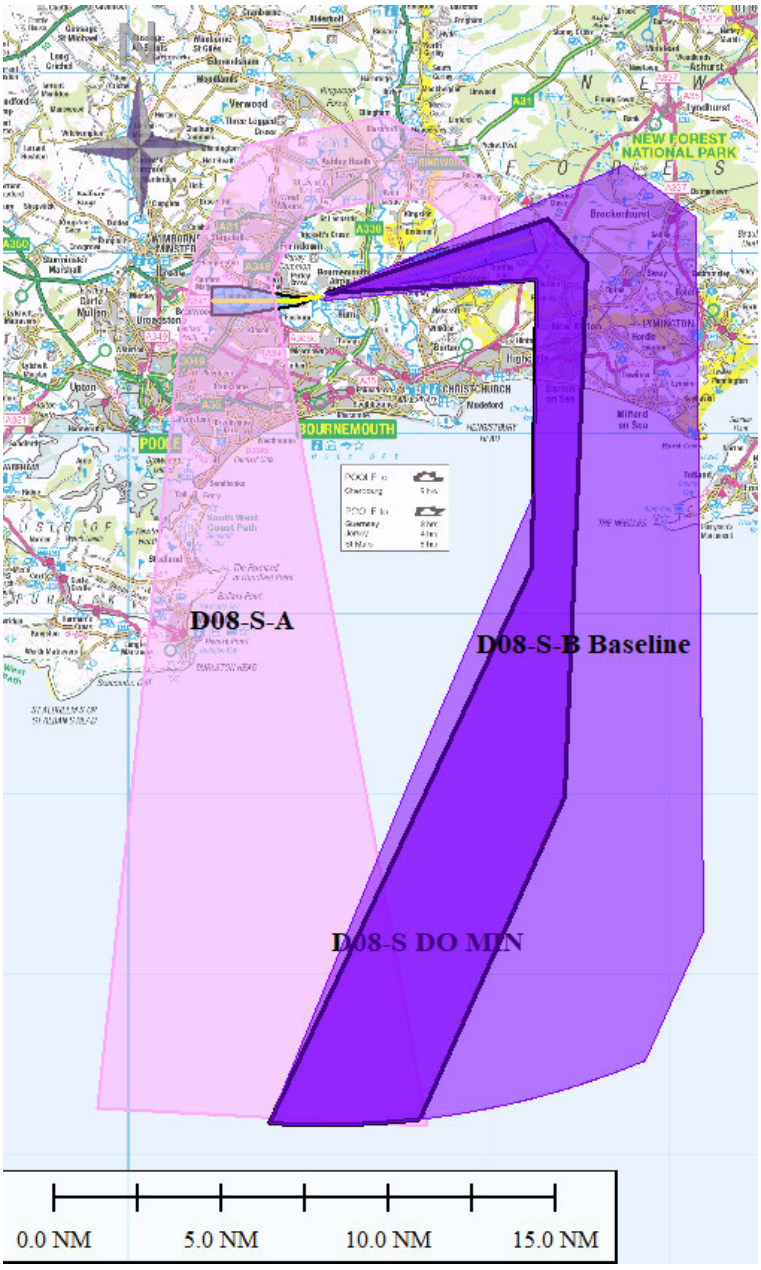


Figure 5: South Design Envelope 08 Departures over OS map.

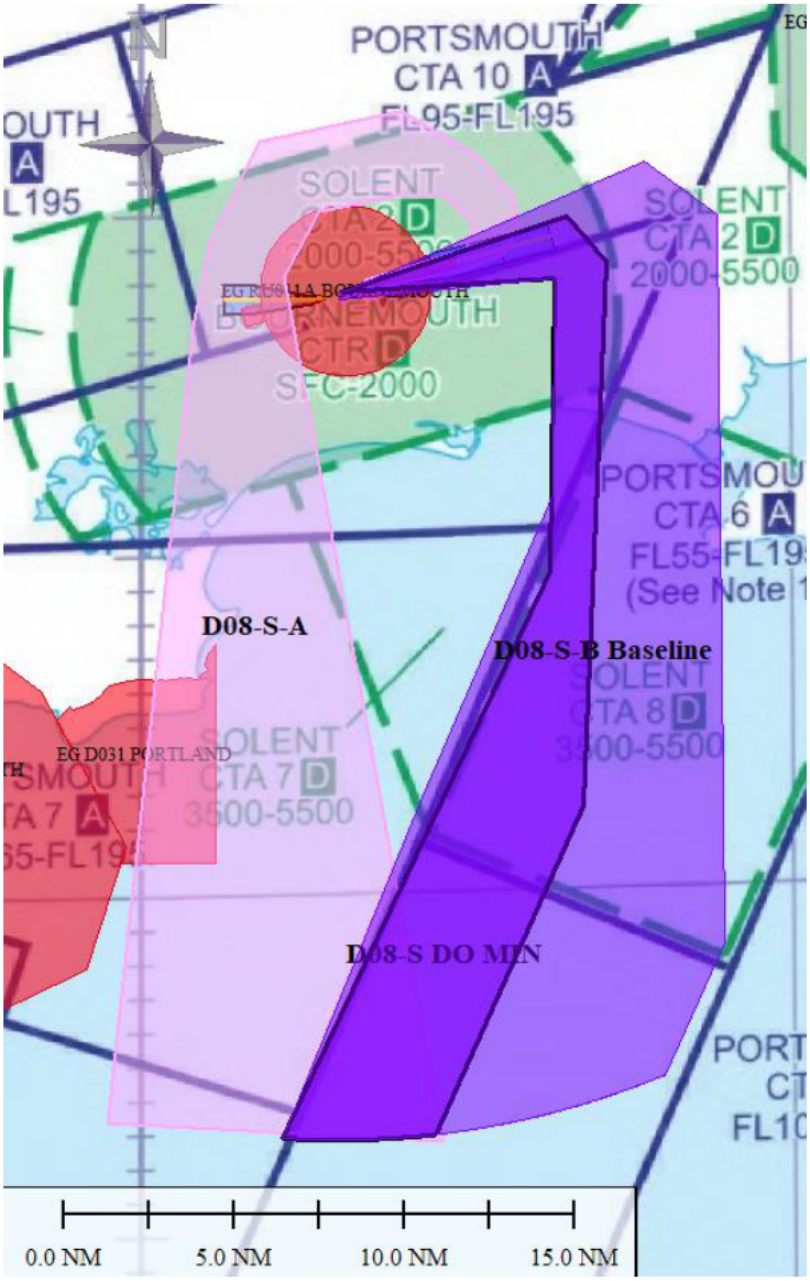


Figure 6: South Design Envelope 08 Departures over ENR chart.

1.7. Runway 08 Arrivals

1.7.1. All options for consideration in this Initial Options appraisal document are detailed in the table below for RWY 08 arrivals followed by images of the swathes for each design envelope over Google Earth imagery and en-route charts.

Northeast	Southeast	South
A08-NE-B Baseline	**A08-SE-A Baseline**	**A08-S-C Baseline**
A08-NE-Do Minimum	A08-SE-Do Minimum	A08-S-Do Minimum

Northeast	Southeast	South
A08-NE-A	A08-SE-B	A08-S-A
A08-NE-C		A08-S-B

Table 2: 08 Arrival options

1.7.2. Northeast Design Envelope

For the Northeast arrivals, aircraft typically arrive from the north and northeast to the north of the runway and turn left on approach. The baseline is named A08-NE-B Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. The baseline is largely the same for all stakeholder engagements however; it is adjusted to accommodate flights to the north and is reflective of current operations. In October 2025, the Do-Minimum option, A08-NE-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV procedures to today's operation. The options, A and C are the same in all engagements.

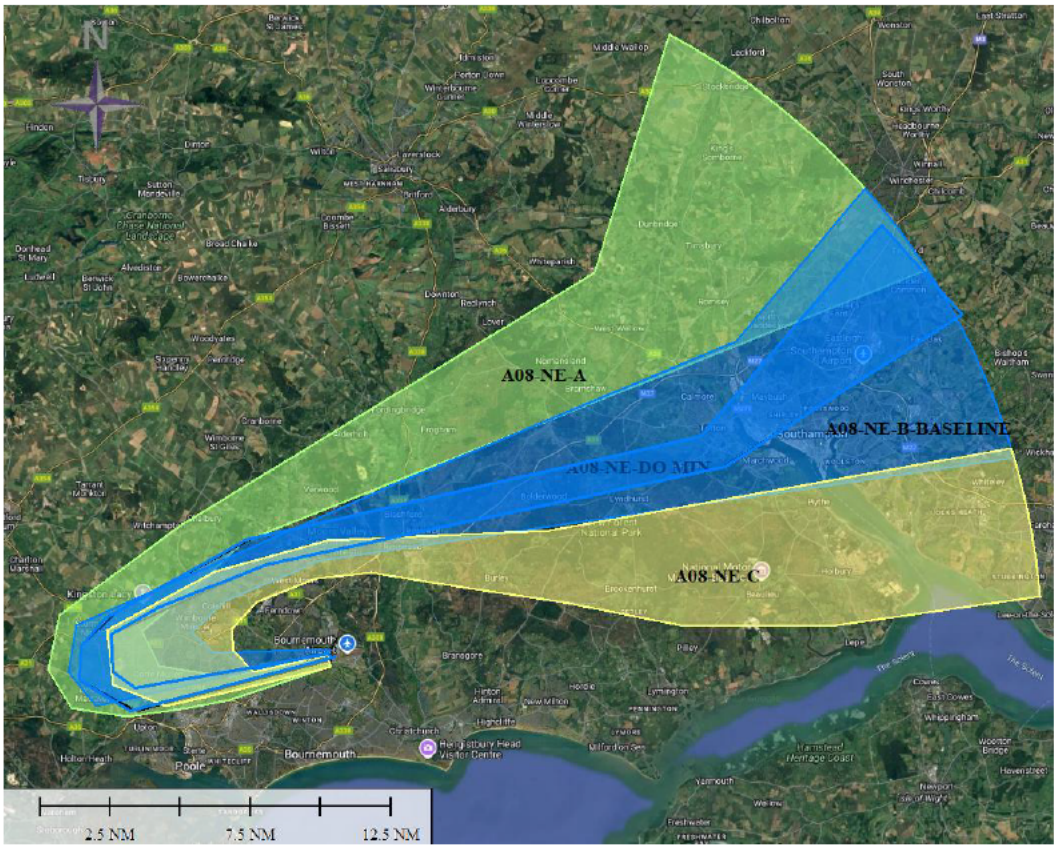


Figure 7: Northeast Design Envelope 08 Arrivals over Google Earth Imagery.

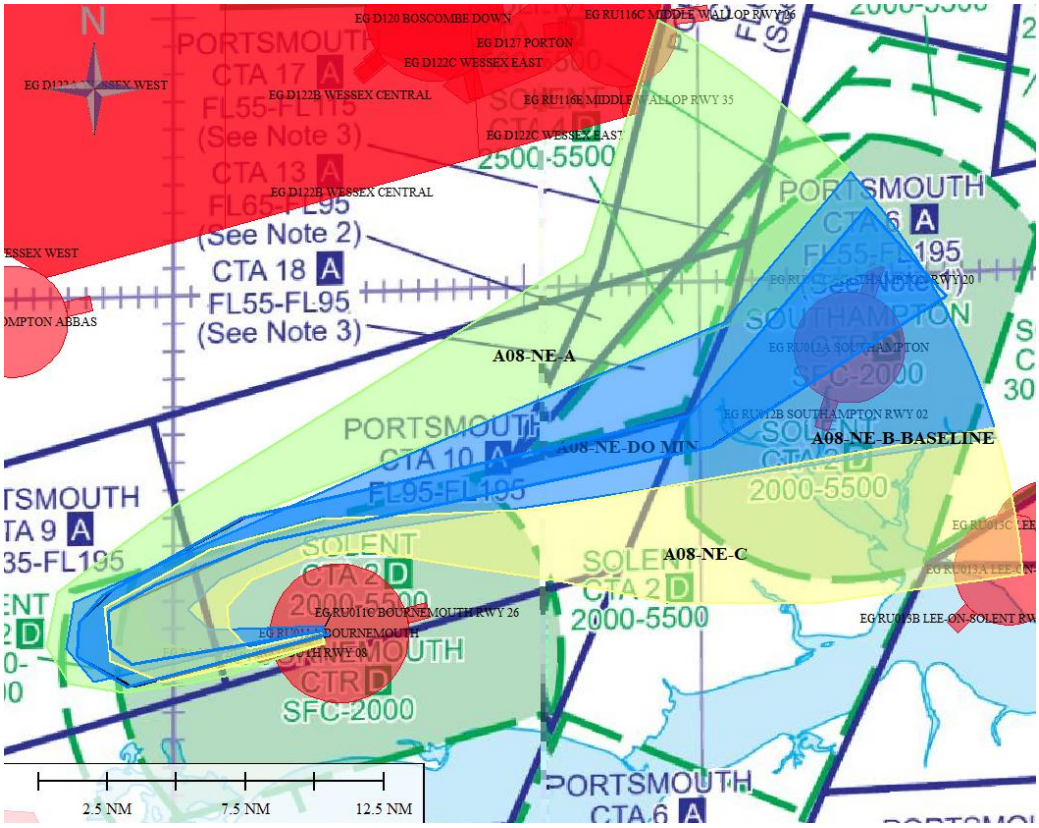


Figure 8: Northeast Design Envelope 08 Arrivals over ENR chart.

1.7.3. Southeast Design Envelope

The baseline for the Southeast arrivals design envelope arrive from the east and southeast. The baseline is named A08-SE-A. The baseline has been established from NTK data, current procedures, and operational expertise. Both the baseline and the option (B) in this design envelope remain unchanged between first, second and third engagements with stakeholders. In October 2025, the Do-Minimum option, A08-SE-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV procedures to today's operation.

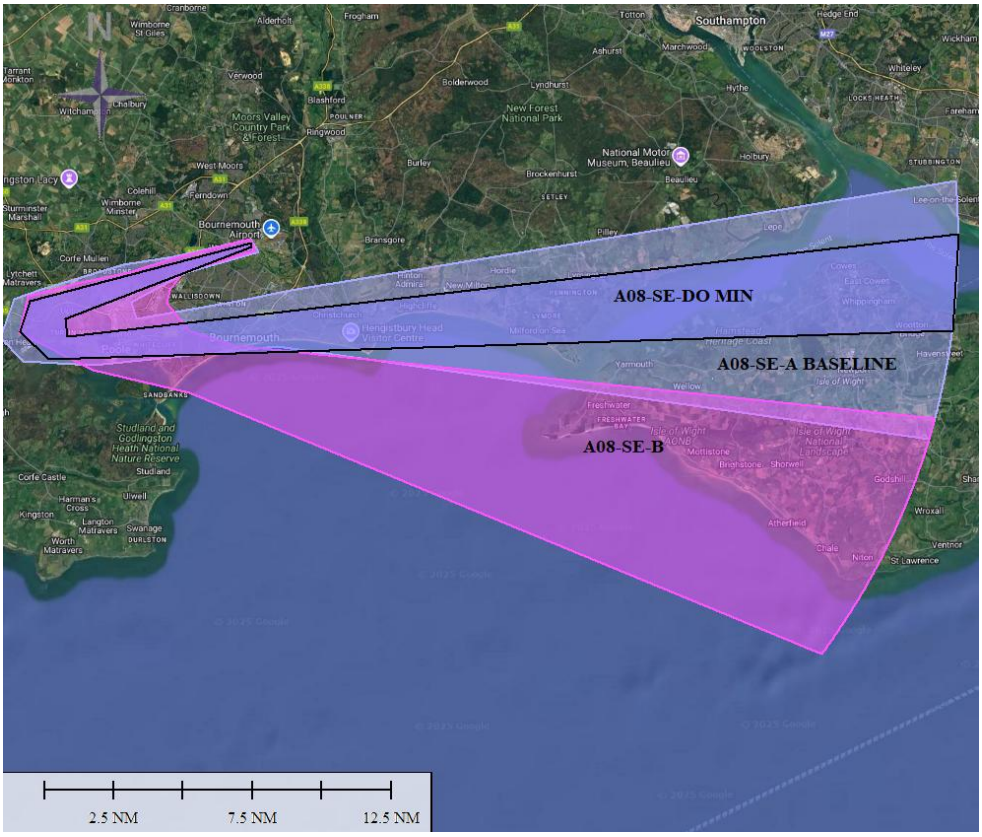


Figure 9: Southeast Design Envelope 08 Arrivals over Google Earth Imagery.

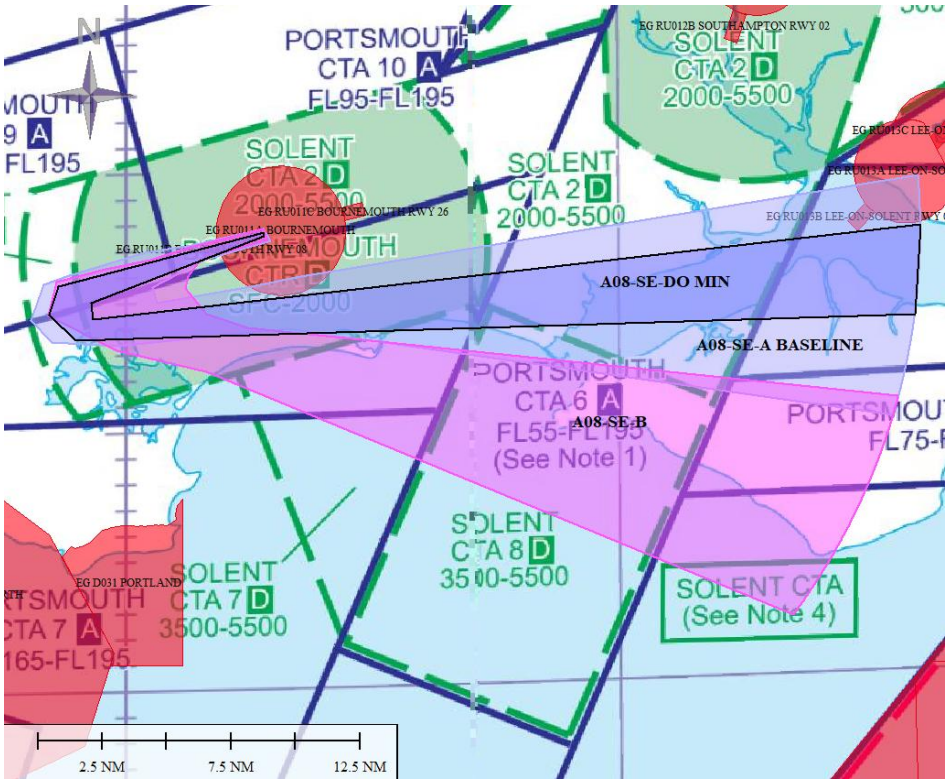


Figure 10: Southeast Design Envelope 08 Arrivals over ENR chart.

1.7.4. South Design Envelope

The baseline for the South arrivals design envelope arrive from the south and turn right onto the runway on approach. The baseline is named A08-S-B. The baseline has been established from NTK data, current procedures, and operational expertise. Aircraft will typically turn right on approach to RWY 08 at a distance greater than 10nm, see figure 12. In October 2025, the Do-Minimum option, A08-S-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV procedures to today's operation. Options A and C are the same for all stakeholder engagements.

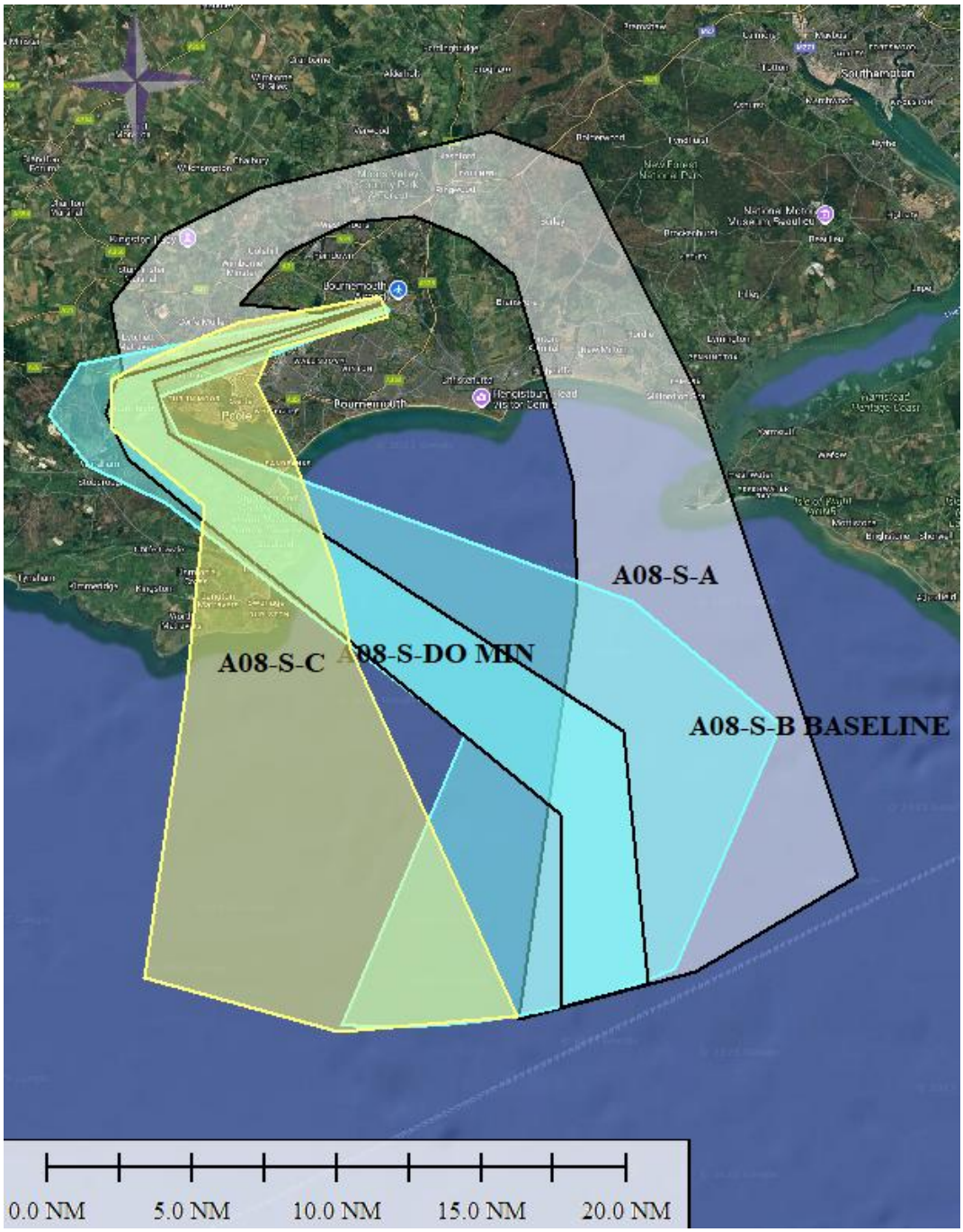


Figure 11: South Design Envelope 08 Arrivals over Google Earth imagery.

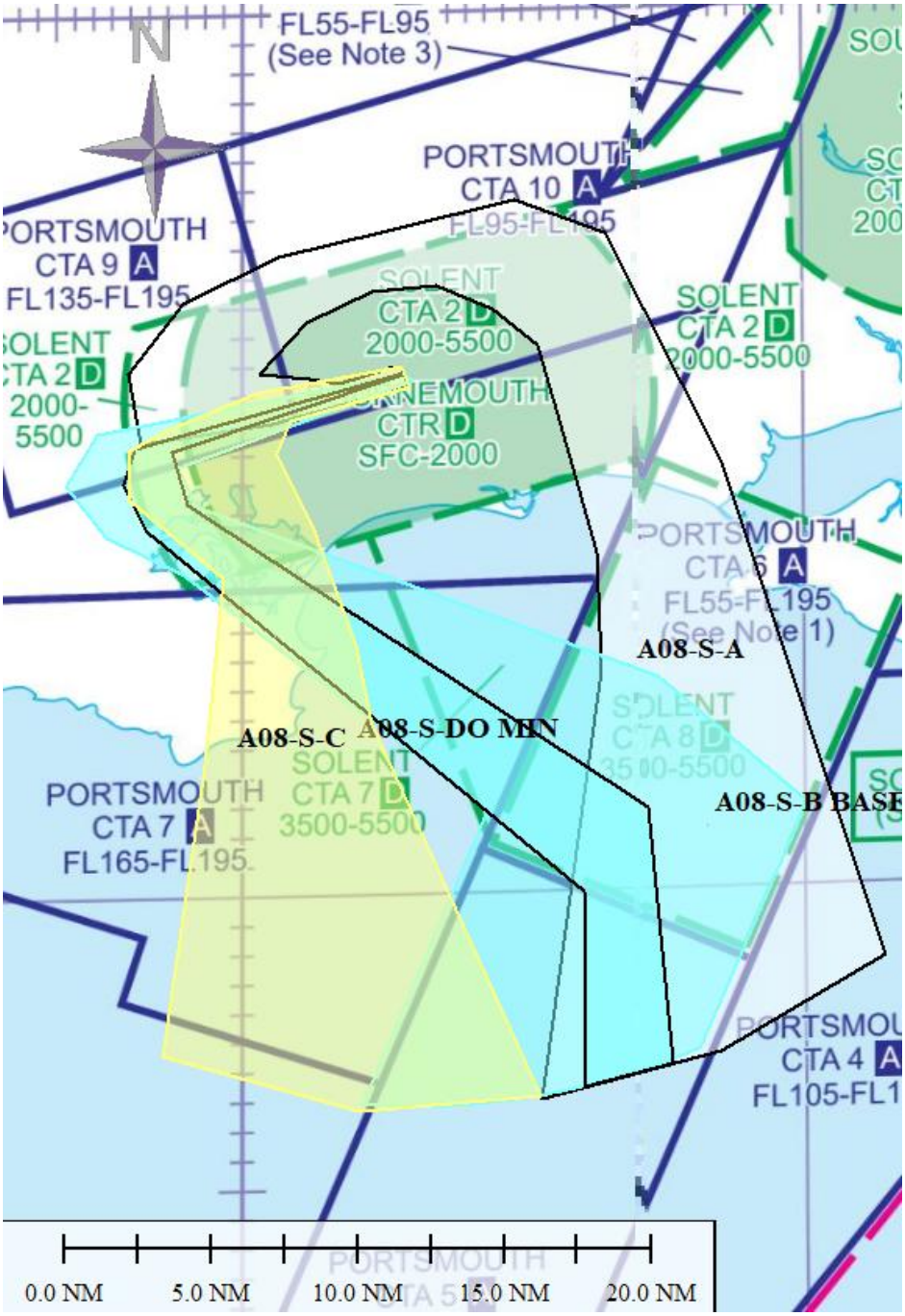


Figure 12: South Design Envelope 08 Arrivals over ENR chart.

1.8. Runway 26 Departures

1.8.1. All options for consideration in this Initial Options appraisal document are detailed in the table below for RWY 26 departures followed by images of the swathes for each design envelope over OS map and en-route charts.

East	South
D26-E-C Baseline	**D26-S-B Baseline**
D26-E-Do Minimum	D26-S-Do Minimum
D26-E-A	D26-S-A
D26-E-D	D26-S-C
D26-E-E	

Table 3: 26 Departure options

1.8.2. East Design Envelope

The baseline for the East departures design envelope typically route straight ahead before turning sharp right. The baseline is named D26-E-C. The baseline has been established from NTK data, current procedures, and operational expertise. The baseline has changed slightly between stakeholder engagements with the baseline moving slightly to the south and as a result, the previous option C for this design envelope has been removed. Option A remains the same. Options A and B from the previous design envelope (Southeast) in the first engagement have been renamed D and E and are now part of the East design envelope; the swathe areas covered are the same for both engagements. I.e. D26-SE-A (first engagement) is the same as D26-E-D, and D26-SE-B (first engagement) is the same as D26-E-E. Options D and E would turn left off the runway before heading straight in an easterly direction. In the 2025 re assessment of baselines and introduction of Do Minimums, the baseline was extended slightly to the north to bridge the gap between the baseline and Option D08-E-A.

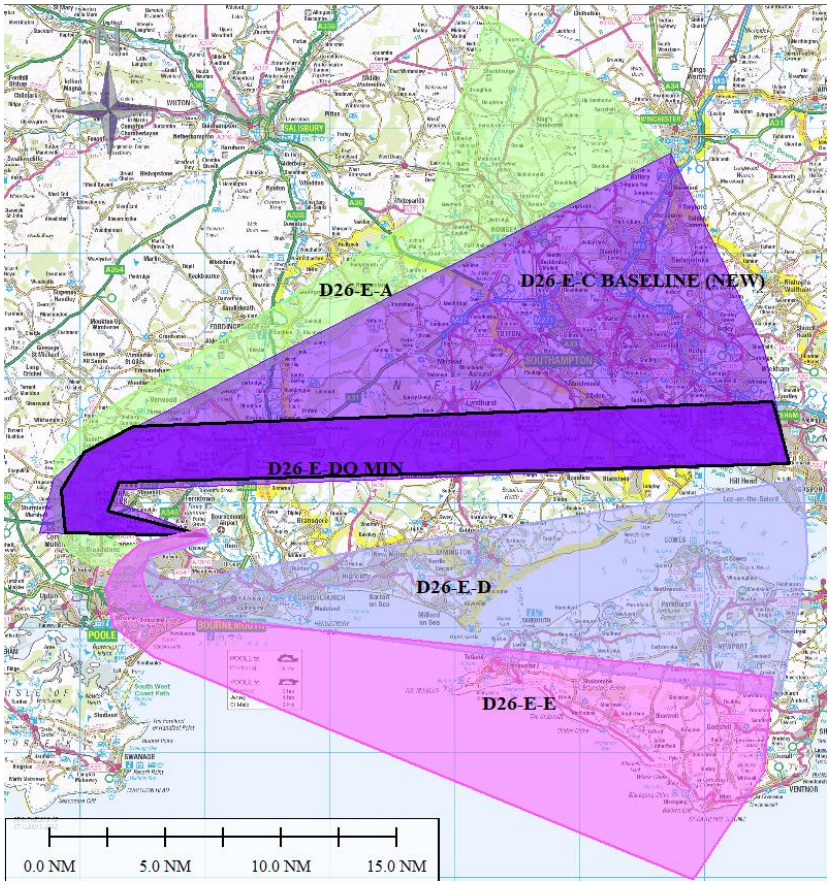


Figure 13 East Design Envelope 26 Departures over OS map.

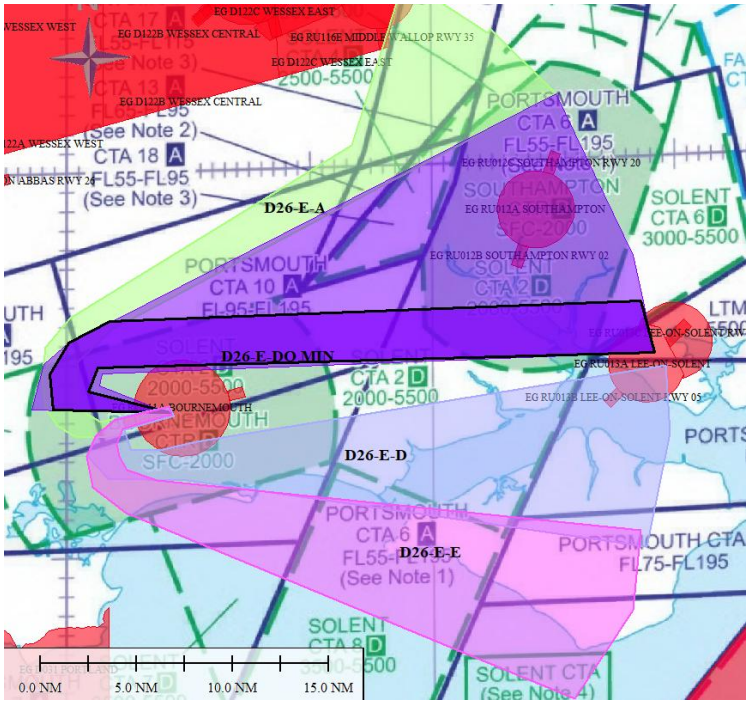


Figure 14: East Design Envelope 26 Departures over ENR chart.

1.8.3. South Design Envelope

The baseline for the South departures typically route straight ahead before turning left and to the south. The baseline is named D26-B-C Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. Option C would follow a similar route however turn left and south sooner. Option A would turn right after departure and right again before finally turning south. Both A and C options were the same for both stakeholder engagements, the baseline has been redrawn to reflect current operations based on summer 2023 data. In the 2025 re assessment of baselines and introduction of Do Minimums, the baseline was amended to reflect traffic patterns. The Do Minimum option was introduced.

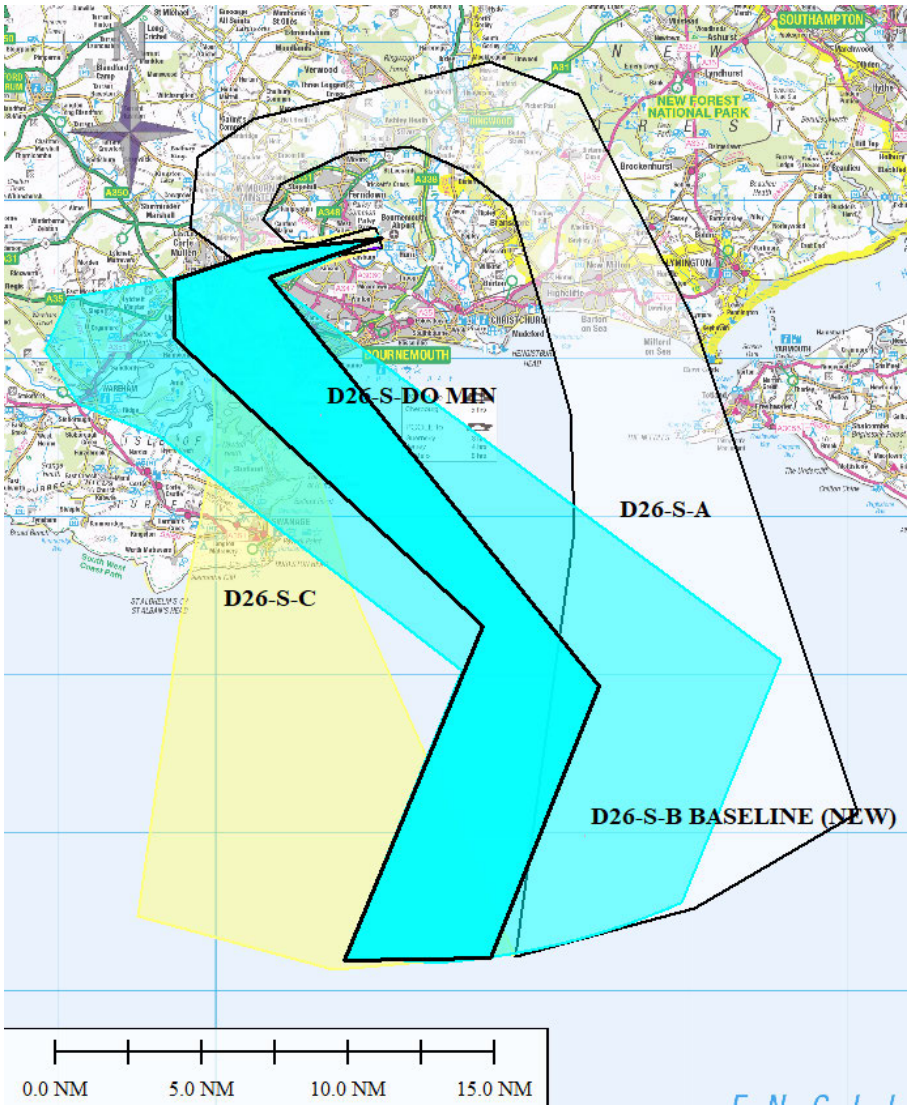


Figure 15: South Design Envelope 26 Departures over OS map.

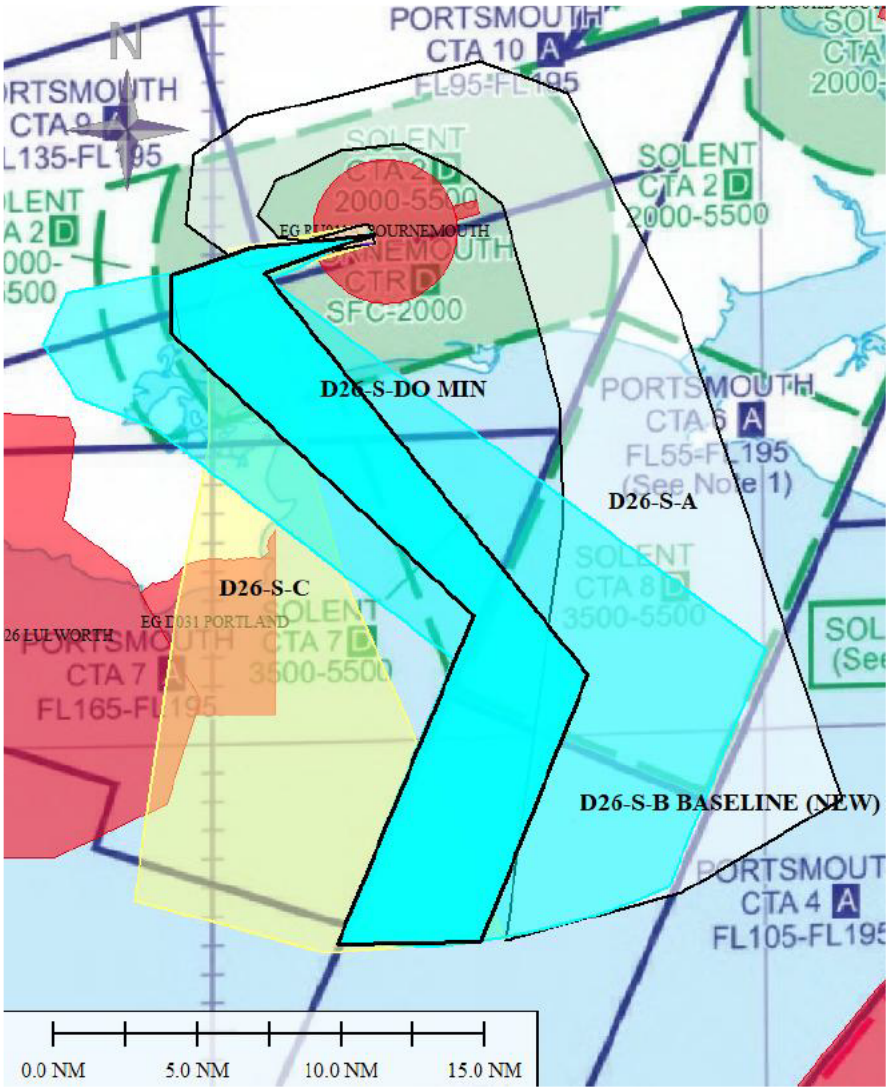


Figure 16: South Design Envelope 26 Departures over ENR chart.

1.9. Runway 26 Arrivals

1.9.1. All options for consideration in this Initial Options appraisal document are detailed in the table below for RWY 26 arrivals followed by images of the swathes for each design envelope over Google Earth imagery and en-route charts.

Northeast	East Southeast	South
A26-NE-B Baseline	**A26-ESE-A Baseline**	**A26-S-C Baseline**
A26-NE-Do Minimum	A26-ESE-Do Minimum	A26-S-Do Minimum
A26-NE-A	A26-ESE-B	A26-S-A

Table 4: 26 Arrival options

1.9.2. Northeast Design Envelope

For the Northeast arrivals, aircraft typically arrive from the north and northeast to the north of the runway and turn slightly right on approach. The baseline is named A08-NE-B Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. The baseline has been slightly redrawn to reflect current operations and option A is the same for all stakeholder engagements, however these two swathes were previously in the East Southeast design envelope and have been split into a separate design envelope for the Northeast. The Do Minimum was introduced in 2025.

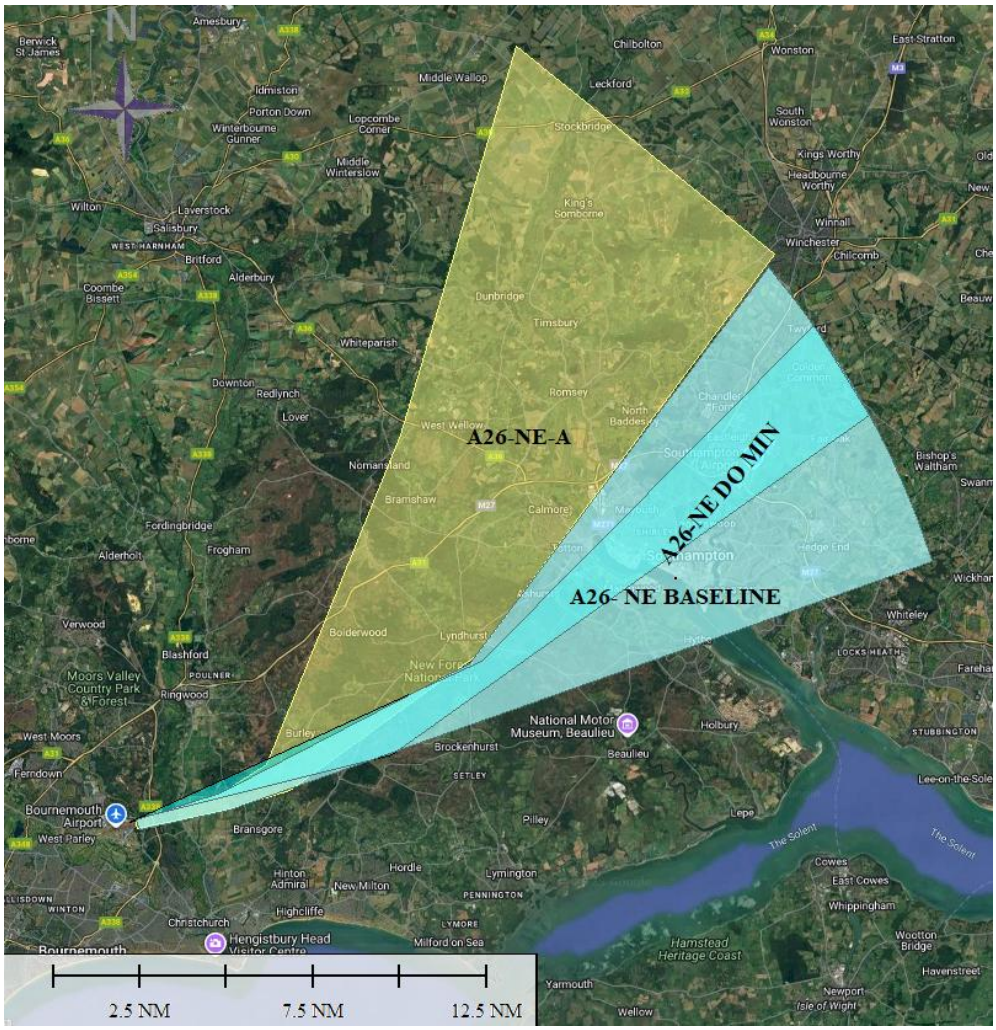


Figure 17: Northeast Design Envelope 26 Arrivals over Google Earth Imagery.

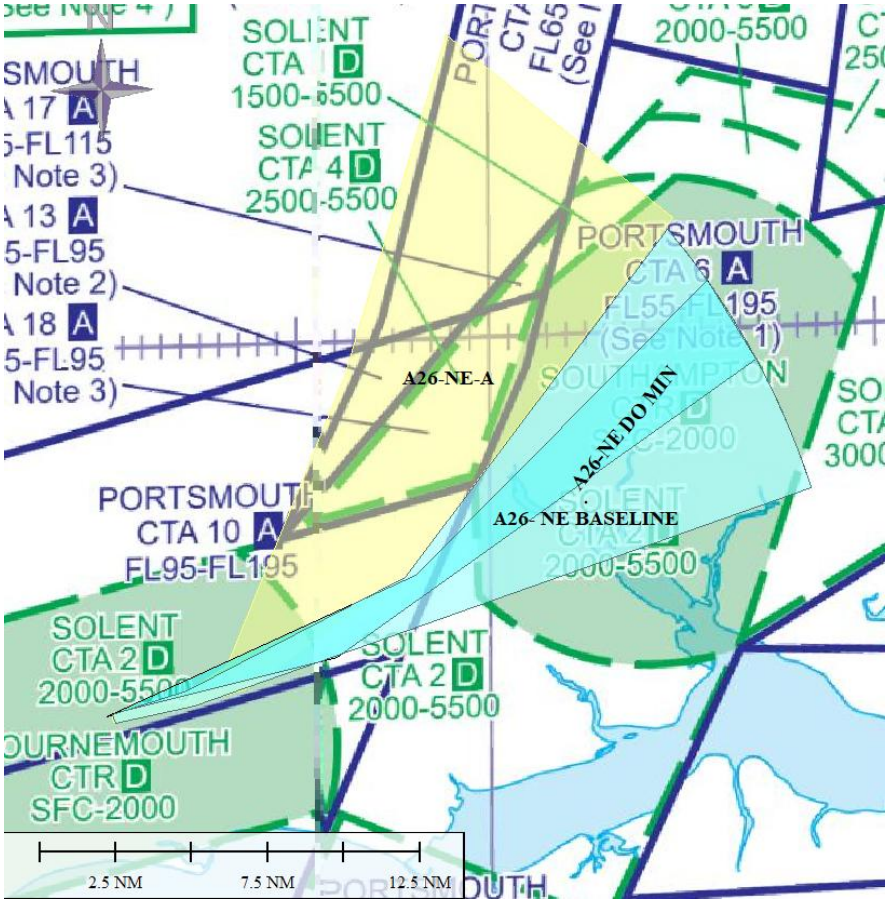


Figure 18: Northeast Design Envelope 26 Arrivals over ENR chart.

1.9.3. East Southeast Design Envelope

For the East Southeast arrivals, aircraft typically arrive from the east to the south of the runway. The baseline is named A08-ESE-A Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. The baseline is similar to the previous option C in the first round of engagement. It has been redrawn slightly to reflect current operations. Option B has also been redrawn, however covers largely the same areas from the first engagement. In 2025 the ESE baseline was extended north to reflect traffic patterns, and the Do Minimum option was introduced.

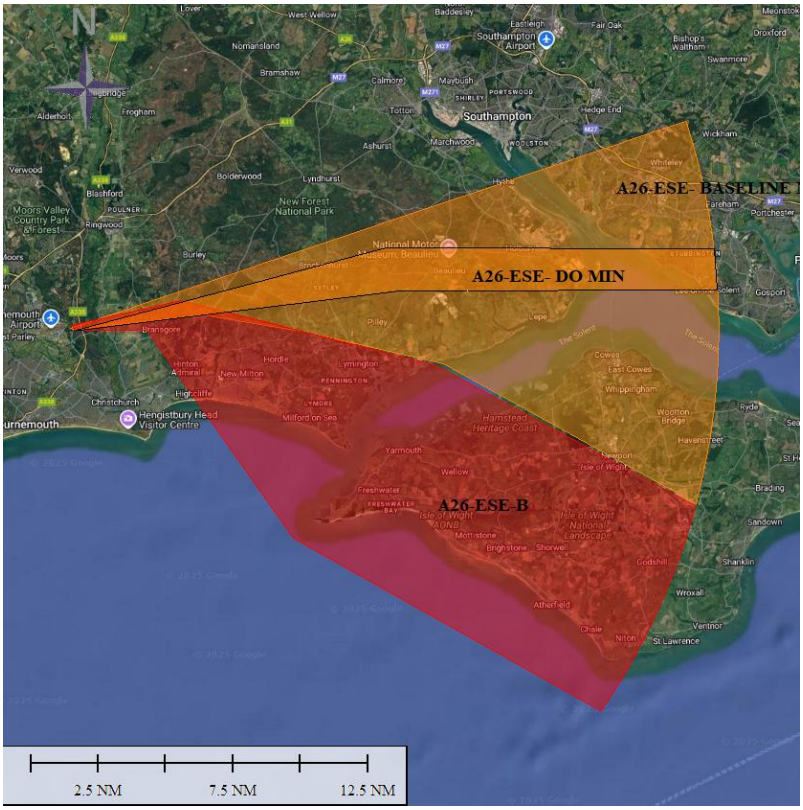


Figure 19: East Southeast Design Envelope 26 Arrivals over Google Earth Imagery.

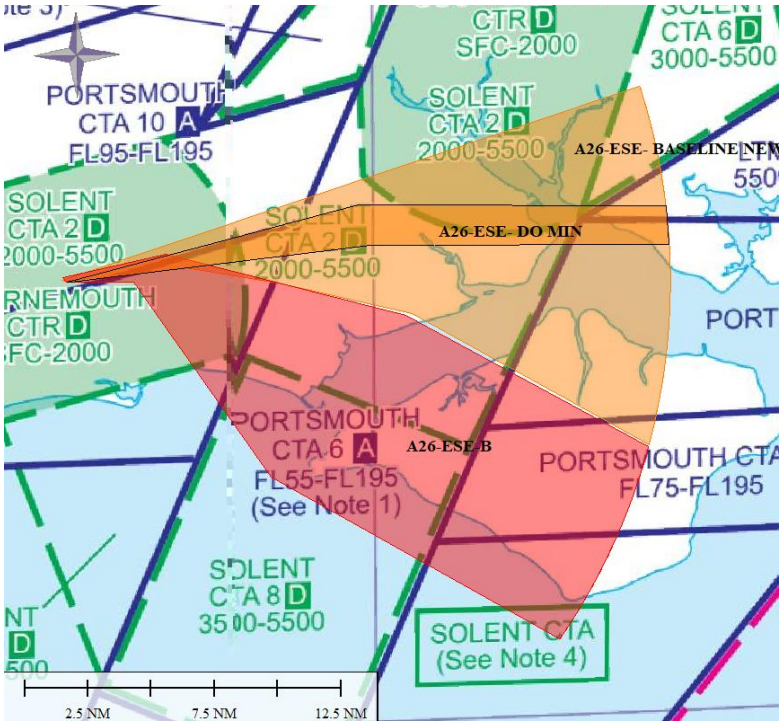


Figure 20: East Southeast Design Envelope 26 Arrivals over ENR chart.

1.9.4. South Design Envelope

For the South arrivals, aircraft typically arrive from the south of the runway and turn left upon approach. The baseline is named A08-S-C Baseline. The baseline has been established from NTK data, current procedures, and operational expertise. The baseline has been redrawn and covers the previous options B and C; option B has therefore been removed. Option A remains the same and would approach the runway from the south turning right and right again before final approach from the north of the runway. In October 2025, the Do-Minimum option, A26-S-DO MIN, was created to show how the Airspace and Procedures would look if we introduced RNAV procedures to today's operation.

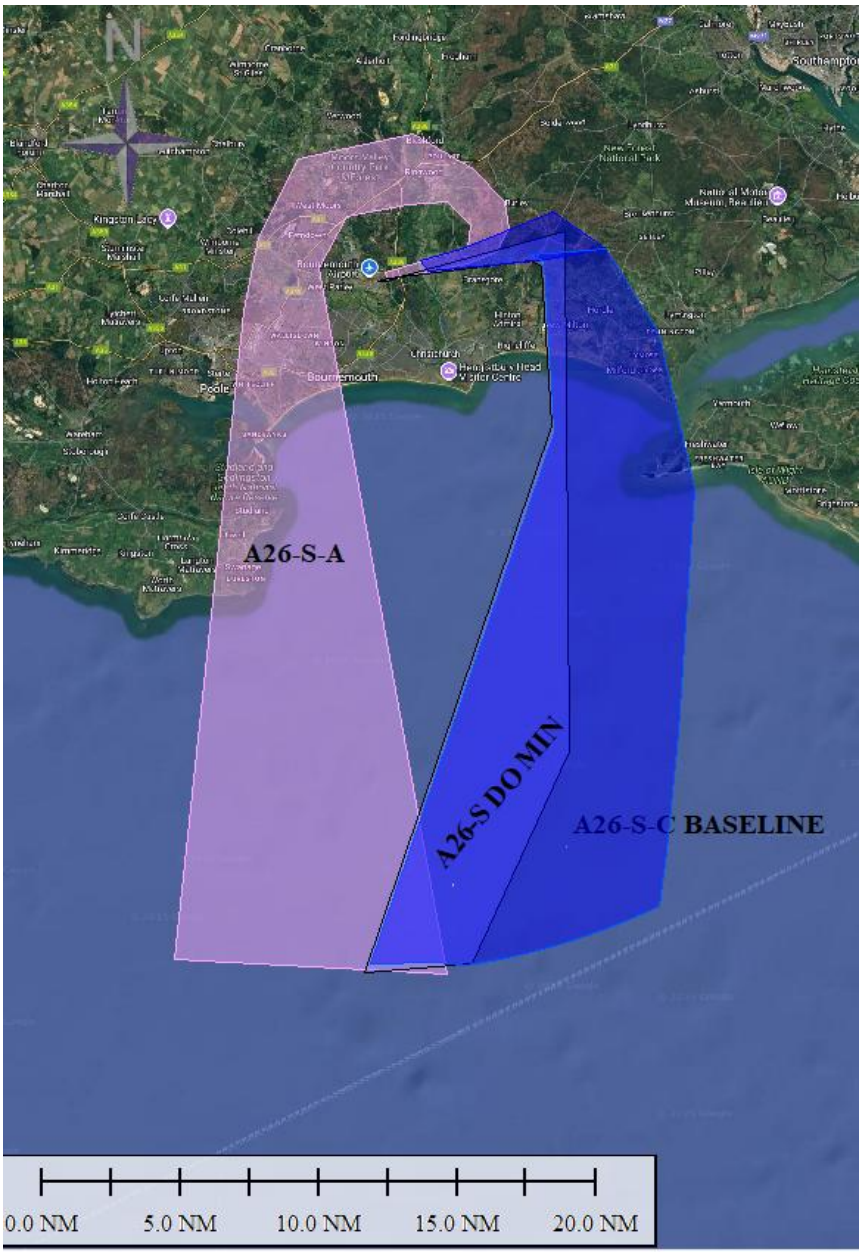


Figure 21: South Design Envelope 26 Arrivals over Google earth Imagery.

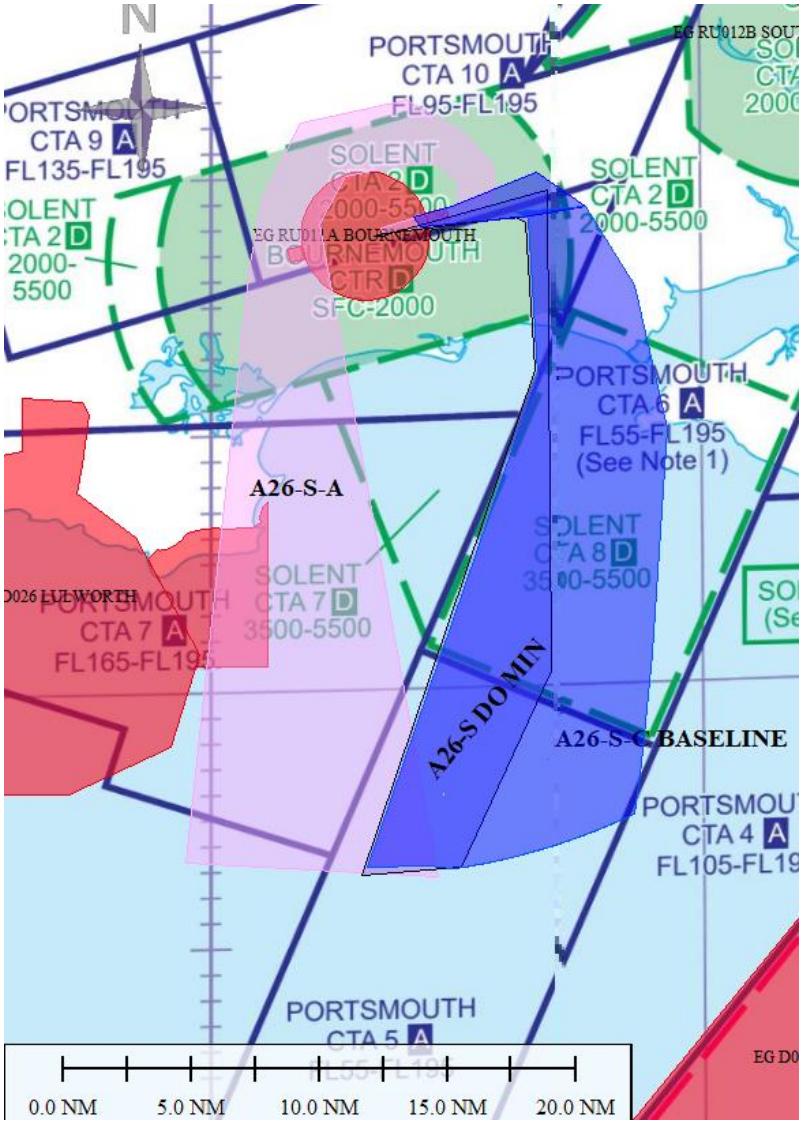


Figure 22: South Design Envelope 26 Arrivals over ENR chart.

2. Methodology

2.1. IOA assessment Criteria

2.1.1. This Initial Options Appraisal (IOA) is the first of three appraisals that will be conducted during the CAP1616 process. It is a high-level qualitative assessment of the options, defined in Stage 2A, against pre-defined decreed by CAP1616 Appendix E.

2.1.2. The purpose of this appraisal is to show the positives, negatives, benefits and costs of each option based on high level qualitative assessment conducted by subject matter experts.

2.1.3. Each option is assessed in isolation. Interdependencies between options will be explored at Stage 3 in collaboration with neighbouring airports and the en-route network.

2.1.4. These options are assessed based on the present day; we have not taken external changes into account at this stage. Future planned housing and industrial developments will be considered for each option taken forward to Stage 3 at the second options appraisal. These have been collated and are contained within Annex A.

2.1.5. This qualitative initial options appraisal does not consider traffic forecasts. Future traffic forecast are provided in the document titled 'Options Development and Design Principle Evaluation' in section 3.3 (available on the ACP Portal) and will be utilised during the Stage 3 options appraisal.

2.1.6. The other document have been submitted to support this Initial Options Appraisal, Bournemouth Airport Options Development and Design Principle Evaluation and can be found on the Airspace Change Portal.

2.1.7. The table below details the IOA methodology that has been followed to undertake an initial assessment of our options.

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	A qualitative assessment of changes to the noise impact for each option when compared to the baseline option. This has been done using the geographical area overflown by each option and the analysis from the DPE - DP2 Overflight and DP3 Noise Footprint. **Annex D** contains Population Density maps which assisted in the assessment for each option [7].
	Air Quality	A qualitative assessment of changes to the local air quality for each option when compared to the baseline option. This has been done using the geographical area overflown by each option in relation to local air quality specifically below 1000ft as per guidelines[8]. **Annex D** contains population density and air quality map, and which assisted in the assessment for each option including analysis from the DPE – DP5 Emissions and Air Quality
Wider society	Greenhouse gas impact	A qualitative assessment of changes to the greenhouse gas impact for each option when compared to the baseline. This has been done by considering the difference in track miles to give an indication of the overall impact and using the analysis from the DPE – DP5 Emissions and Air Quality.
	Capacity/ resilience	A qualitative assessment of changes to airspace capacity and resilience for each option when compared to the baseline option. This includes our analysis from the DPE – DP7 Airspace Complexity and DP9 - Systemisation[9]
	Tranquillity	A qualitative assessment of changes to the tranquillity impact for each option when compared to the baseline option including analysis from the DPE – DP4 Tranquillity. This has been done paying particular attention to National Parks and AONBs in the vicinity of the option and where aircraft are likely to be below 7000ft. Areas of tranquillity have been scoped in within a 25nm range ring, where aircraft are likely to be at, or above, 7000ft. **Annex B** contains a tranquillity map which assisted in the assessment for each option.
	Biodiversity	A qualitative assessment of changes to the Biodiversity impact for each option when compared to the baseline option. It is not

[7] In the 'Noise impact on health and quality of life' section of the IOA tables, each dot represents the location of the Population Weighted Centroid (PWC) of an administrative unit. For more information see Annex D.
[8] AQMAs were scoped in within a 10nm range ring; this represents approximately 4000ft on a 6% climb gradient. Further analysis in Stage 3 will identify any AQMAs under 1000ft when options are refined to tracks.
[9] Possible interactions and conflicts between arrival and departure swathes have not been considered at this stage as it is these will be assessed in Stage 3 when the swathes are refined.

Group	Impact	Qualitative Assessment
		always possible to qualitatively assess if an option is 'better' or 'worse' than the baseline, however where possible an option may be assessed as overflying more or less European sites. Data retrieved from The Department for Environment, Food and Rural Affairs (DEFRA) Magic maps is used to identify areas of Biodiversity significance, such as Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA) and Ramsar sites. Additionally potential sites were investigated. **Annex C** contains biodiversity maps which assisted in the assessment for each option. Please refer to **Annex C** for maps of European sites and colour keys.
General aviation	Access	A qualitative assessment of changes to the General Aviation (GA) access to airspace for each option when compared to the baseline option. This includes our analysis from the DPE – DP6 Airspace Dimensions.
General aviation/ commercial airlines	Economic impact from increased effective capacity	A qualitative assessment of the economic impact for GA and commercial airlines from changes to capacity for each option when compared to the baseline option.
	Fuel burn	A qualitative assessment of changes to the impact to fuel burn for GA and commercial airlines for each option when compared to the baseline option. This has been done by considering the difference in track miles to give an indication of the overall impact and uses analysis from the DPE – DP5 Emissions and Air Quality and DP11 Operational Cost [10].
Commercial airlines	Training costs	A qualitative assessment of changes to commercial airline training costs for each option when compared to the baseline option.
	Other costs	A qualitative assessment of changes to additional commercial airline costs for each option when compared to the baseline option.
Airport/ Air navigation	Infrastructure costs	A qualitative assessment of changes to infrastructure costs for the Airport and/or Air Navigation Service Provider (ANSP) for each option when compared to the baseline option.

[10] Definition of DP11 Operational Cost - Provided it does not have an adverse impact of community disturbance, procedures should be designed to optimise fuel efficiency.

Group	Impact	Qualitative Assessment
service provider	Operational costs	A qualitative assessment of changes to operational costs for the Airport and/or ANSP for each option when compared to the baseline option.
	Deployment costs	A qualitative assessment of deployment costs for the Airport and/or ANSP for each option when compared to the baseline option, although it is acknowledged that there will be costs associated with the development of any routes for this ACP.
All	Safety	A qualitative safety assessment for each option when compared to the baseline option including analysis from the DPE - DP1 Safety.
	AMS Realisation	A qualitative assessment of whether the option meets the AMS objectives of safety, integration, simplification and environmental sustainability compared with the do-nothing baseline. Includes analysis from the DPE – DP12 AMS Realisation. Where an option meets the AMS objective but does not provide any improvement from today then this has been noted in the Assessment.
	Interdependencies, conflicts and trade-offs	A qualitative assessment of each option compared to the baseline and includes analysis from the DPE - DP10 Independence. Further qualitative assessments have been carried out by SMEs at the airport.

Table 5: IOA Methodology

2.2. Safety Assessment

2.2.1. In line with the safety assessment requirements for the initial options appraisal set out by CAP1616, an initial safety assessment was carried out by Bournemouth Airport. This consisted of a high-level qualitative assessment of each option, including the baselines for each runway departures and arrivals. This was followed by a safety assurance meeting with NATS, NERL, a representative of Southampton Airport and the safety manager of Bournemouth Airport. The airlines were invited to attend however, no pilot or representative were available for this meeting.

2.2.2. The objective of this meeting was to examine each option with regards to safety and connectivity to the network. Each option was discussed, and comments recorded for the minutes. The comments are recorded in the stakeholder summary sections for each design

envelope in the 2a Options Development and Design Principle Evaluation document[11], section 6. Feedback is further reflected in the safety sections of this document.

2.3. Shortlisting Criteria

2.3.1. Assessment

2.3.1.1. The Tables contained in this section provide a summary assessment of the net costs/benefits for each option in each of the categories which have been assessed against the individual baseline for each suite of options. All our analysis has been qualitative and there are some categories that require further analysis at later stages of this ACP. The Options have been assessed as to whether there is potential for an overall net benefit, no benefit or cost and overall net cost, they are colour coded as per the table below:

Qualitatively assessed as having potential for an overall net benefit.	
Qualitatively assessed as having neither impact nor benefit.	
Qualitatively assessed as having potential for an overall net cost.	

Table 6: IOA Summary Key

2.3.2. Discounting

2.3.2.1. The Qualitative assessment of each option was carried out by looking at the number of Red, Amber or Green (RAG) scores for each option and assessing the feasibility of each. Having completed the Qualitative assessment of each option, the Team at Cyrrus and BOH undertook the process of discounting. However, it was decided that due to a number of factors, no options would be discounted at this stage of the process. These reasons are summarised below:

- Assessment of Noise and Air Quality: due to our high-level approach with swathes, we have been unable to accurately quantify which areas could see an increase or decrease in noise or air quality. Our assessment of overflight is qualitative at this stage and does not align with CAP1498's definition and assessment. This means that when the swathes are refined to actual routes (lines on the map), communities that are contained within the swathe and feature in the assessment, may be avoided. Therefore, it has been decided that the analysis at this IOA stage is not sufficient to rule out or rule in options based on these assessments. It has been determined that further analysis should be done on each option (which will done in the Full Options Appraisal, at Stage 3 of this ACP). This will also ensure the best options are in keeping with the Government's Altitude Based Priorities, that stipulate:

[11] The minutes of this meeting can be found in Annex A of the Options Development and Design Principle Evaluation document.

  - In the airspace from the ground to below 4,000 feet, the Government's environmental priority is to limit and, where possible, reduce the total adverse effects on people;
  - Where Options for route design from the ground to below 4,000 feet are similar in terms of the number of people affected by total adverse noise effects, preference should be given to that option which is most consistent with existing published airspace arrangements.

- Tranquillity and Biodiversity: In a similar vein to the issues discussed above with regards to swathes, the assessments of Tranquillity and Biodiversity are made by assessing the sites that are contained within each swathe. Once the options are refined to routes (lines on maps) there would be the opportunity to avoid various locations. This means that the impact on these sites may be minimised. Furthermore, a detailed analysis will be conducted in the Full Options Appraisal in Stage 3 of this ACP, which will allow more accurate quantification of the benefits and costs of each option.

- Safety Assessment: The options that were assessed as having a net cost in safety were assessed as such for flying over a danger area (DA). These options are still under consideration as issues may be resolved in the next stage of the ACP process, and with regards to DAs as they have the potential of creating respite routes that could be used when the DAs are inactive. There is no intention to use the routes when the DAs are active, so it was decided that discounting options based on the safety assessments at this stage was not beneficial and does not align with our aim to potentially create respite routes. Detailed analysis will be conducted in the Full Options Appraisal in Stage 3 of this ACP.

- Integration with neighbouring airports and the network: As there has not yet been any specific technical engagement between neighbouring airports to deconflict routes, or with the en-route network, options have not been discounted on the basis of Interdependencies, conflicts and trade-offs . Further work will need to be done and will be progressed as part of the Stage 3 activities. It has been decided to retain all options in order to facilitate flexibility and integration with neighbouring airports. This would potentially enable free flow for departures and better connectivity with the network. Detailed analysis will be conducted in the Full Options Appraisal in Stage 3 of this ACP.

3. Baseline Recap

3.1. Overview

3.1.1. This section summarises the baseline operational context used for the IOA. The baseline reflects the Do-Nothing scenario defined in the Options Development and Design Principle Evaluation (DPE) document, representing the existing airspace and procedural arrangements at Bournemouth Airport with no changes implemented. It forms the reference case for all comparative assessments undertaken within this IOA.

3.2. Definition of the Baseline (Do-Nothing Scenario)

3.2.1. In alignment with CAP 1616 guidance, the baseline for this IOA corresponds to the Do-Nothing case. This represents a continuation of current operations with no changes to:

- Existing instrument flight procedures or routings;
- Airspace classification or lateral boundaries;
- Track-keeping procedures, performance requirements, or levels of traffic;
- Noise and environmental management practices already in place.

3.2.2. The Do-Nothing baseline provides the benchmark against which potential benefits or disbenefits of the Do-Minimum and other design options can be objectively measured.

3.3. Data Sources and Baseline Period

3.3.1. Baseline data were derived from the period 16 June – 15 September 2023, reflecting a representative summer operating period. The dataset includes radar track and Noise and Track-Keeping (NTK) data, covering commercial, business, and GA operations. This period was used consistently throughout the DPE for environmental and operational baseline development.

3.3.2. Noise modelling for this IOA, however, has been updated using 2024 baseline movements to align with the Bickerdike Allen Partners (BAP) noise contours, ensuring consistency with CAP 2091 methodology and forward forecasts to 2037.

3.4. Relationship to Other Baselines

3.4.1. Although referred to as the Baseline in this IOA, it is functionally equivalent to the Do-Nothing case within the DPE. It has been retained for assessment within each design envelope where the associated geographical area represents the most likely location for a future route alignment. This ensures continuity between the DPE and IOA, while allowing refinement and more detailed environmental assessment to occur in the next stage.

3.4.2. Further detail on baseline evolution, track distributions, and environmental characteristics, including noise, tranquillity, and emissions, can be found in: Options Development and Design Principle Evaluation (Sections 3.1–3.9).

4. Safety Assessment

4.1. CAP1616 requirements

4.1.1. CAP1616 requires Change Sponsors to conduct a qualitative Safety Assessment at Step 2b of the process. An initial indication of safety implications is required at this stage with a qualitative assessment of the potential impacts of each option on safety. Importantly, it is not expected to compare the safety of one option against another at this stage [12].

4.1.2. A seven-step CAP760 compliant Safety Assessment will be conducted prior to Step 4b. This activity will include Hazard Identifications, Risk Assessment, and the production of the required Safety Case(s) for the proposed change(s).

4.2. Safety Assurance Step 2b

4.2.1. A safety assurance meeting for this stage was held with the objective of a high-level assessment of each of the conceptual options. In this meeting there were representatives from NATS, NERL and Southampton Airport in addition to representatives from BOH with safety responsibilities. The outcome of the assessment has been reflected in the appraisal tables for each design option in the Initial Options Appraisal section of this document, Section 6. Minutes of the Safety Assurance meeting can be found in Annex A of 2a Options Development and Design Principle Evaluation document, available on the ACP portal.

4.2.2. The Safety Assurance Team involved in this ACP in the next stage (Stage 3) will consist of the following suitably qualified and empowered individuals:

- Representative of Bournemouth Airport conversant with the Safety Management System (SMS);
- Airspace Change Consultant ;
- Airport Safety Manager;
- Representatives from neighbouring LTMA ACP Sponsors (including NERL) ;
- At least one pilot from an airline routinely operating at BOH.

[12] For more information about the CAP1616 safety assessment for Stage 2 see page 206, paragraphs E49-E52.

5. Noise

5.1. Overview

5.1.1. This section presents the results of the noise assessment undertaken for the Initial Options Appraisal (IOA) in accordance with CAP 2091. The methodology follows that described in Section 2.3 of the Options Development and Design Principle Evaluation (DPE) document and summarised below.

5.1.2. Noise modelling was conducted by Bickerdike Allen Partners LLP using AEDT v3g, consistent with ECAC Doc 29 and CAP 2091.

- Contours were produced for average summer day (07:00–23:00) and summer night (23:00–07:00) conditions.
- Aircraft movement data represented the 16 June – 15 September 2024 baseline period, with 2032 forecasts applied for future case modelling.
- Population exposure was derived from 2024[13] postcode centroid data, using ONS Census datasets.
- Results were categorised using CAP 2091 thresholds to determine the airport's noise modelling category.

5.2. Noise Modelling Category

≥ 51 dB LAeq,16h	5,959	8,112	D
≥ 45 dB LAeq,8h	623	3,214	D

Table 7: Population within 2024 and 2037 Noise Contours (Day and Night)

5.2.1. Bournemouth Airport remains a **Category D airport** under CAP 2091 through 2037, with no material change to population exposure anticipated.

5.2.2. In summary, daytime contours extend ≈ 7 km from runway ends; night-time ≈ 8 km. No communities are exposed above 60 dB LAeq,16h or 54 dB LAeq,8h. Predicted growth to 2037 results in a modest increase in contour area but does not change the airport's noise category. Noise across the New Forest and Cranborne Chase remains below 57 dB LAeq,16h.

5.2.3. Detailed quantitative noise comparisons for each refined option will be undertaken as part of the Full Options Appraisal (FOA) and Environmental Assessment at Stage 3.

[13] The operational baseline for track and airspace analysis is based on 2023 radar data (16 June – 15 September). The baseline for noise modelling uses the 2024 validated dataset from Bickerdike Allen Partners, which incorporates updated fleet mix and population data. Both datasets represent current operations prior to any airspace change and are therefore considered consistent for baseline assessment purposes.

6. Options Appraisal

6.1. This section provides the IOA for each option carried forward from step 2a. It is structured by runway, 08 departures and arrivals, followed by 26 departures and arrivals. Within each section the options are assessed according to the design envelope. Options are qualitatively assessed as described in Table 5 in Section 2.1.

6.2. Runway 08 Departures

6.2.1. For RWY 08 there are three design envelopes for departures, Northeast, East and South.

6.2.2. Northeast Design Envelope

6.2.2.1. In the Northeast Design Envelope for departures there are three options: D08-NE-B Baseline and D-08-DO Minimum and D08-NE-A.

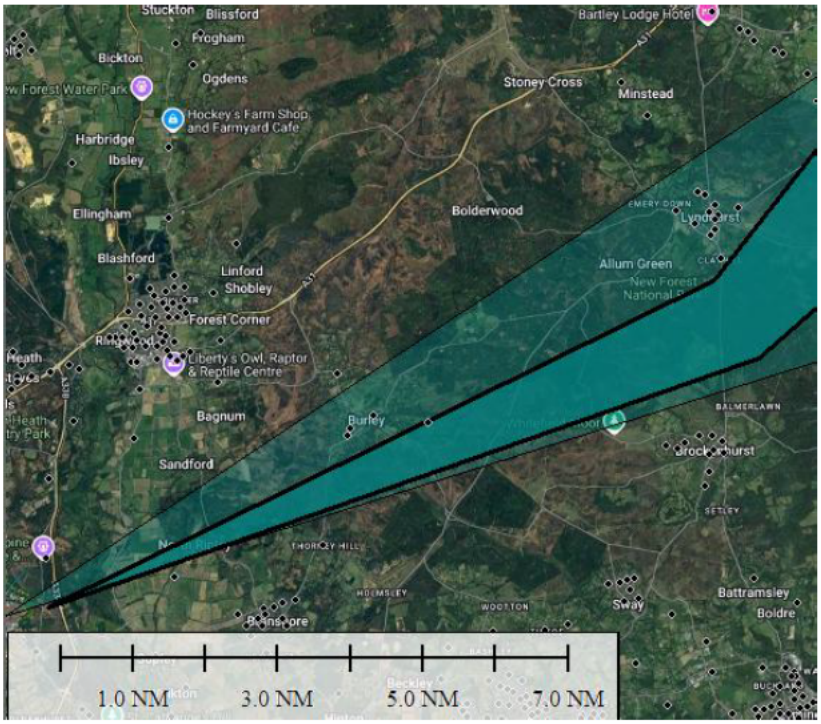
6.2.2.2. Option D08-NE-B Baseline

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.

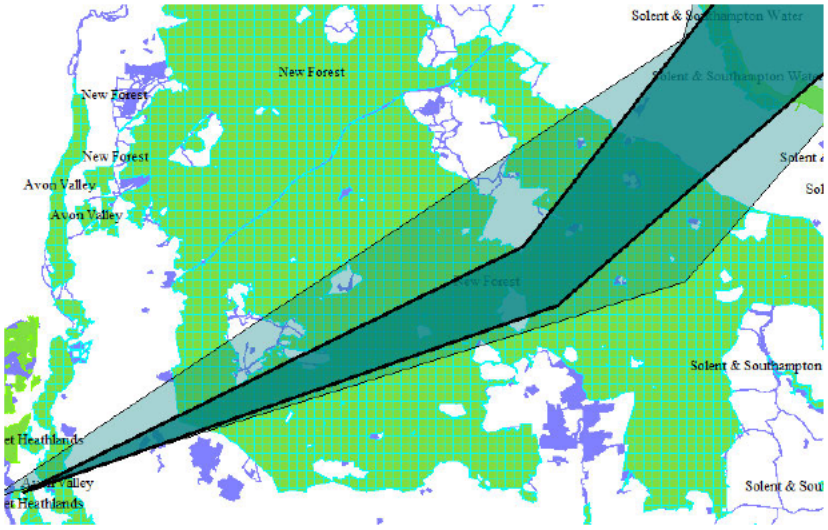
Group	Impact	Qualitative Assessment
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade-offs	D08-NE-B Baseline shares significant interdependencies with Southampton. Solent CTA, CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic

Table 8: Option D08-NE-B Baseline

6.2.2.3. D08-NE Do Minimum

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Burley, Allum Green, and Lyndhurst, offering a small improvement over the baseline. 
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

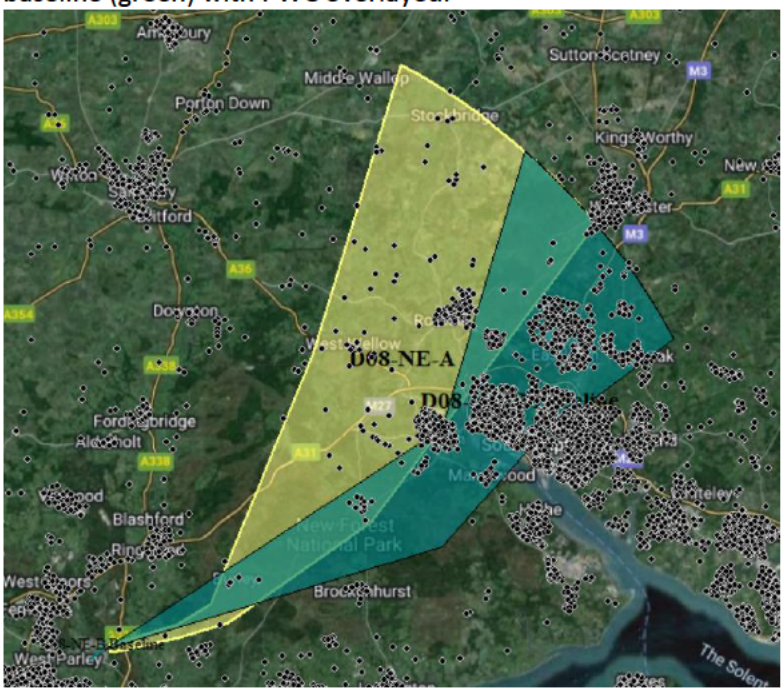
Group	Impact	Qualitative Assessment
	Tranquillity	A smaller portion of the New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the Park and its tranquillity. 

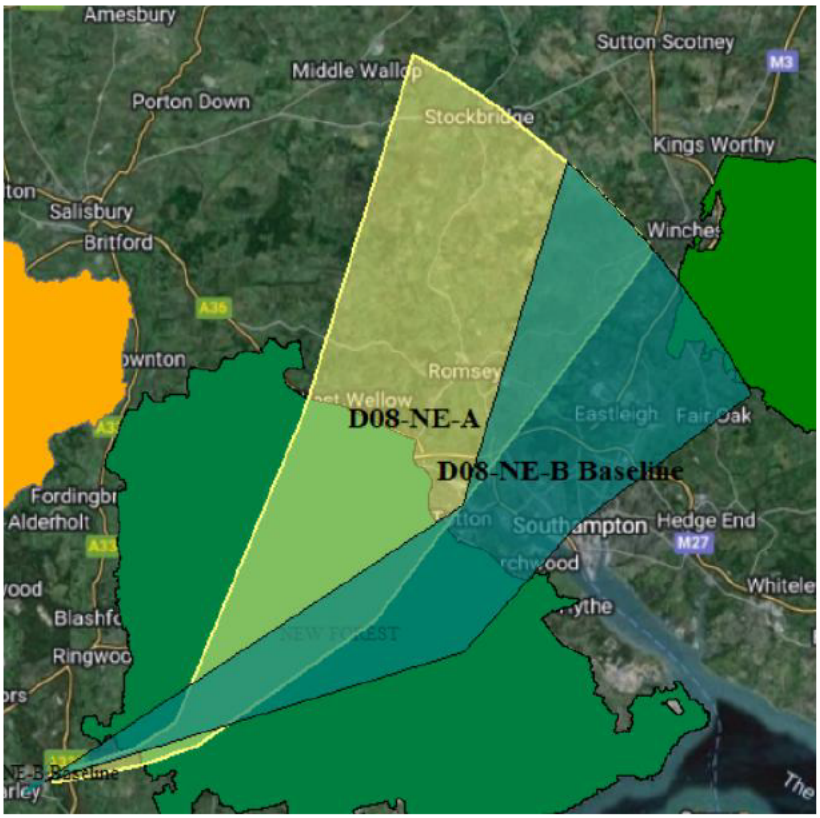
Group	Impact	Qualitative Assessment
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts on biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	Minimal difference in track miles between this option and the Baseline. No significant benefits or impacts to fuel burn are anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.

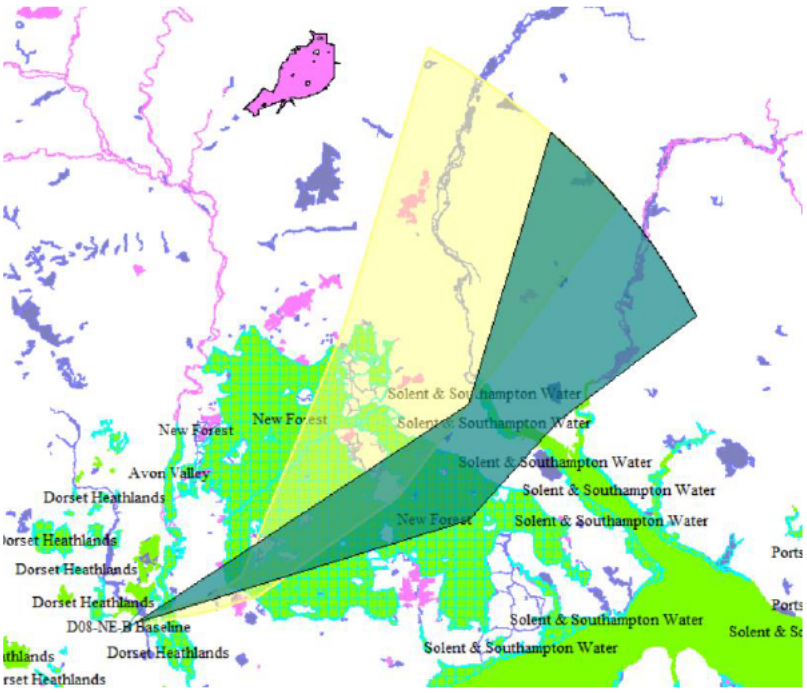
Group	Impact	Qualitative Assessment
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA, CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 9: Option D08-NE Do Minimum

6.2.2.4. Option D08-NE-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would initially overfly the same communities as the baseline after take-off, until the route turns left. After this point, this design option would overfly different communities to the baseline. The newly overflown areas would be of lower population density than the baseline. Newly overflown communities include Minstead, Lyndhurst and Stoney Cross, although aircraft are expected to be above 4000ft at this point. Image shows option A (Yellow), option B baseline (green) with PWC overlayed. 
	Air Quality	This design option would initially overfly the same communities as the baseline after take-off with no change in impact to local air quality under 1000ft.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes, as traffic is moved further north away from Southampton Airport and the congested area surrounding it associated with LTMA traffic; this could contribute to an increased capacity.

Group	Impact	Qualitative Assessment
	Tranquillity	Similar amount of the New Forest National Park will be overflown, compared with the current operations, the northeast of the park would be newly overflown and is a more tranquil area. There would therefore be a change in impact to the northeast of New Forest National Park in terms of tranquillity. Image shows option A (Yellow), option B baseline (green) with the New Forest NP in green underneath the swathes. 

Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies similar sites after take-off, then similar amount but different sections of sensitive sites. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (dark green) and option (yellow) laid over these sites. 
General aviation	Access	This option takes aircraft out of CAS airspace. Additional controlled airspace and amendments to the current FUA may be required depending on final route placement within this swathe. Note: BOH already have FUA in that area it will need to be reviewed/amended for this option. Currently available 06:30-09:30 and 17:30-21:30 (Winter) and 04:45-08:30 and 16:30-20:30 9 summer).
General aviation/ commercial airlines	Economic impact from increased effective capacity	This option is broadly similar to the current operations so limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to fuel burn are anticipated.

Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does contribute to the AMS objectives of simplification and reducing noise. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Option D08-NE-A shares significant interdependencies with Southampton. Solent CTA, CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above the Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 10: Option D08-NE-A

6.2.3. East Design Envelope

6.2.3.1. In the East Design Envelope for departures there are three options, D08-E-C Baseline, D08-E-Do Minimum and D08-E-D.

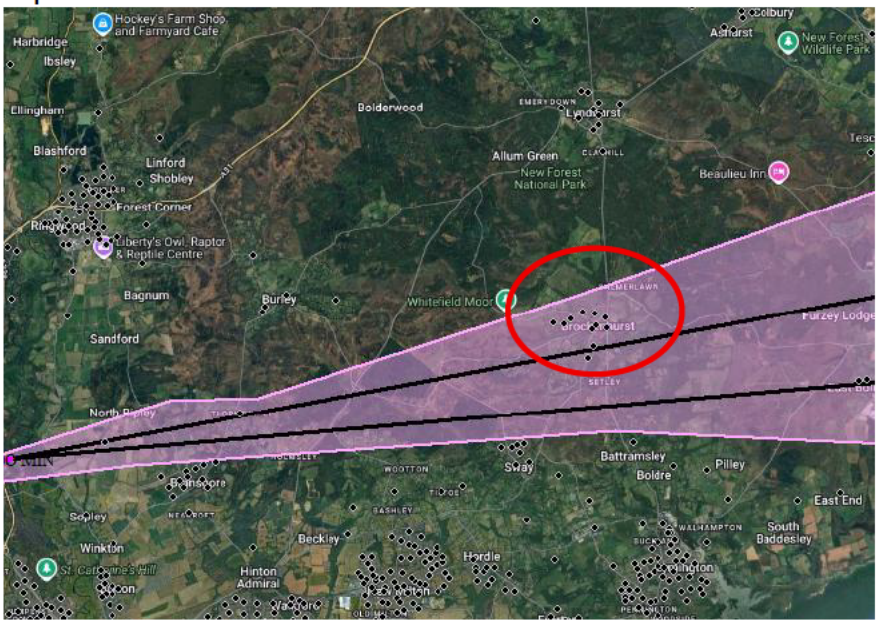
6.2.3.2. Option D08-E-C Baseline

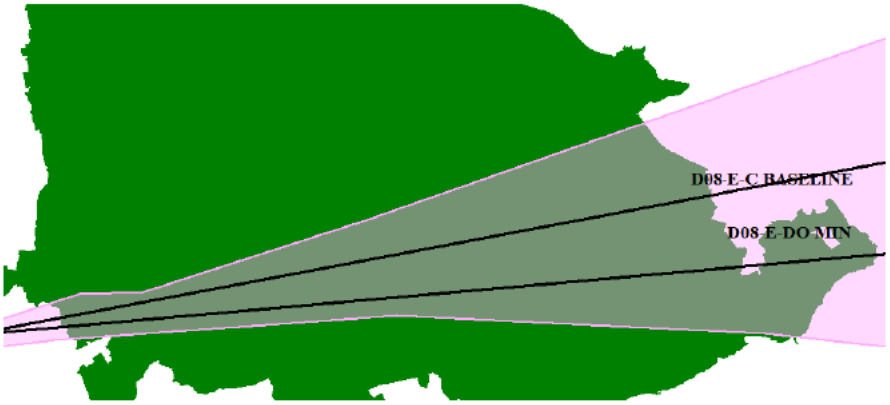
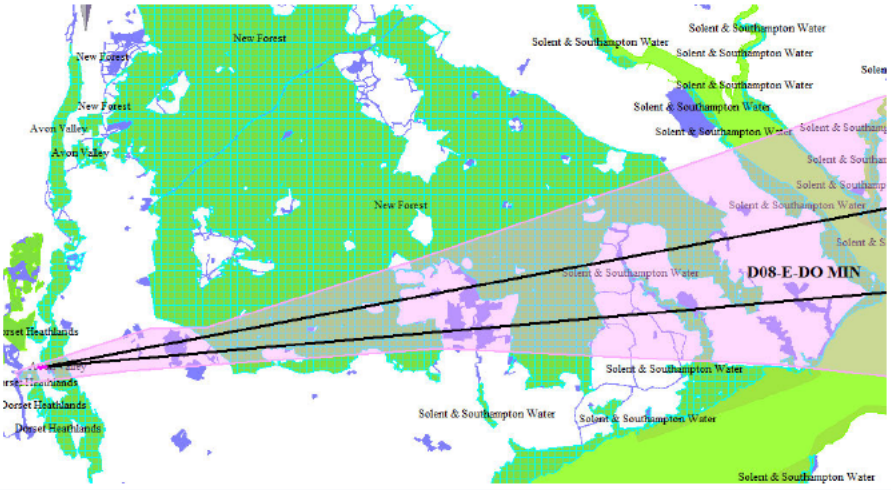
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.

Group	Impact	Qualitative Assessment
	Interdependencies, conflicts and trade-offs	Option D08-E-C-Baseline shares significant interdependencies with Southampton. Solent CTA, CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above the Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 11: Option D08-E-C Baseline

6.2.3.3. Option D08-E-Do Minimum

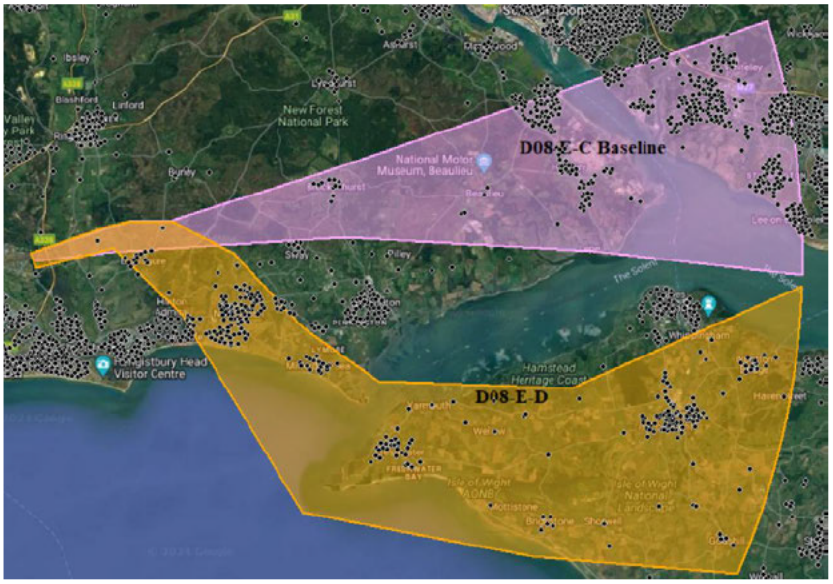
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Brokenhurst (shown in red circle), offering a small improvement over the baseline 
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

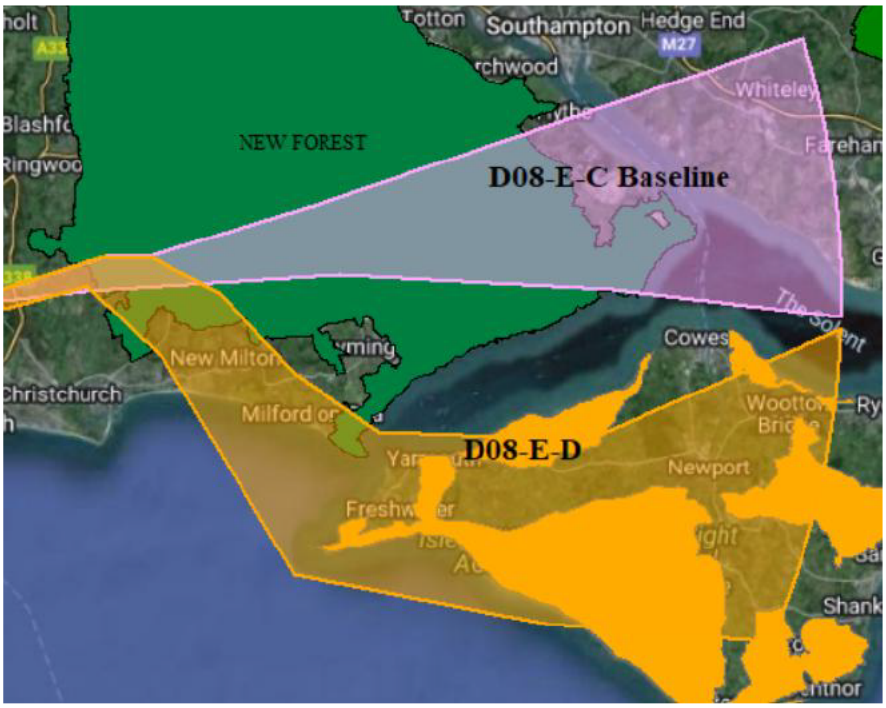
Group	Impact	Qualitative Assessment
	Tranquillity	A smaller portion of the New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the Park and its tranquillity. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. . These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	Minimal difference in track miles between this option and the Baseline. No significant benefits or impacts to fuel burn are anticipated.

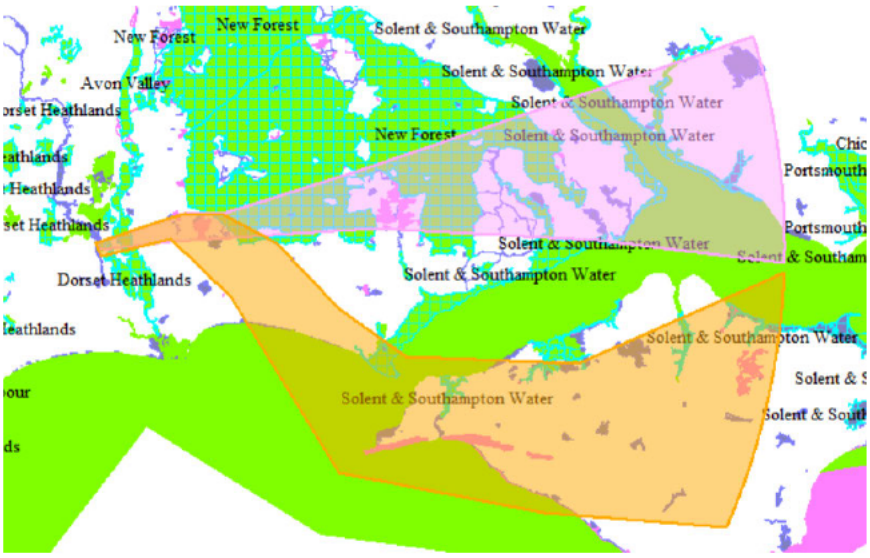
Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA, CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic

Table 12: Option D08-E-Do Minimum

6.2.3.4. Option D08-E-D

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would overfly more communities than the baseline after take-off, as the route turns right. Newly overflown communities include New Milton, Barton on Sea and Milford on Sea After this point, this design option would overfly the Isle of Wight although this will likely be above 4000ft. Image shows the baseline (pink) and the option (orange) with PWC overlayed. 
	Air Quality	This design option would initially overfly the same communities as the baseline after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There will be more track miles anticipated with this option compared to the baseline and therefore greater impact on greenhouse gas and CO2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes as traffic is moved further south away from LTMA traffic; this could contribute to an increased capacity.

Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies a small section of the New Forest National Park, however considerably less of the Park would be overflown compared to the baseline. The Isle of Wight AONB would be overflown however aircraft are expected to be above 4000ft, but below 7000ft at this point. Image shows the baseline (pink) and the option (orange) with the NP (green) and AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies different sites than the baseline after take-off, then similar amount but different sensitive sites. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (pink) and option (orange) flying over these sites. 
General aviation	Access	No increase or reduction in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity, or benefit to economic impact is anticipated. Increase in track miles, and therefore potential increase fuel costs.
	Fuel burn	Track miles are expected to be higher for traffic to the east between this option and the baseline. Therefore greater fuel burn is anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.

Group	Impact	Qualitative Assessment
service provider	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of simplification, improving fuel efficiency, environmental sustainability objectives or reducing noise. This option has been assessed as offering no improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Option D08-E-D shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above the Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 13: Option D08-E-D

6.2.4. South Design Envelope

6.2.4.1. In the South Design Envelope for departures there are three options, D08-S-B Baseline, D08-S-Do Minimum and D08-S-A.

6.2.4.2. Option D08-S-B Baseline

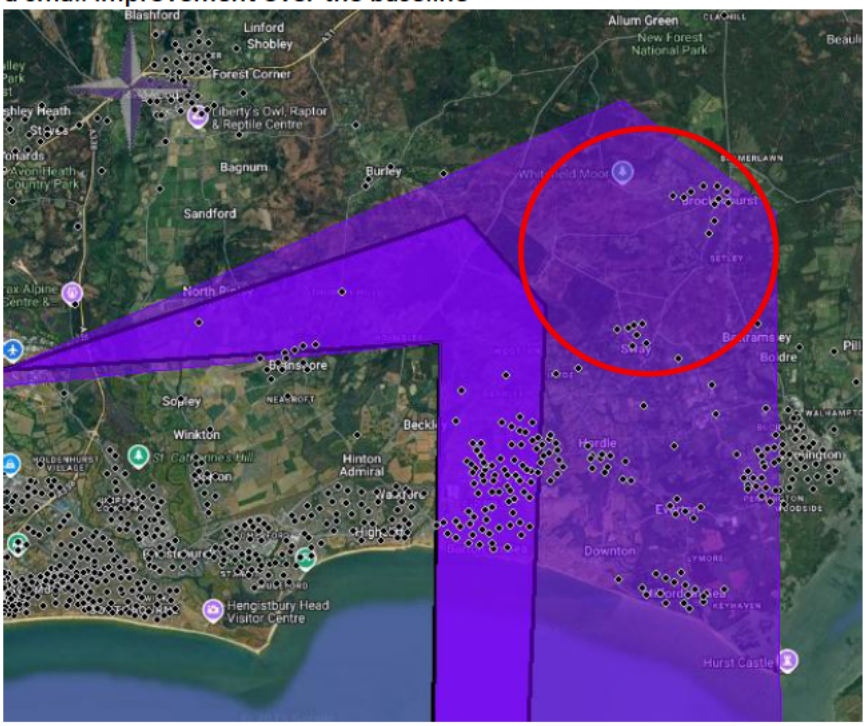
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.

Group	Impact	Qualitative Assessment
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.

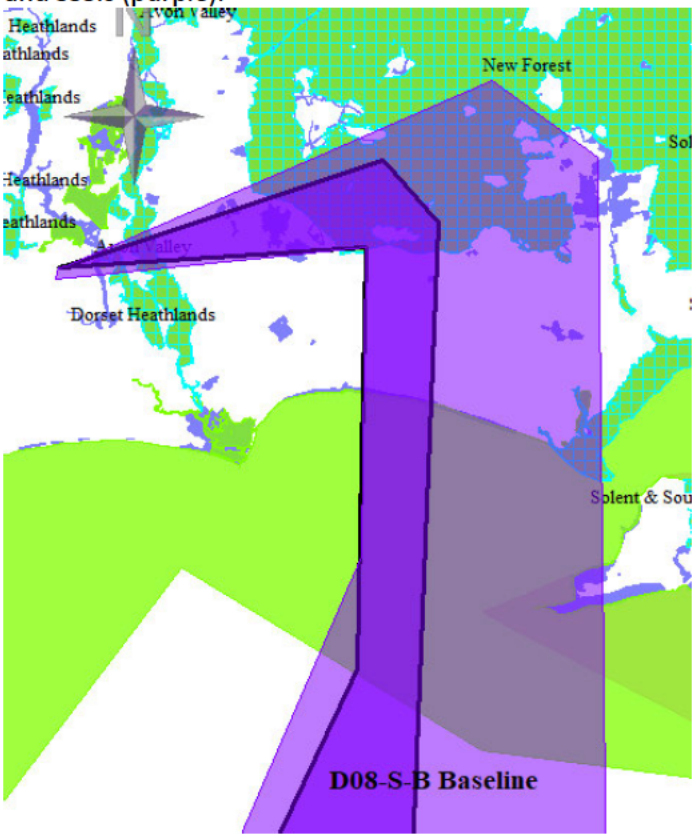
Group	Impact	Qualitative Assessment
	Interdependencies, conflicts and trade-offs	Option D08-S-B- Baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions.

Table 14: Option D08-S-B Baseline

6.2.4.3. Option D08-S-Do Minimum

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Burley, Allum Green, and Brockenhurst and Sway, offering a small improvement over the baseline 
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.

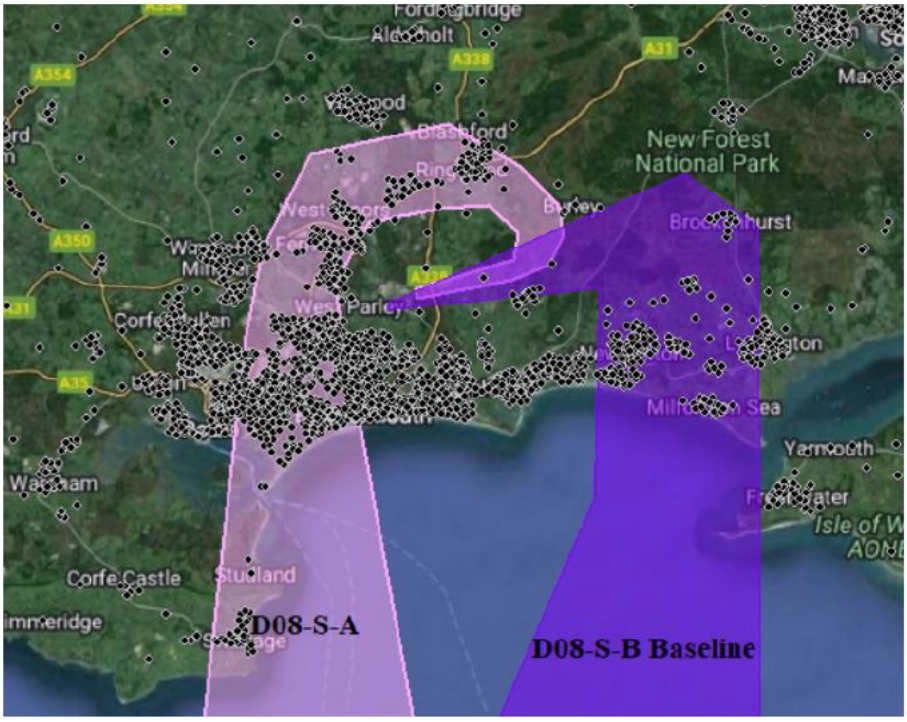
Group	Impact	Qualitative Assessment
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.
	Tranquillity	This option is less likely to involve overflight of Isle of Wight AONB resulting in a slight improvement in potential impacts on tranquillity compared to the baseline. 

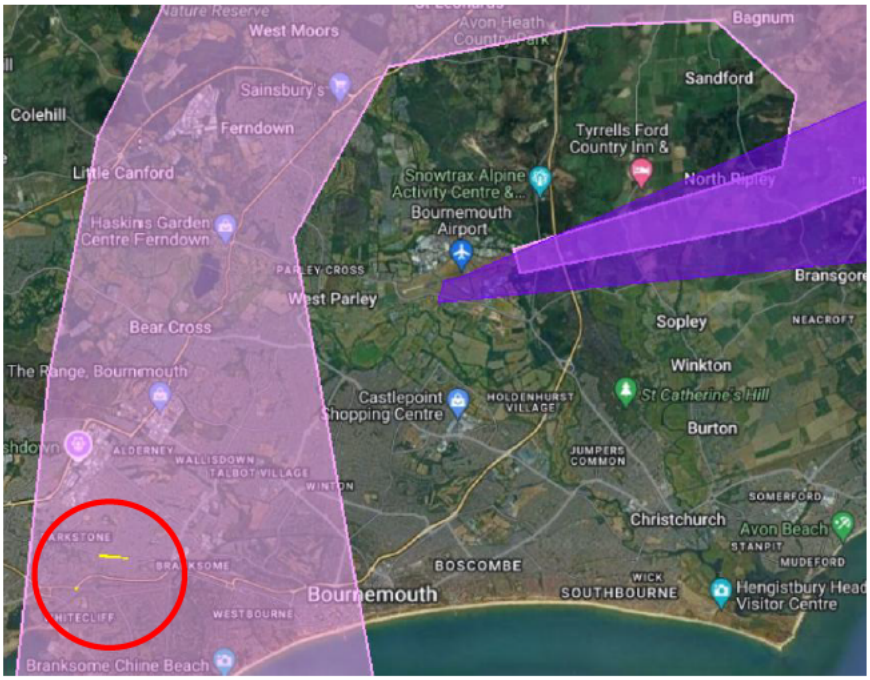
Group	Impact	Qualitative Assessment
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	Minimal difference in track miles between this option and the Baseline. No significant benefits or impacts to fuel burn are anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions.

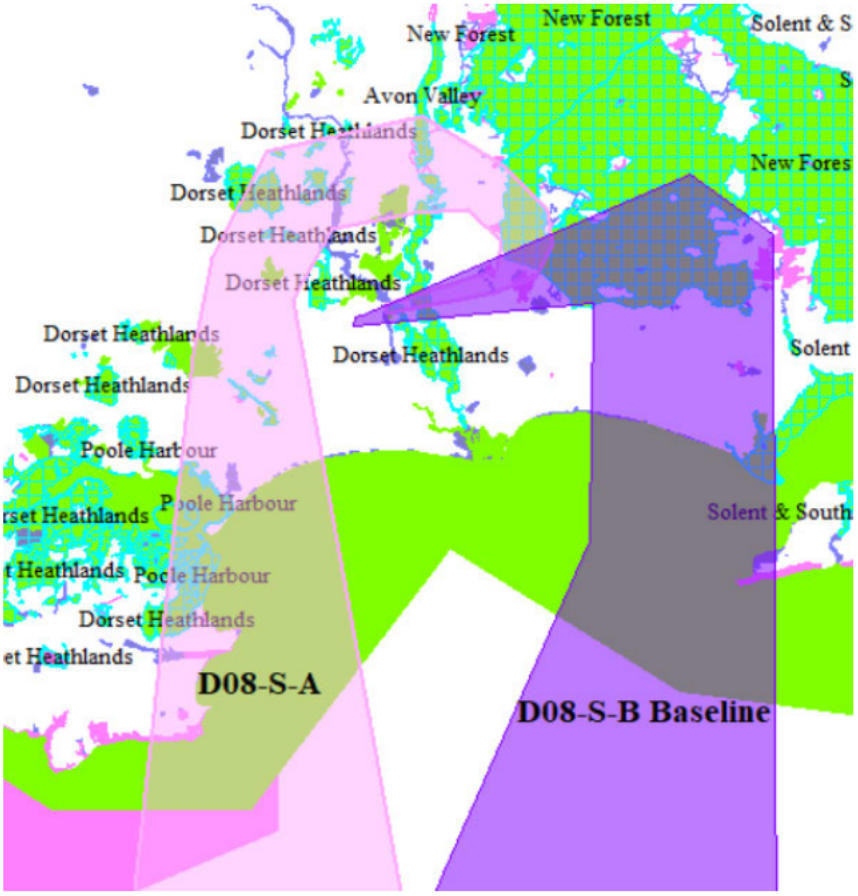
Table 15: Option D08-S-Do Minimum

6.2.4.4. Option D08-S-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	As this design option is a wraparound, turning left after departure before turning south, it overflies significantly more people, and different communities than the baseline. Image shows the baseline (purple) and the options (pink) with PWC overlayed. 

Group	Impact	Qualitative Assessment
	Air Quality	This design option would overfly different communities than the baseline on departure and due to the wraparound, aircraft will be held lower for longer potentially having an impact on air quality. Additionally, this option overflies a AQMA at Ashley Road in Upper Parkstone. Image shows the baseline (purple) and the options (pink) with the AQMA highlighted in yellow within the red circle. 
Wider society	Greenhouse gas impact	As this design option is a wraparound there will be significantly more track miles between this option and the baseline and therefore greater impact on greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. Although traffic would be moved further away from neighbouring airports capacity would be decreased due to the wraparound meaning departing traffic would be crossing the final approach tracks.

Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies less of the New Forest National Park than the baseline however will overfly a small portion of the Dorset AONB at the easterly tip. Image shows the baseline (purple) and the option (pink) with the NP (green) and AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies more and different sensitive sites than the baseline. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (purple) and option (pink) flying over these sites. 
General aviation	Access	Increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity, or benefit to economic impact is anticipated.
	Fuel burn	There are significant changes in track length and therefore a greater impact on fuel burn is anticipated.

Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	Depending on final track placement this option could penetrate danger area EG D31 Portland which would cause a safety concern.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. This option does not contribute to the AMS objectives of simplification, improving fuel efficiency, environmental sustainability objectives or reducing noise and considered less favourable than the baseline.
	Interdependencies, conflicts and trade-offs	Option D08- S-A shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. The wraparound option also conflicts with traffic within the Bournemouth hold on final approach to RWY 08 and possibly with military aircraft operating in the Poole HLS area and within Poole Harbour.

Table 16: Option D08-S-A

6.3. Runway 08 Arrivals

6.3.1. For RWY 08 there are three design envelopes for arrivals, Northeast, Southeast and South.

6.3.2. Northeast Design Envelope

6.3.2.1. In the Northeast Design Envelope for arrivals there are four options, A08-NE-B Baseline, A08-NE-Do Minimum, A08-NE-A and A08-NE-C.

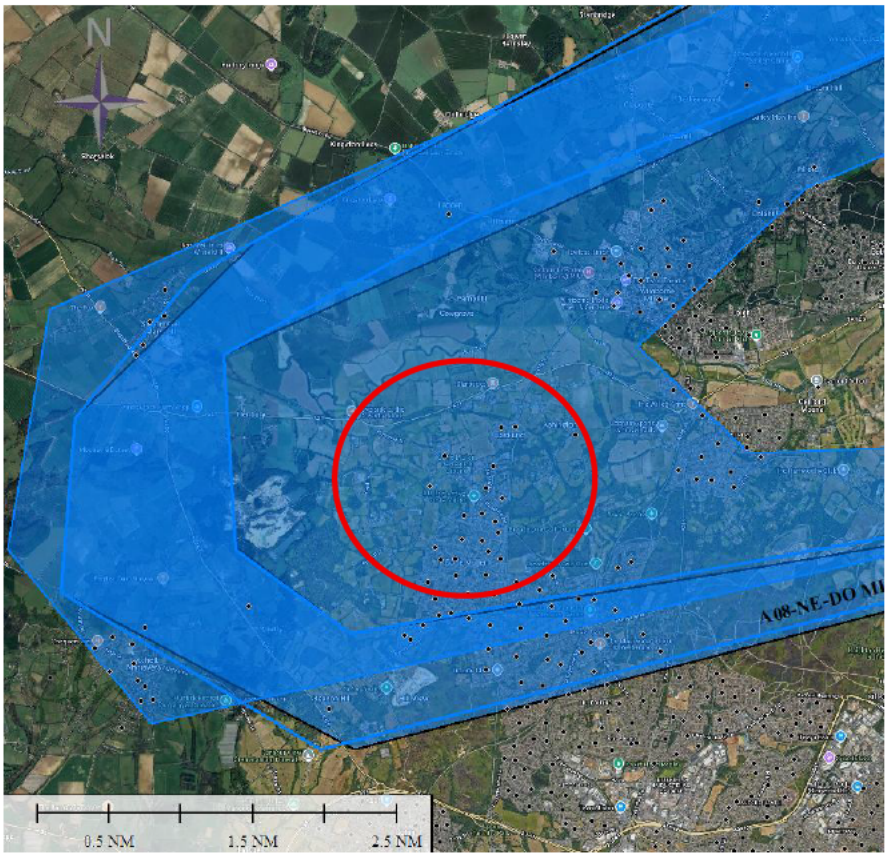
6.3.2.2. Option A08-NE B Baseline

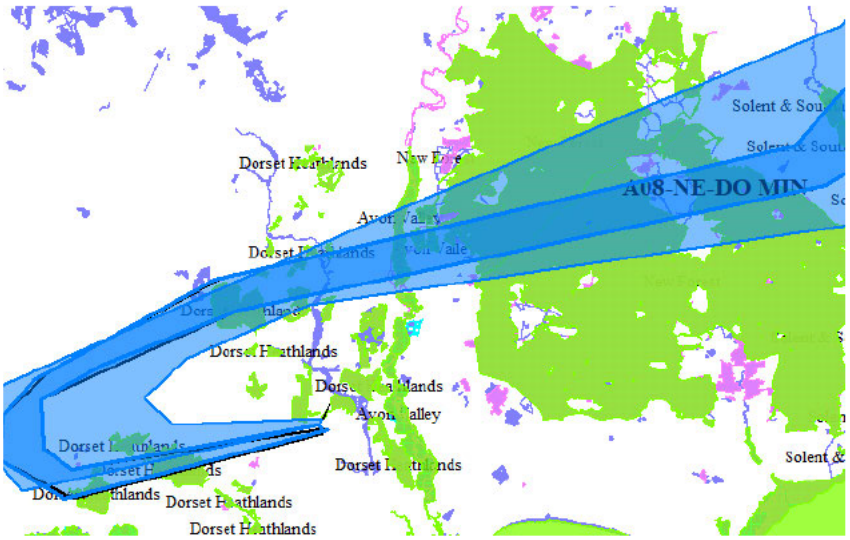
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities upon arrival with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS, or access to it, if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.

Group	Impact	Qualitative Assessment
service provider	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade-offs	Option A08- NE-B Baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic arriving at Bournemouth is initially controlled by Solent who will transfer inbound traffic to Bournemouth on an agreed Silent Handover or with coordination against their own traffic.

Table 17: Option A08-NE B Baseline

6.3.2.3. Option A08-NE-Do Minimum

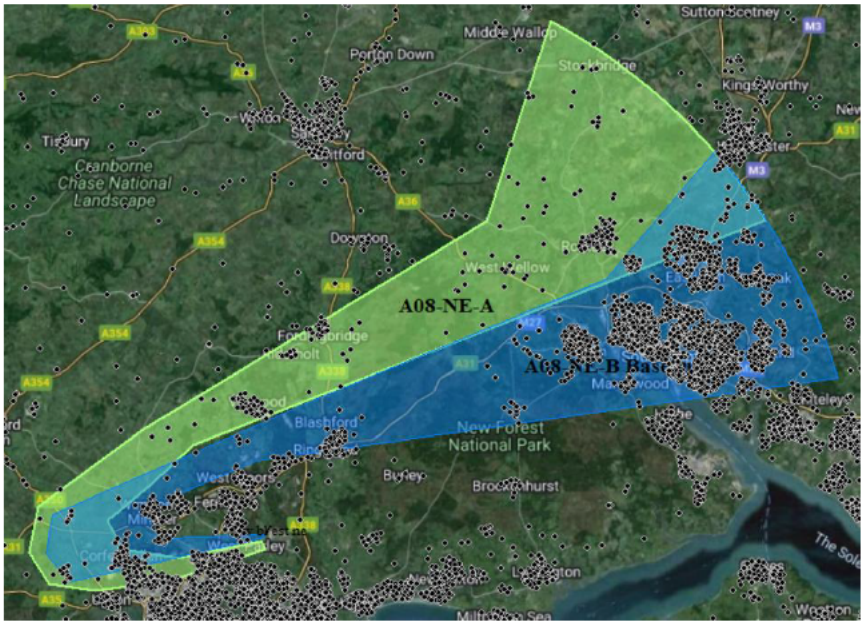
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Ashington, East End and parts of Corfe Mullen, offering a small improvement over the baseline. 
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

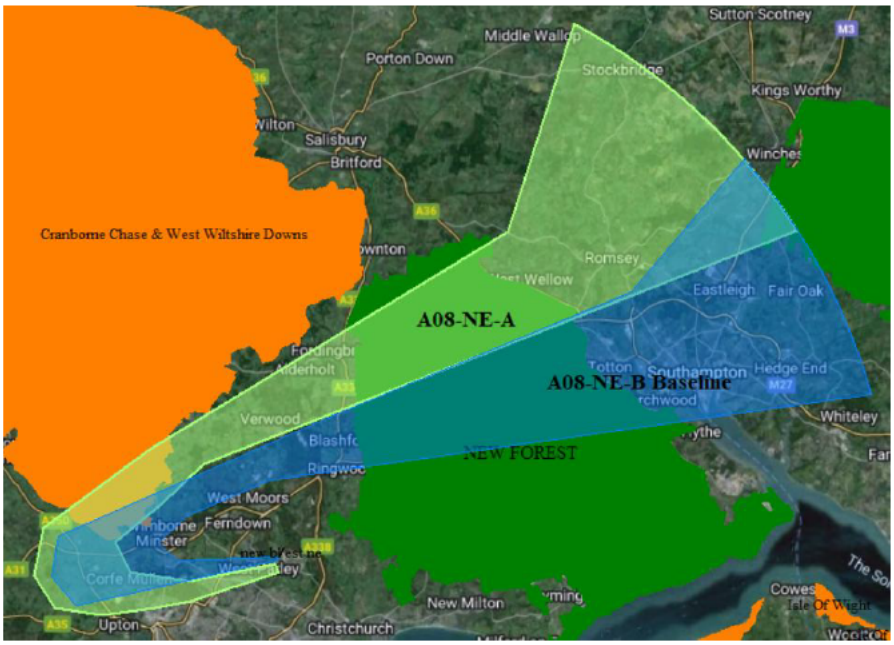
Group	Impact	Qualitative Assessment
	Tranquillity	There will be no change to the portion of the AONB flown over however, a smaller portion of the New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the Park and its tranquillity. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.

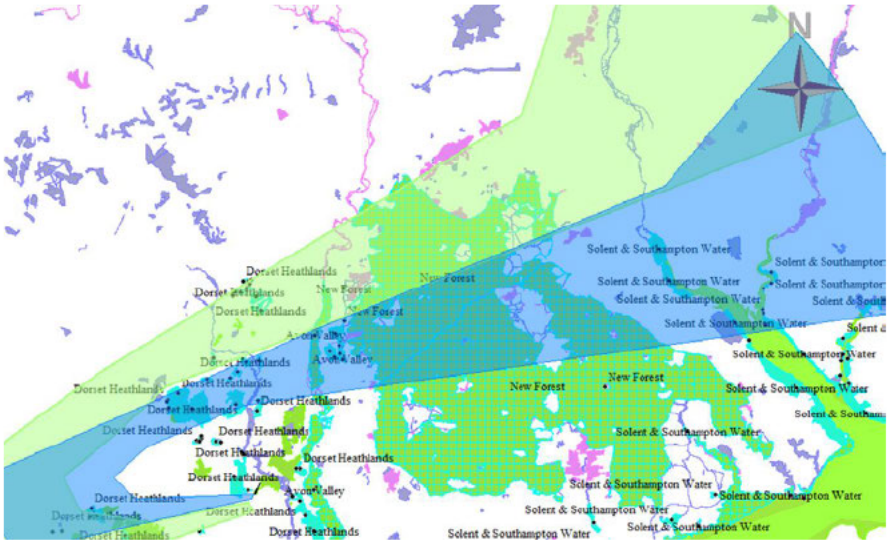
Group	Impact	Qualitative Assessment
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic arriving at Bournemouth is initially controlled by Solent who will transfer inbound traffic to Bournemouth on an agreed Silent Handover or with coordination against their own traffic.

Table 18: Option A08-NE-Do Minimum

6.3.2.4. Option A08-NE-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would initially arrive over the different communities and less densely populated areas compared to the baseline. Closer to arrival, and at a lower altitude, this option overflies similar communities to the baseline. The newly overflown areas would be of lower population density than the baseline. Newly overflown communities include Verwood, Alderholt, Fordingbridge and Sandy Balls Holiday Village. Image shows the baseline (blue) and the option (green) with PWC overlayed. 
	Air Quality	This design option would overfly the same communities as the baseline on arrival and below 1000ft with no change in impact to local air quality.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes, as traffic is moved further north away from Southampton Airport and the congested area surrounding it associated with LTMA traffic; this could contribute to an increased capacity.

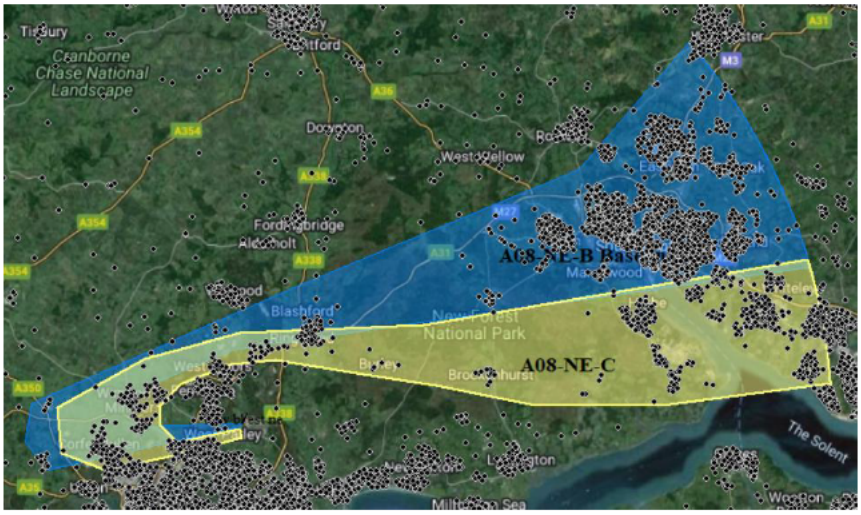
Group	Impact	Qualitative Assessment
	Tranquillity	This option arrives over a more northerly section of the New Forest National Park and is a more tranquil area. There would therefore be a change in impact to the northeast of New Forest National Park in terms of tranquillity. Both the baseline and the option fly over a small portion of the southerly tip of the CCAONB; the option flies over a slightly larger section. Image shows the baseline (blue) and the option (light green) with the NP (green) and AONB (orange) underneath. 

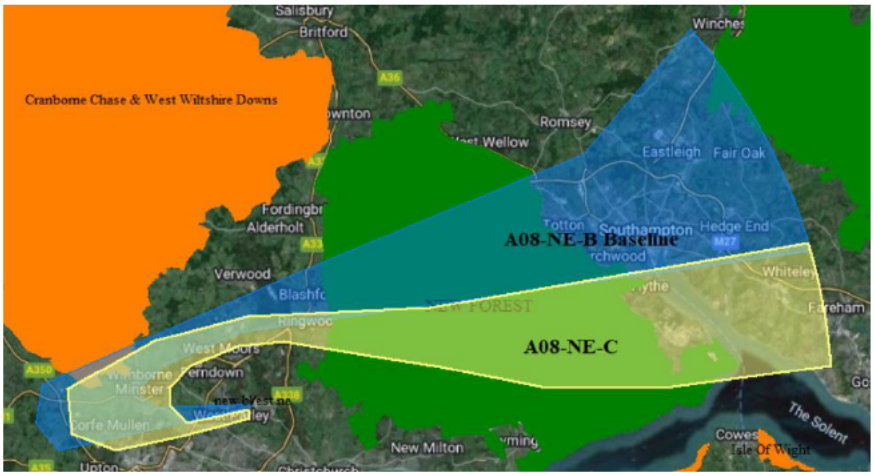
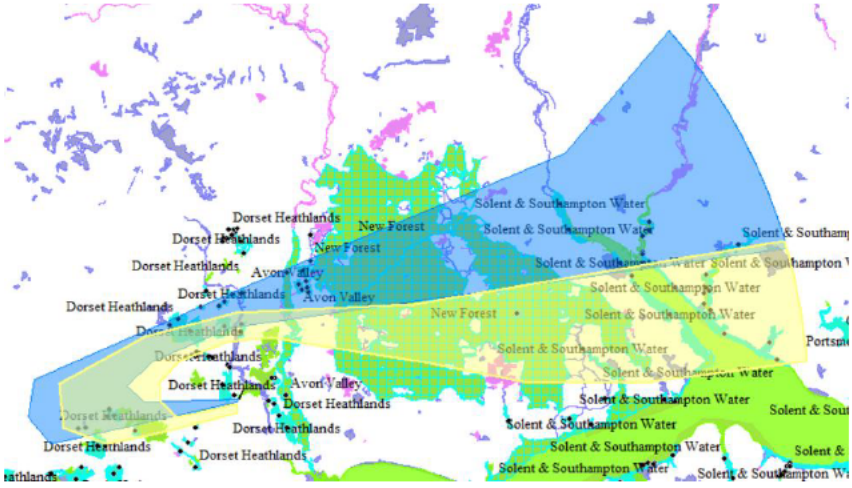
Group	Impact	Qualitative Assessment
	Biodiversity	Initially aircraft would be flying over similar amount but different sections of sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (blue) and option (light green) flying over these sites. 
General aviation	Access	Increase in CAS is anticipated for this option potentially conflicting with GA interests. Additional controlled airspace and amendments to the current FUA may be required depending on final route placement within this swathe. Note: BOH already have FUA in that area it will need to be reviewed/amended for this option. Currently available 06:30-09:30 and 17:30-21:30 (Winter) and 04:45-08:30 and 16:30-20:30 9 summer).
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	No significant benefits and minor impacts to fuel burn are anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

Group	Impact	Qualitative Assessment
Airport/ Air navigation Service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives improving fuel efficiency, but has the potential to reduce noise impact and simplification objectives. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Option A08-NE-A. shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic arriving at Bournemouth is initially controlled by Solent who will transfer inbound traffic to Bournemouth on an agreed Silent Handover or with coordination against their own traffic.

Table 19: Option A08-NE-A

6.3.2.5. Option A08-NE-C

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would initially arrive over the different communities and less densely populated areas compared to the baseline. Closer to arrival, and at a lower altitude, this option overflies similar communities to the baseline. The newly overflown areas would be of lower population density than the baseline. Newly overflown communities include Brockenhurst and Burley. Image shows the baseline (blue) and the options (yellow) with PWC overlayed. 
	Air Quality	This design option would overfly the same communities as the baseline on arrival, below 1000ft, with no change in impact to local air quality.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and current operations. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. Traffic would be closer to Southampton Airport routes providing little opportunity for better integration, a reduction in coordination or increased capacity.

Group	Impact	Qualitative Assessment
	Tranquillity	This option arrives over a more southerly, section of the New Forest National Park, similar size area of the Park would be overflown compared to the baseline. Both the baseline and the option fly over a small portion of the southerly tip of the CCAONB; the option flies over a marginally smaller section. Image shows the baseline (blue) and the option (yellow) with the NP (green) and AONB (orange) underneath. 
	Biodiversity	Initially aircraft would be flying over a greater amount and different sections of sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (blue) and option (yellow) flying over these sites. 
General aviation	Access	No increase or reduction in CAS is anticipated for this option.

Group	Impact	Qualitative Assessment
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	No significant benefits and minor impacts to fuel burn are anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of simplification or improving fuel efficiency, but has the potential to reduce noise impact. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade-offs	Option A08- NE-C shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above Bournemouth CTR delegated to Bournemouth under certain conditions. IFR airways traffic arriving at Bournemouth is initially controlled by Solent who will transfer inbound traffic to Bournemouth on an agreed Silent Handover or with coordination against their own traffic.

Table 20: Option A08-NE-C

6.3.3. Southeast Design Envelope

6.3.3.1. In the Southeast Design Envelope for arrivals there are two options, A08-SE-A Baseline and A08-SE-B.

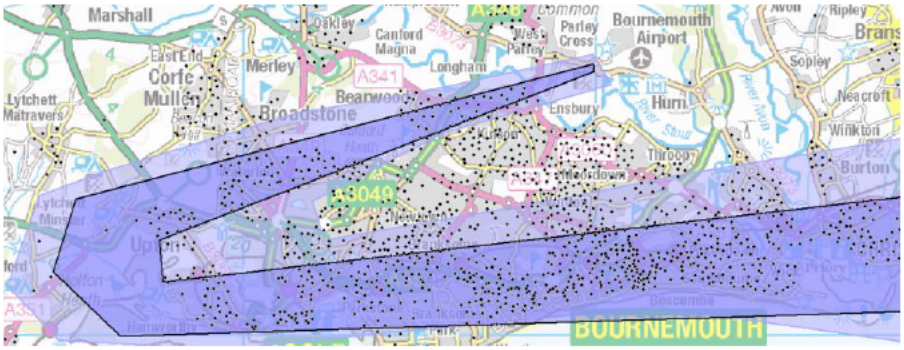
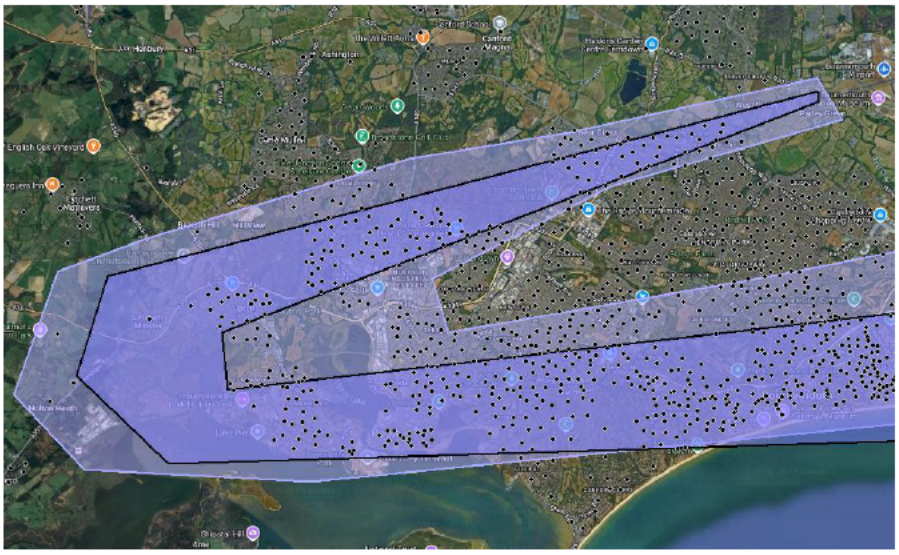
6.3.3.2. Option A08-SE-A Baseline

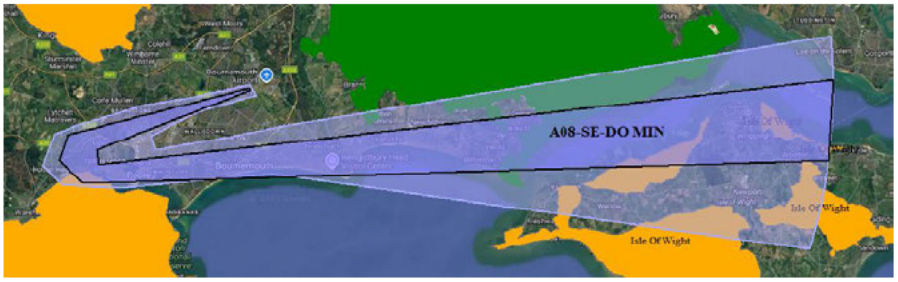
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities upon arrival with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity. Arrivals to RWY 08 from this direction only impact a small part of the New Forest to the southwest of the park.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS, or access to it, if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.

Group	Impact	Qualitative Assessment
service provider	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts, and trade-offs	Option A08-SE – C Baseline shares significant interdependencies with Southampton. Solent CTA2 sits to the east and above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south and east will need coordinating on a tactical basis. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 21: Option A08-SE-A Baseline

6.3.3.3. Option A08-SE-Do Minimum

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Newtown, Winton and Burton, offering a small improvement over the baseline.  
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

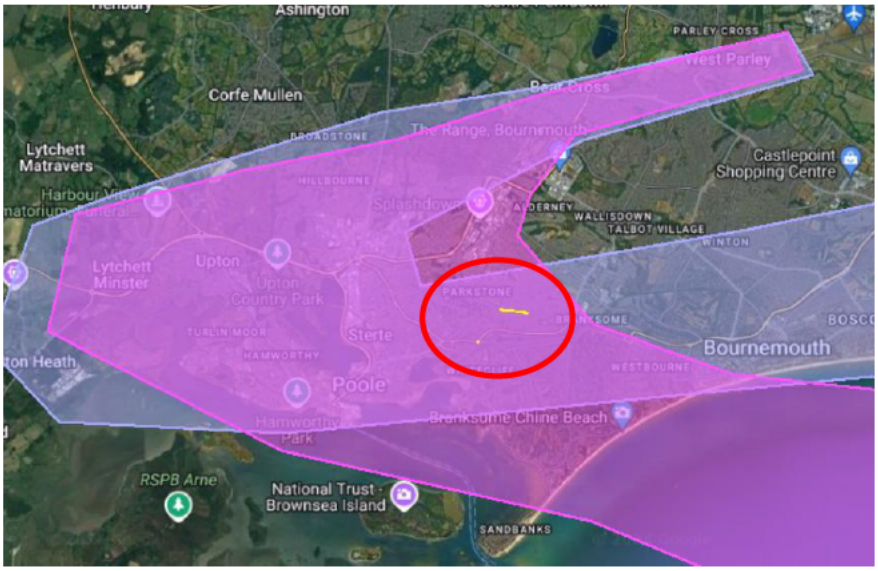
Group	Impact	Qualitative Assessment
	Tranquillity	A smaller portion of the AONBs and New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on AONBs and the Park and its tranquillity. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.

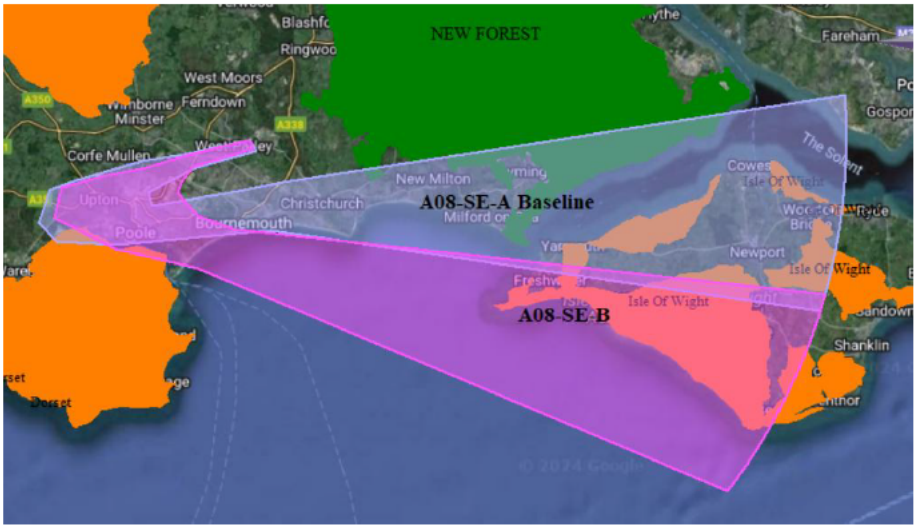
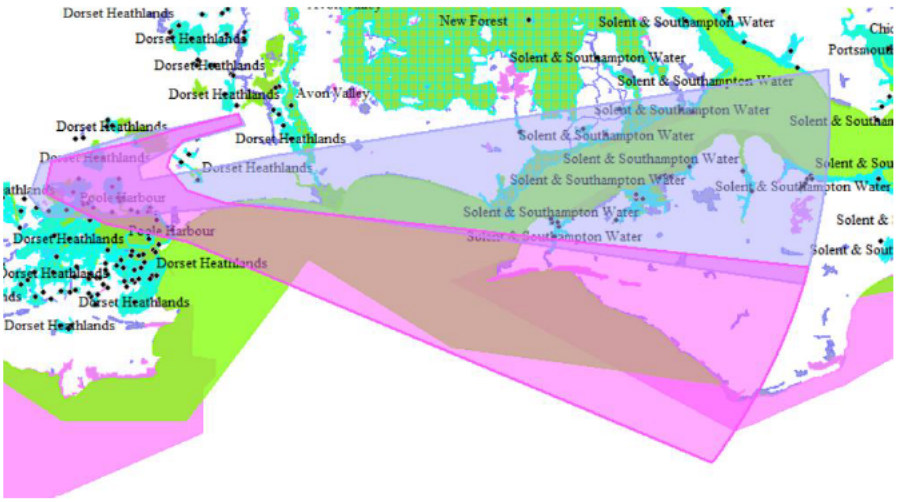
Group	Impact	Qualitative Assessment
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts, and trade-offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA2 sits to the east and above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south and east will need coordinating on a tactical basis. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 22: Option A08-SE-Do Minimum

6.3.3.4. Option A08-SE-B

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would initially arrive over the different communities and less densely populated areas compared to the baseline. Closer to arrival, and at a lower altitude, this option overflies similar communities to the baseline. Newly overflown communities include Freshwater and Canford Cliffs. Image shows the baseline (purple) and the options (pink) with PWC overlayed. 

Group	Impact	Qualitative Assessment
	Air Quality	This option and the baseline fly over the AQMA at Ashley Road in Upper Parkstone. Image shows the baseline (purple) and the options (pink) with the AQMA highlighted in yellow within the red circle. 
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes as traffic is moved further south away from LTMA traffic. Close proximity to the Portsmouth DAs means an increase in capacity would not be anticipated.

Group	Impact	Qualitative Assessment
	Tranquillity	This option does not overfly the New Forest National Park as the baseline does, however it will overfly a small portion of the Dorset AONB, marginally less than the baseline, and the Isle of Wight AONB, on arrival. Image shows the baseline (purple) and the option (pink) with the NP (green) and AONB (orange) underneath. 
	Biodiversity	Initially aircraft would be flying over different sections, and fewer sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline.However it would avoid flying over Solent and Southampton Water Ramsar site and over Highcliffe to Milford cliffs SSSI. A newly flown over SSSIs would be Compton Chine to Steephill Cove and Headon Warren and West High Down on the Isle of Wight. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (purple) and option (pink) flying over these sites. 

Group	Impact	Qualitative Assessment
General aviation	Access	Possible increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Little to no impact for fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage. However, depending on final track placement, aircraft could be in close proximity to the Portsmouth danger areas EG D037 prior to joining the arrival route.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. This option does not contribute to the AMS objectives improving fuel efficiency. However it does contribute to reducing noise, simplification objectives and some environmental sustainability objectives. Overall this offers an improvement over the baseline.

Group	Impact	Qualitative Assessment
	Interdependencies, conflicts, and trade-offs	Option A08- SE-B shares significant interdependencies with Southampton. Solent CTA2 sits to the east of Bournemouth with Bournemouth CTR above from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. Solent arrival and departure traffic routing to and from the south will need coordinating on a tactical basis. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 23: Option A08-SE-B

6.3.4. South Design Envelope

6.3.4.1. In the South Design Envelope for arrivals there are four options, A08-S-B Baseline, A08-S-Do Minimum, A08-S-A, and A08-S-C.

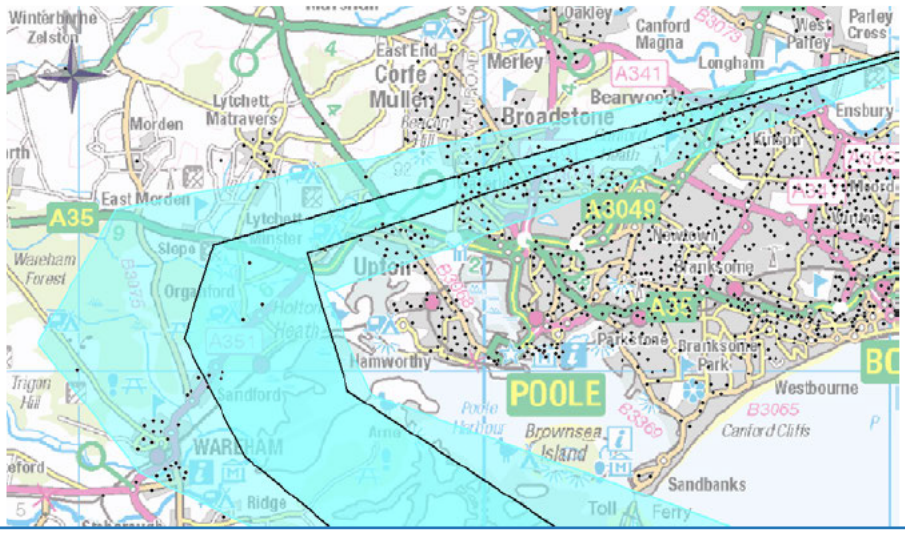
6.3.4.2. Option A08-S-B Baseline

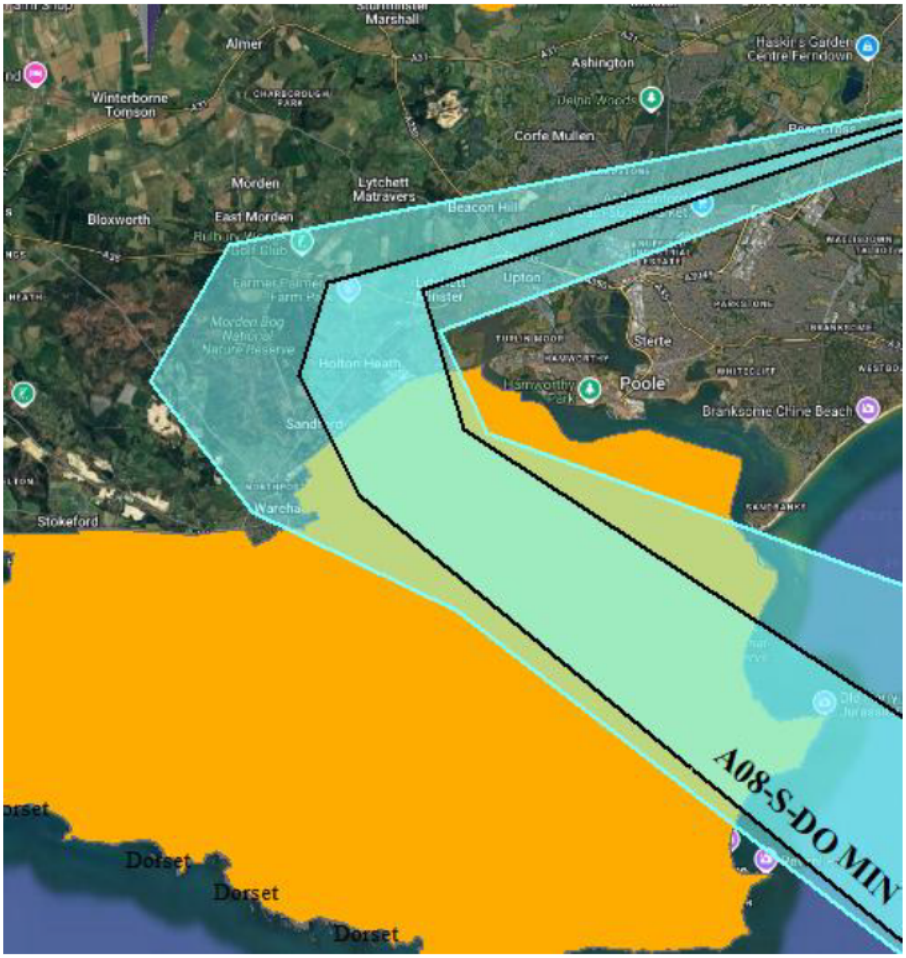
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the Dorset AONB will be overflown. There would be no change in impact on the AONB or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS, or access to it, if the baseline was to be retained.

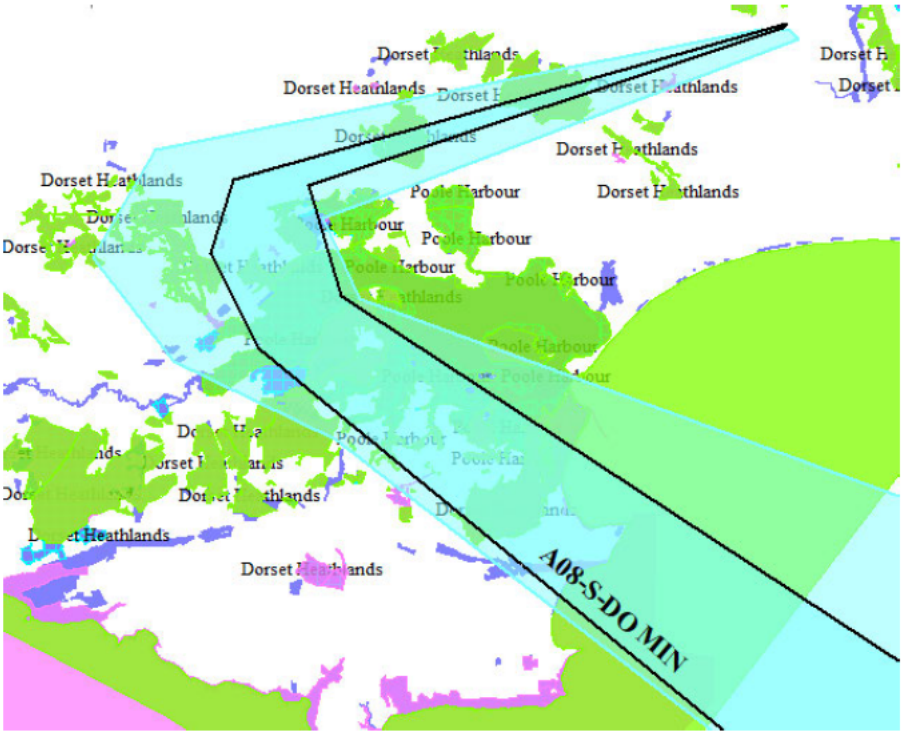
Group	Impact	Qualitative Assessment
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should the baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade offs	Option A08- S-B Baseline shares significant interdependencies with Southampton. Solent CTA sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south will need coordinating on a tactical basis or via the established Silent Handover procedures. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 24: Option A08-S-B Baseline

6.3.4.3. Option A08-S-Do Minimum

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Wareham offering a small improvement over the baseline.  
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

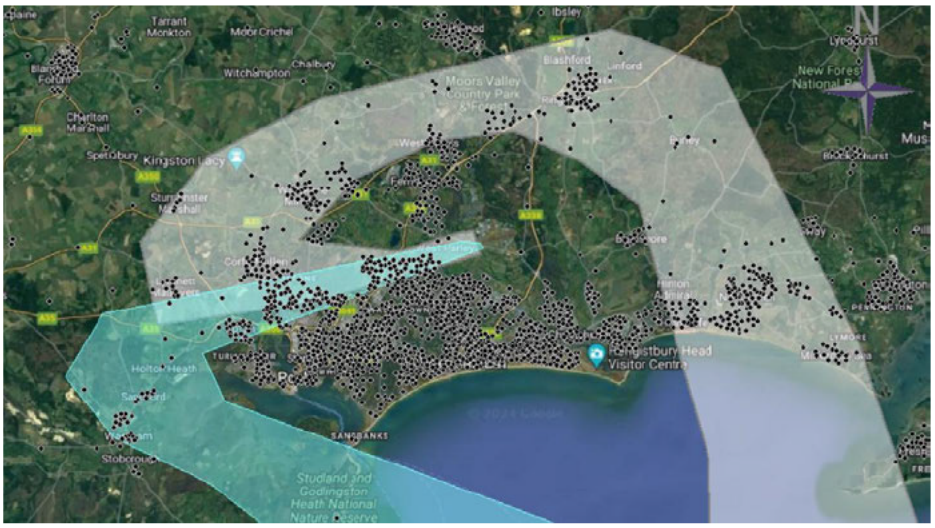
Group	Impact	Qualitative Assessment
	Tranquillity	A slightly smaller portion of the Dorset AONB would be overflown, resulting in a slight improvement in potential impacts on the AONB and its tranquillity. 

Group	Impact	Qualitative Assessment
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

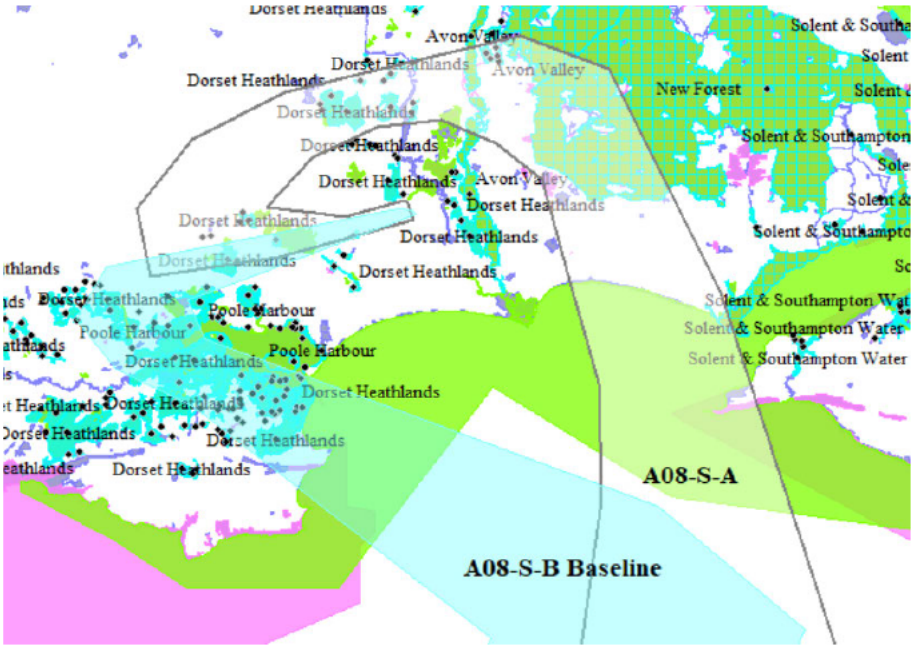
Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south will need coordinating on a tactical basis or via the established Silent Handover procedures. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 25: Option A08-S-Do Minimum

6.3.4.4. Option A08-S-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	As this design option is a wraparound, it overflies significantly more communities than the baseline. Newly overflown communities potentially include Colehill, Winbourne Minster, Ashington and Corfe Mullen. Image shows the baseline (turquoise) and the option (white) with PWC overlayed. 
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	As this design option is a wraparound there will be significantly more track miles between this option and the baseline and therefore a greater impact on greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. Capacity would be decreased due to the wraparound meaning departing traffic would be crossing the final approach tracks. Traffic would also be moved closer to Southampton Airport and LTMA traffic.

Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies Cranborne Chase AONB at the southern tip and the New Forest National Park and therefore overflies more areas of tranquillity than the baseline. Additionally it could potentially fly over the Isle of Wight AONB at the westerly tip. Image shows the baseline (turquoise) and the option (white) with the NP (green) and AONB (orange) underneath. 

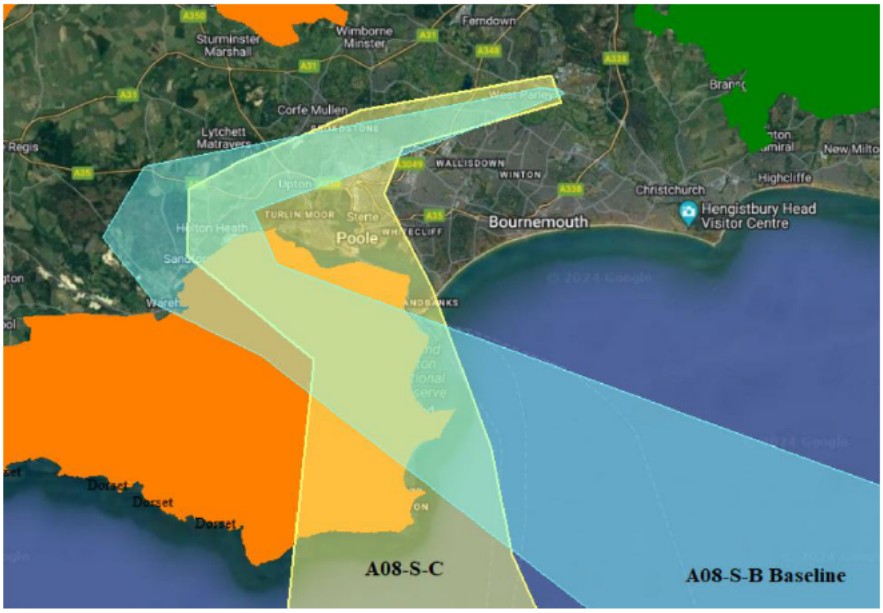
Group	Impact	Qualitative Assessment
	Biodiversity	Initially aircraft would be flying over different sites and different sections of sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline This option overflies New Forest, Avon Valley and Dorset Heathlands sites in addition to the Highcliffe to Milford cliffs. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (turquoise) and option (white) flying over these sites. 
General aviation	Access	Potential increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	There are significant changes in track length and therefore a greater impact on fuel burn is anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

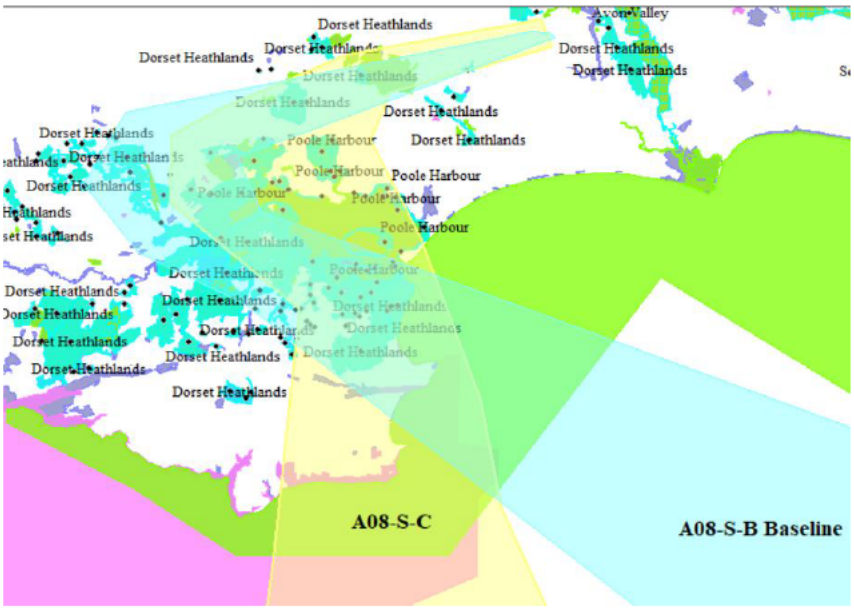
Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage. However, depending on final track placement, aircraft could be in close proximity to the Portsmouth danger areas EG D036 prior to joining the arrival route.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. This option does not contribute to the AMS objectives of simplification, improving fuel efficiency, environmental sustainability objectives or reducing noise, and considered less favourable than the baseline.
	Interdependencies, conflicts, and trade-offs	Option A08-S-A shares significant interdependencies with Southampton. Solent CTA sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south will need coordinating on a tactical basis. Conflict with Bournemouth departures as the wraparound will cross the outbound track for RWY 08 and traffic holding the BIA

Table 26: Option A08-S-A

6.3.4.5. Option A08-S-C

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option overflies more communities that the baseline. Newly flown over areas would include Poole, Hamworthy and Upton. Image shows the baseline (turquoise) and the options (yellow) with PWC overlayed. 
	Air Quality	This design option would overfly more communities than the baseline on arrival, however no changes below 1000ft, and therefore no change in impact to local air quality. This option does overfly the AQMA on Bournemouth road (A35) in Lower Parkstone.
Wider society	Greenhouse gas impact	Potential for a reduction in track miles as the route is more direct, therefore potential benefits to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This option is broadly similar to the baseline so limited opportunity for increased capacity is anticipated.

Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies approximately the same square miles and similar areas of the Dorset AONB as the baseline. However, the southeast section of the AONB would be newly overflown. Image shows the baseline (turquoise) and the option (yellow) with the AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	Initially aircraft would be flying over different sites and different sections of sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline This option overflies Dorset Heathlands and Poole Harbour as does the baseline. Different sections of Poole Harbour would be overflown. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (turquoise) and option (yellow) flying over these sites. 
General aviation	Access	An increase in controlled airspace would be required in an area of high GA activity.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Potential for a reduction in track miles as the route is more direct, therefore potential benefits to reduce fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	Depending on final track placement this option could penetrate danger area EG D31 Portland which would cause a safety concern.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of safety, simplification or reducing noise, but may contribute to improving fuel efficiency Overall this option offers no improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option A08-S-C shares significant interdependencies with Southampton. Solent CTA sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south will need coordinating on a tactical basis or via the established Silent Handover procedures. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 27: Option A08-S-C

6.4. Runway 26 Departures

6.4.1. For RWY 26 there are two design envelopes for departures, East and South.

6.4.2. East Design Envelope

6.4.2.1. In the East Design Envelope for departures there are five options: D26-E-C Baseline, D26-E-Do Minimum, D26-E-A, D26-E-D and D26-E-E.

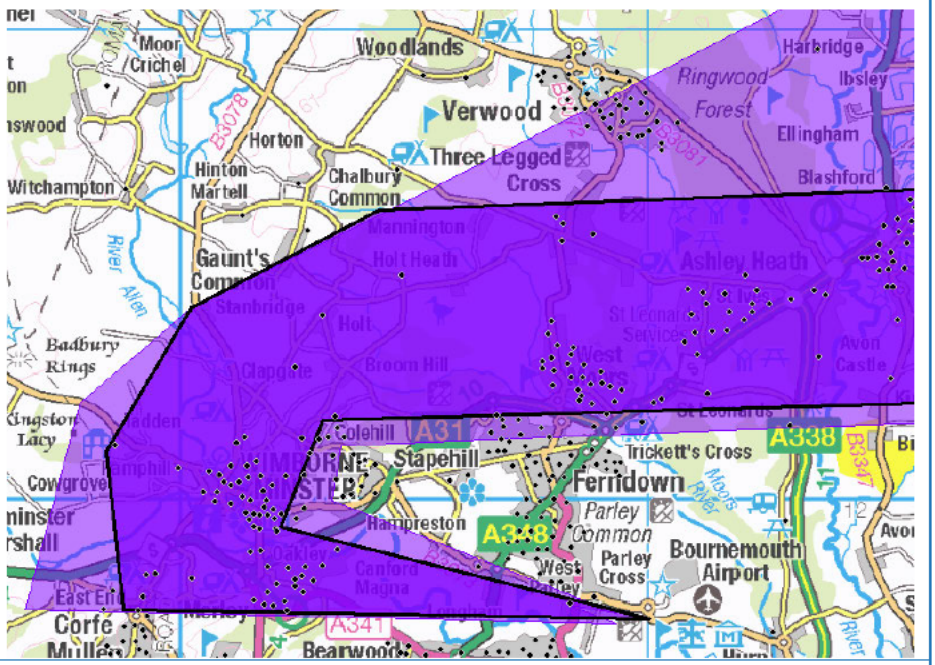
6.4.2.2. Option D26-E-C Baseline

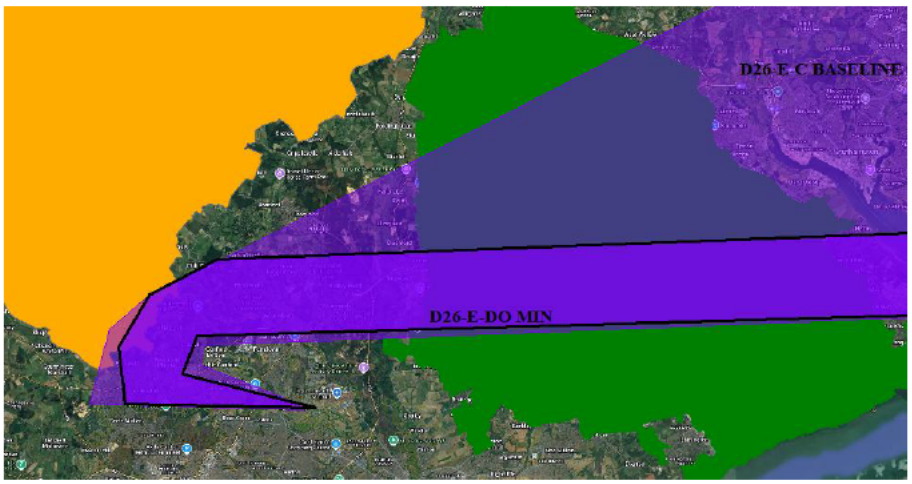
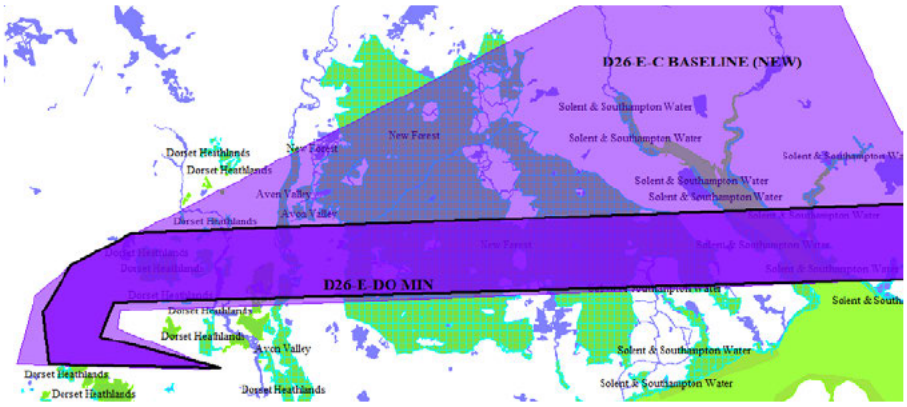
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.

Group	Impact	Qualitative Assessment
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade offs	Option D26-E-C baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 28: Option D26-E-C Baseline

6.4.2.3. Option D26-E-Do Minimum

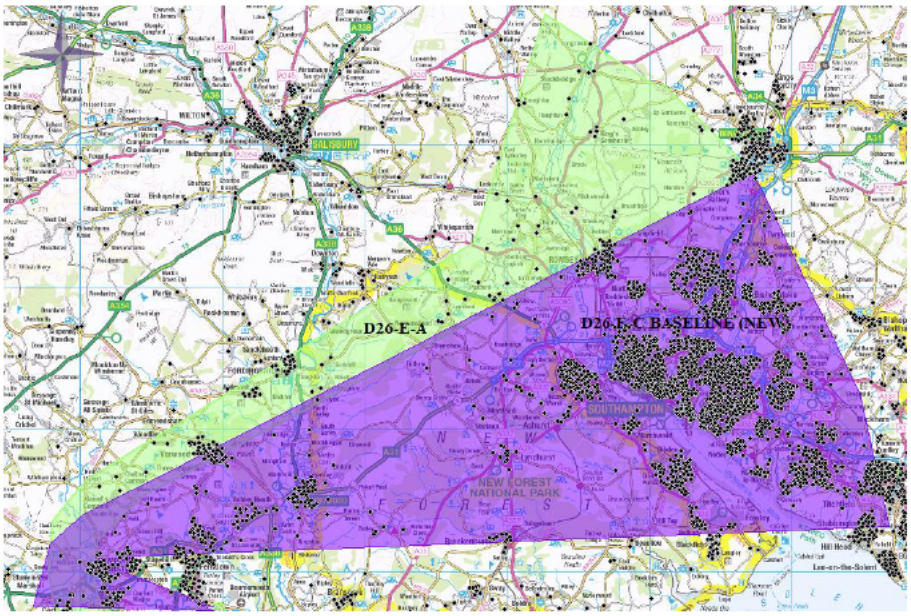
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Verwood and Ringwood Forest, offering a small improvement over the baseline. 
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.

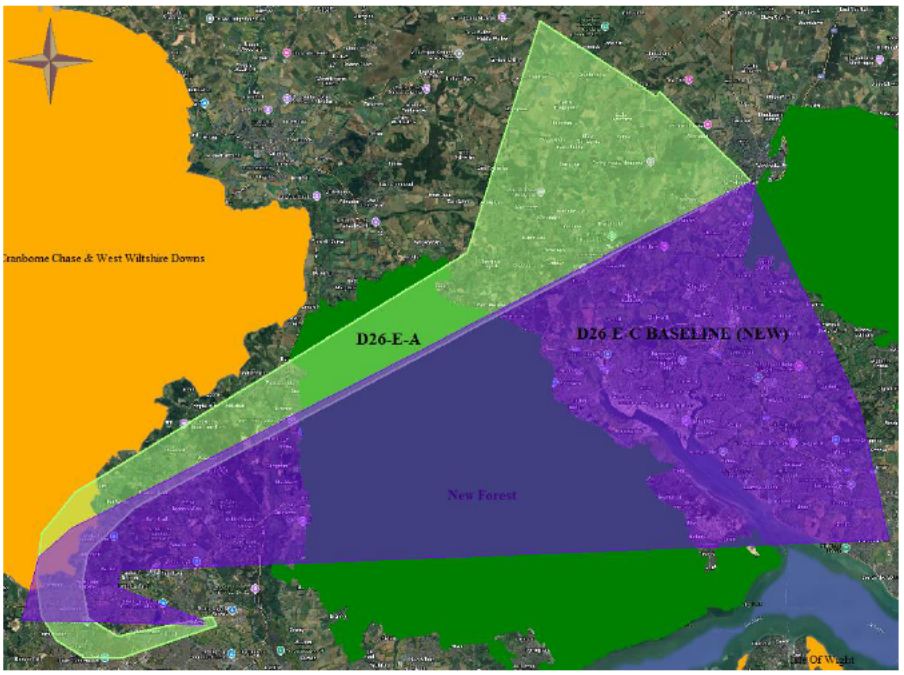
Group	Impact	Qualitative Assessment
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.
	Tranquillity	A smaller portion of the CCAONB and New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the AONB and Park and their tranquillity. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.

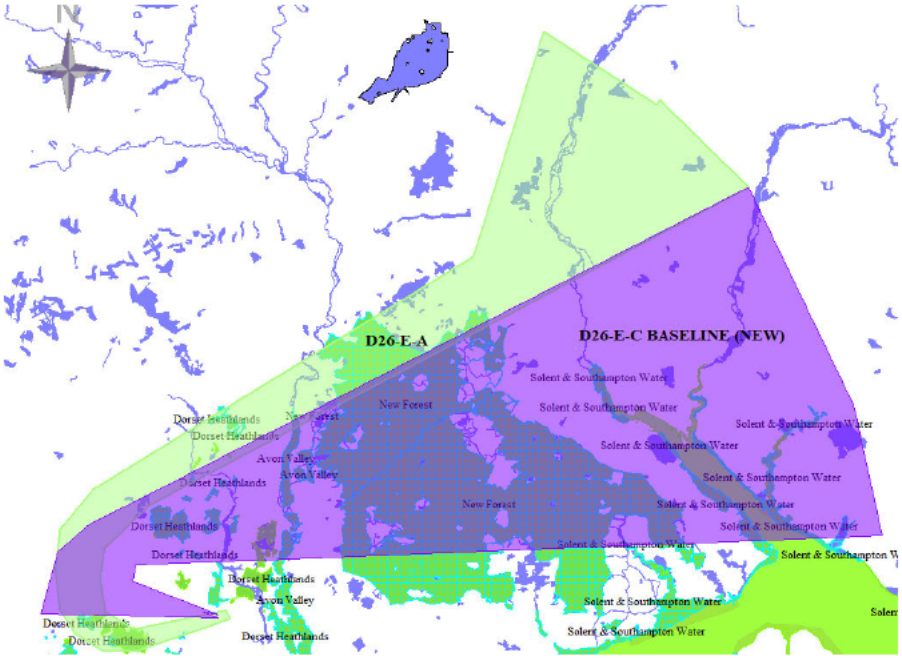
Group	Impact	Qualitative Assessment
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 29: Option D26-E-Do Minimum

6.4.2.4. Option D26-E-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would overfly a similar amount of communities as the baseline after take-off, before the route turns right. This option would fly over fewer communities than the baseline overall. Newly overflown communities include Verwood, Alderholt and Fordingbridge. Image shows the baseline (purple) and the option (green) with PWC overlayed. 
	Air Quality	This design option would initially overfly the same communities as the baseline after take-off, with no change in impact to local air quality. Before the right turn, aircraft would be above 1000ft.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes, as traffic is moved further north away from Southampton Airport and the congested area surrounding it associated with LTMA traffic; this could contribute to an increased capacity.

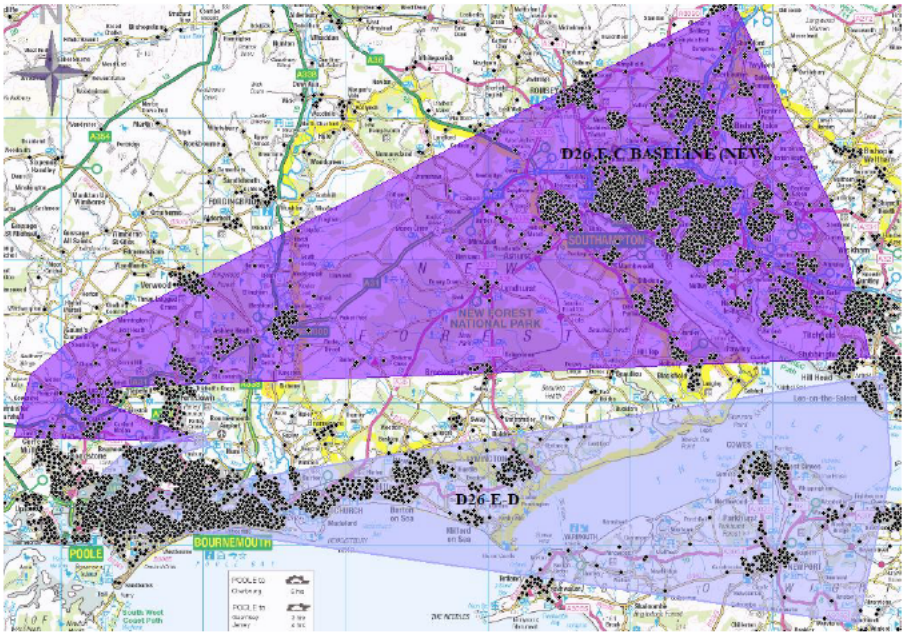
Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies the northerly section of the New Forest National Park, which is a more tranquil area. There would therefore be a change in impact to the northeast of New Forest National Park in terms of tranquillity. This option will also overfly a small section of the Cranborne Chase AONB at its southern end. Image shows the baseline (purple) and the option (green) with the NP (green) and AONB (orange) underneath. 

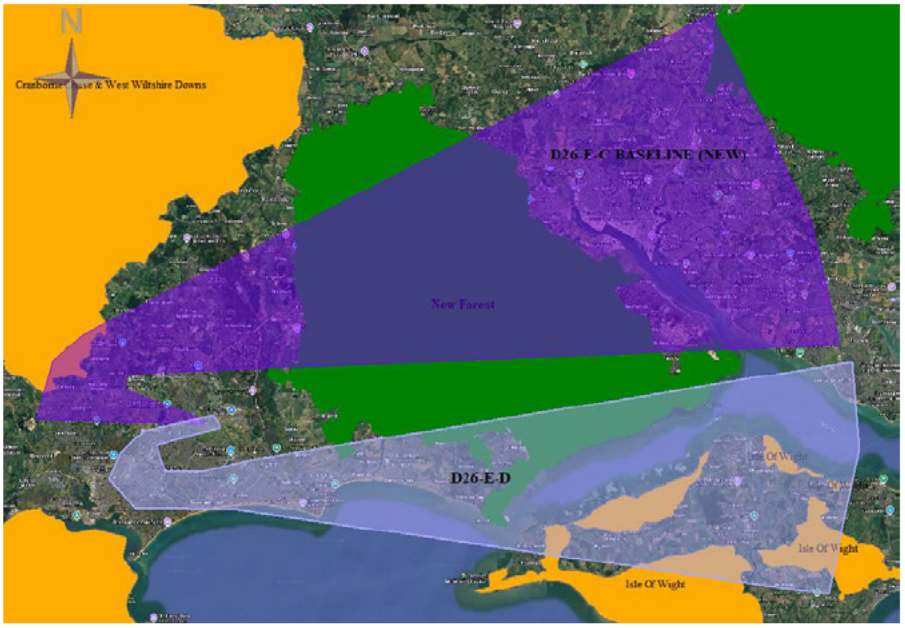
Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies similar sites to the baseline after take-off, then similar amount but different sections of sensitive sites. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (purple) and option (light green) flying over these sites. 
General aviation	Access	Possible increase in CAS is anticipated for this option which would impact the GA community. Additional controlled airspace and amendments to the current FUA may be required depending on final route placement within this swathe. Note: BOH already have FUA in that area it will need to be reviewed/amended for this option. Currently available 06:30-09:30 and 17:30-21:30 (Winter) and 04:45-08:30 and 16:30-20:30 9 summer).
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Track miles are not expected to be higher for traffic to the east between this option and the baseline. No significant benefits and minor impacts to fuel burn are anticipated.

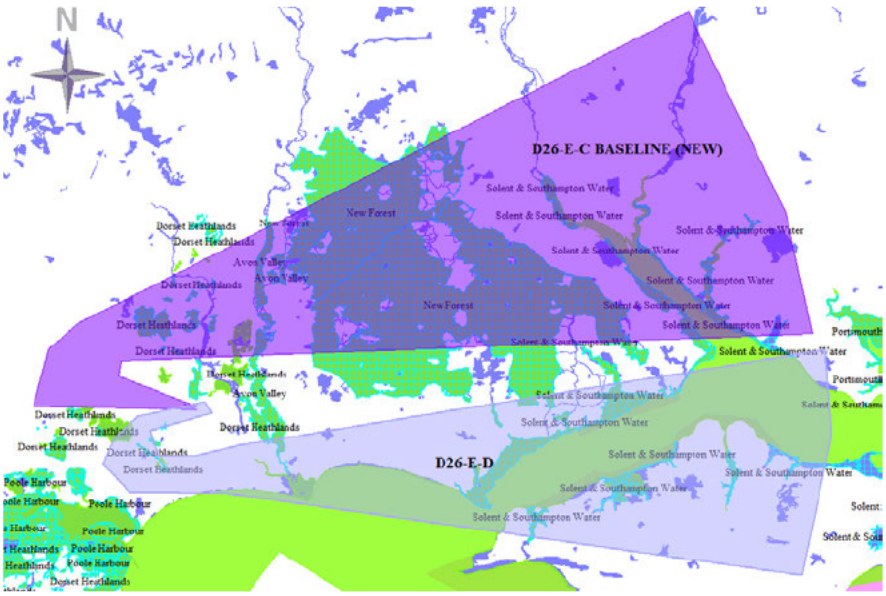
Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does contribute to the AMS objectives of simplification, improving fuel efficiency and reducing noise. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option D26-E-A shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace above the CTR delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 30: Option D26-E-A

6.4.2.5. Option D26-E-D

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would overfly different communities to the baseline as the route turns left. Significantly more densely populated areas would be overflown. Newly overflown communities include Bournemouth, Boscombe and Christchurch, compared with the baseline. Image shows the baseline (purple) and the option (light purple) with PWC overlayed. 
	Air Quality	This design option would initially overfly the same communities as the baseline after take-off with no change in impact to local air quality. Before the right turn, aircraft would be above 1000ft.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. Traffic would be closer to Southampton Airport routes providing little opportunity for better integration, a reduction in coordination or increased capacity.

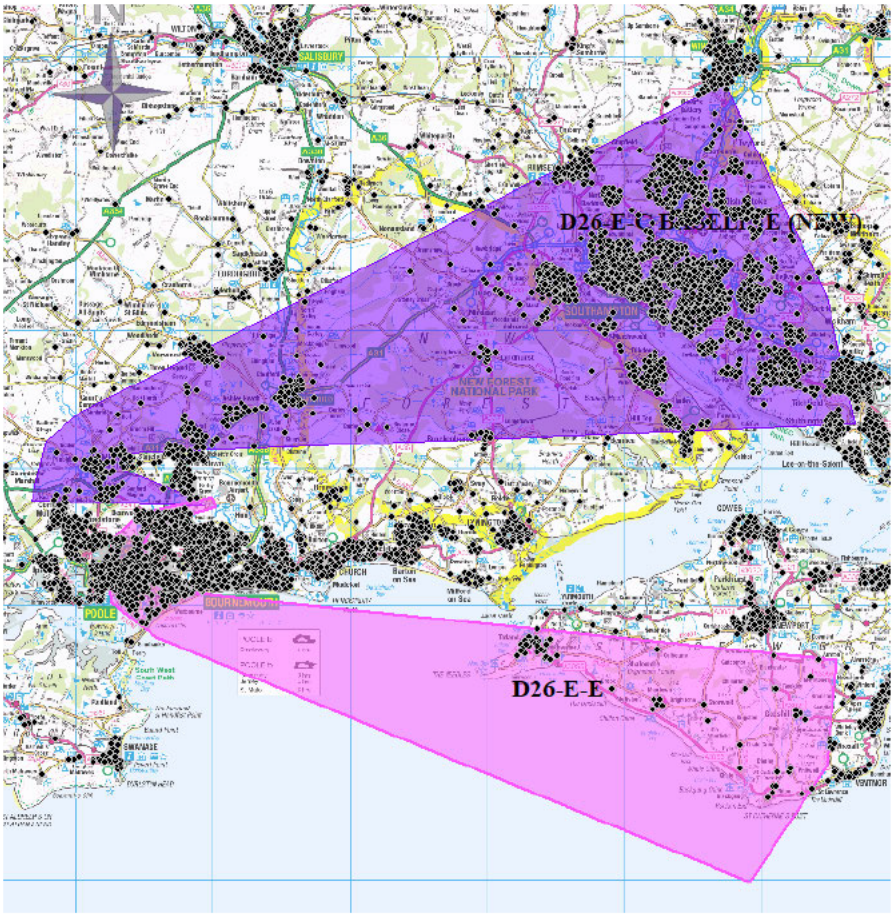
Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies the southerly section of the New Forest National Park, however less of the Park would be overflown compared to the baseline. It would overfly the Isle of Wight however; aircraft are likely to be above 4000ft at this point. Image shows the baseline (purple) and the option (blue) with the NP (green) and AONB (orange) underneath. 

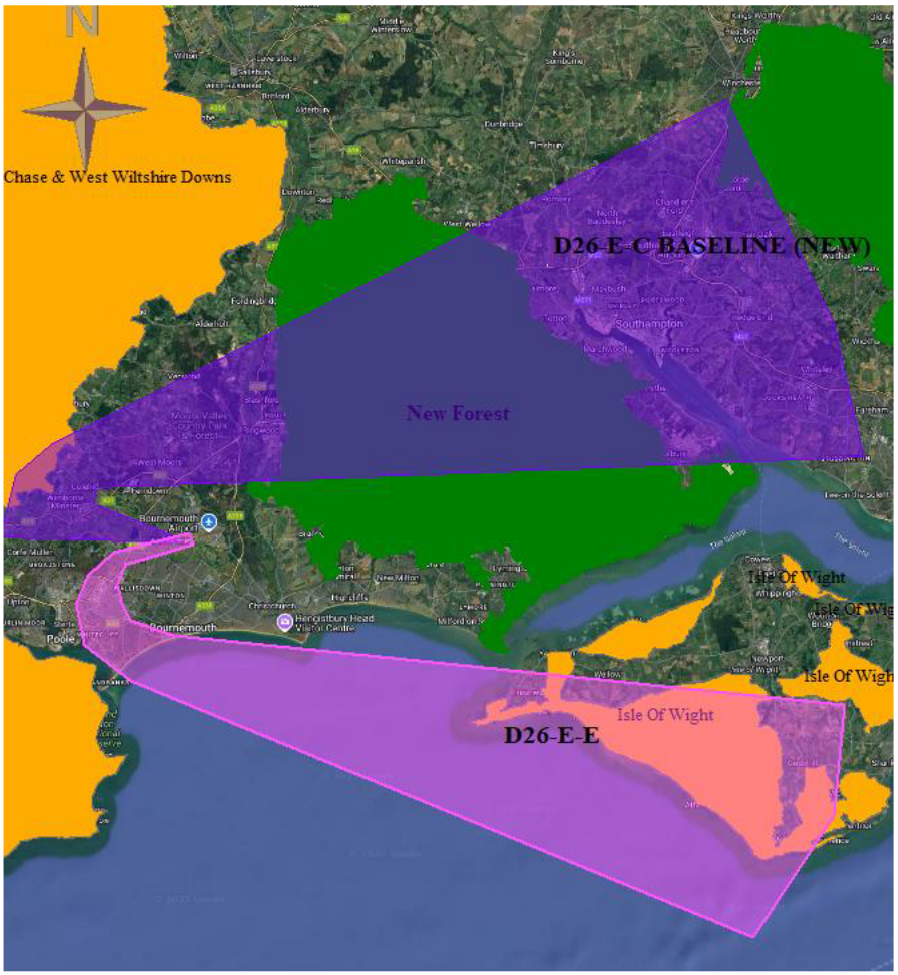
Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies different sites than the baseline after take-off, then similar amount but different sensitive sites. This option overflies the Solent and Southampton Water, the Highcliffe to Milford Cliffs, Yar Estuary and Boulder and Hamstead cliffs. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (dark purple) and option (light purple) flying over these sites. 
General aviation	Access	Increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Track miles are not expected to be higher for traffic to the east between this option and the baseline. No significant benefits and minor impacts to fuel burn are anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.

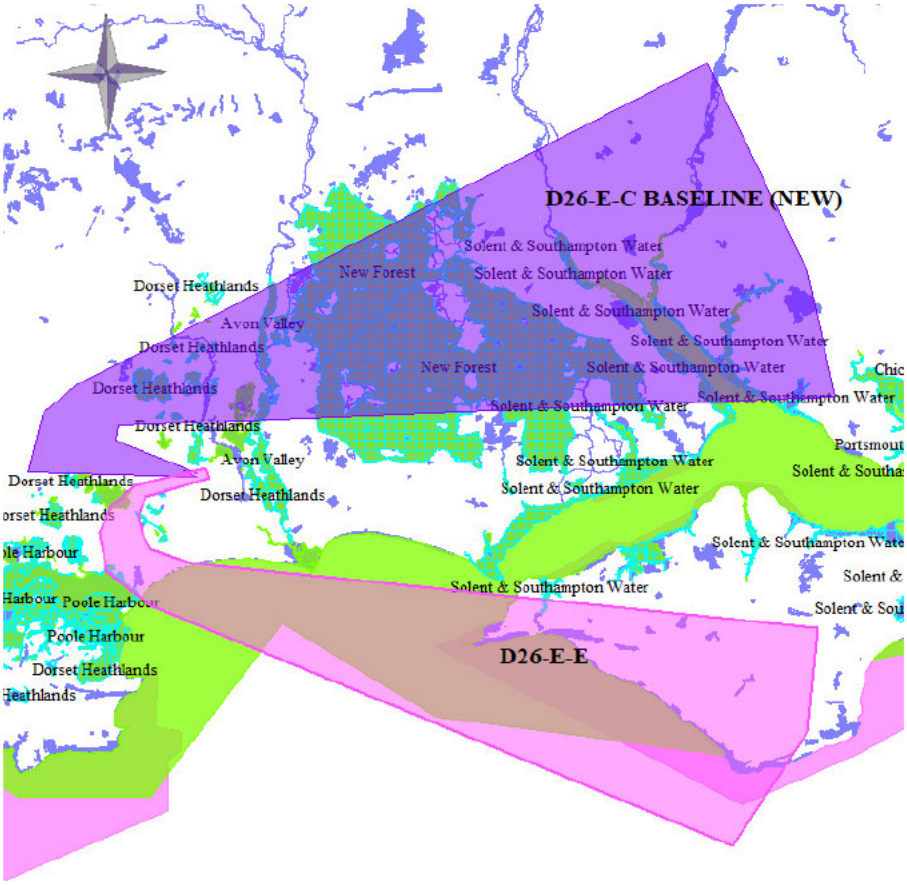
Group	Impact	Qualitative Assessment
service provider	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of simplification, improving fuel efficiency, or reducing noise. Overall this option offers no improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option D26-E-D shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. At higher level this option may have interdependencies with Gatwick, Farnborough and Heathrow traffic.

Table 31: Option D26-E-D

6.4.2.6. Option D26-E-E

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would overfly different communities to the baseline as the route turns left, additionally a greater number of communities would be overflown compared with the baseline at low altitudes and shortly after take-off. Newly overflown communities include Newtown and Parkstone, compared with the baseline. As this option is only briefly overland, fewer communities would be overflown overall and at a higher altitude compared with the baseline. Image shows the baseline (purple) and the option (pink) with PWC overlayed. 
	Air Quality	This design option would initially overfly the same communities as the baseline after take-off with no change in impact to local air quality. Before the left turn, aircraft would be over 1000ft.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.

Group	Impact	Qualitative Assessment
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes as traffic is moved further south away from LTMA traffic. Close proximity to the Portsmouth DAs means an increase in capacity would not be anticipated.
	Tranquillity	This option does not overfly the National Park or AONB at lower altitudes, however, would overfly the Isle Of Wight AONB at a higher altitude between 4000ft and 7000ft. Image shows the baseline (purple) and the option (pink) with the NP (green) and AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies different sites than the baseline after take-off, then different sections of sensitive sites; fewer sites are flown over due to this option reaching the sea sooner. This option overflies the Highcliffe to Milford cliffs and a small section of the Poole Harbour. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (purple) and option (pink) flying over these sites. 
General aviation	Access	Increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Track miles are not expected to be higher for traffic to the east between this option and the baseline. Minor increase to fuel burn anticipated.

Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage. However, depending on final track placement, aircraft could be in close proximity to the Portsmouth danger areas, EG D036, further along the extended route.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of simplification, improving fuel efficiency, or reducing noise. Overall this option offers no improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option D26-E-E shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. It may also conflict with military traffic operating at Poole HLS and over Poole Harbour.

Table 32: Option D26-E-E

6.4.3. South Design Envelope

6.4.3.1. In the South Design Envelope for departures there are three options: D26-S-A and D26-S-B Baseline, D26-S-C.

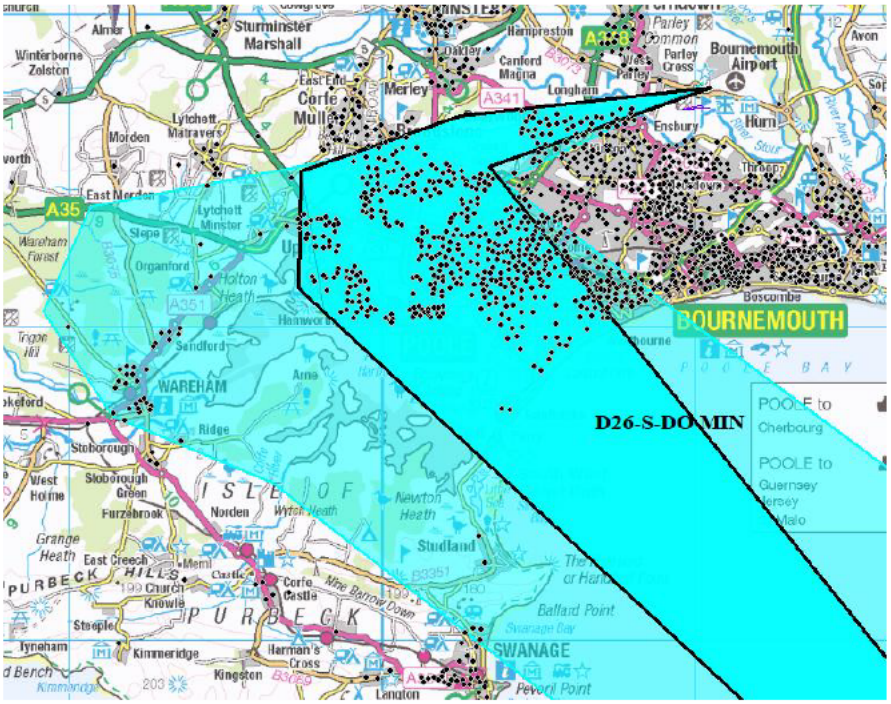
6.4.3.2. Option D26-S-B Baseline

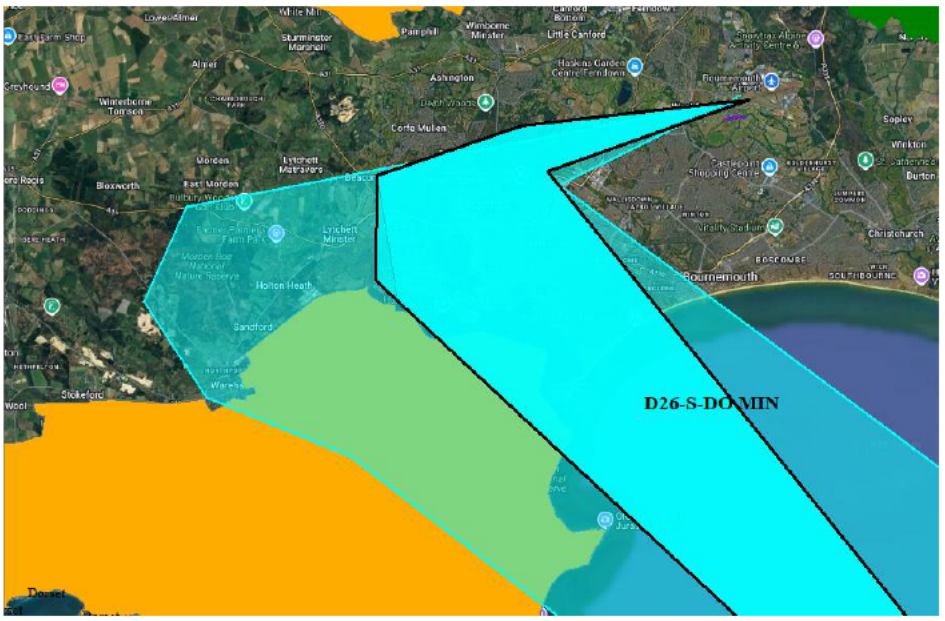
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the Dorset AONB will be overflown. There would be no change in impact on the AONB or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.

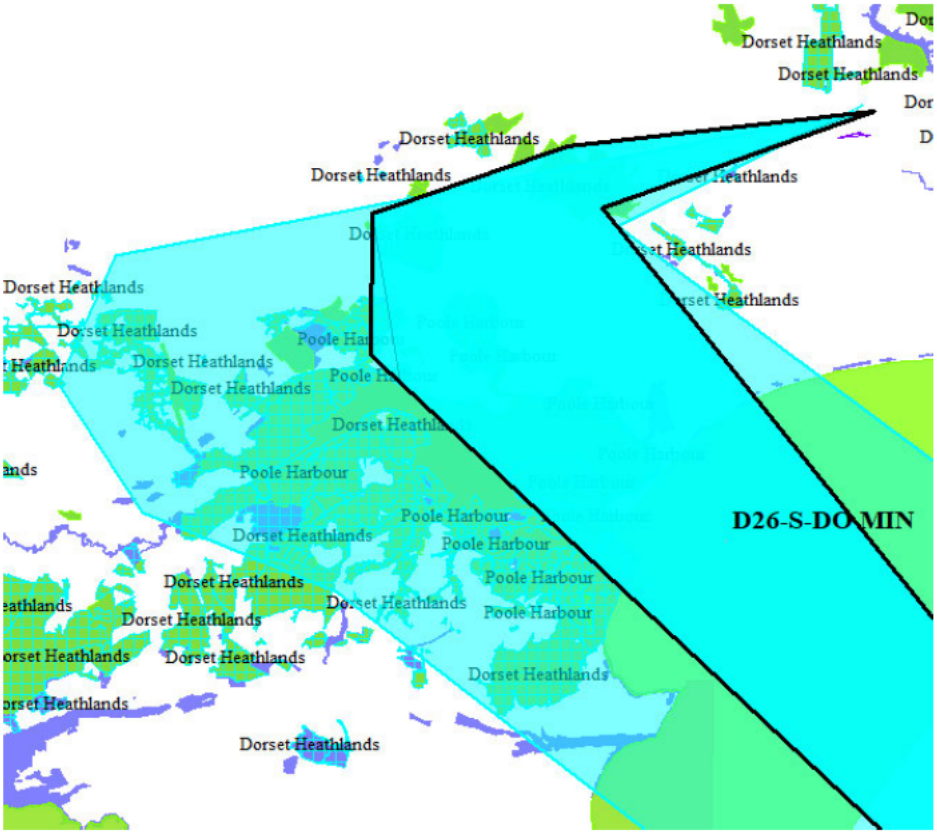
Group	Impact	Qualitative Assessment
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade offs	Option D26-S-B baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions.

Table 33: Option D26-S-B Baseline

6.4.3.3. Option D26-S-Do Minimum

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Wareham and Swanage, offering a small improvement over the baseline. 
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.

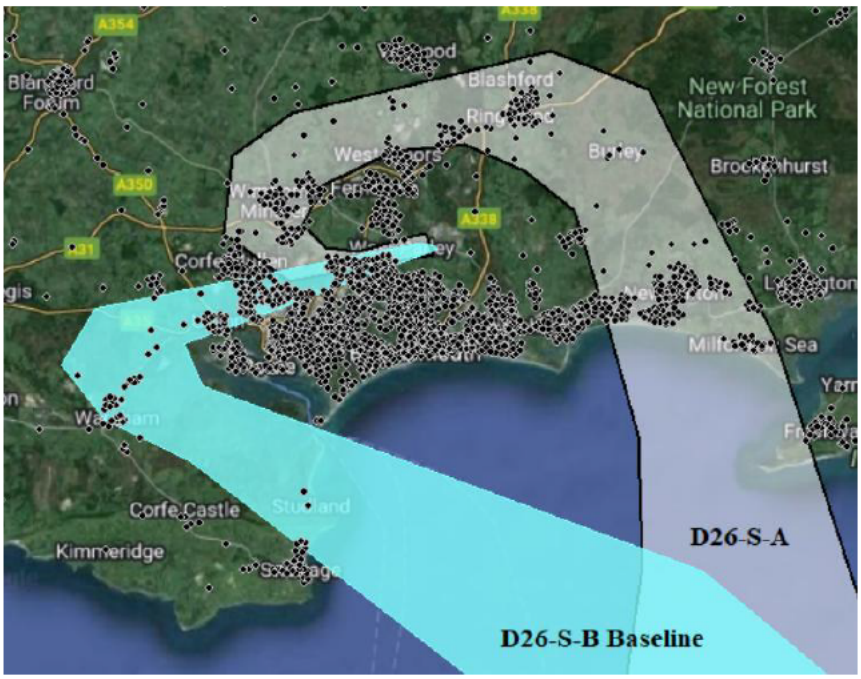
Group	Impact	Qualitative Assessment
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.
	Tranquillity	A smaller portion of the Dorset AONB would be overflown, resulting in a slight improvement in potential impacts on the AONB and its tranquillity. 

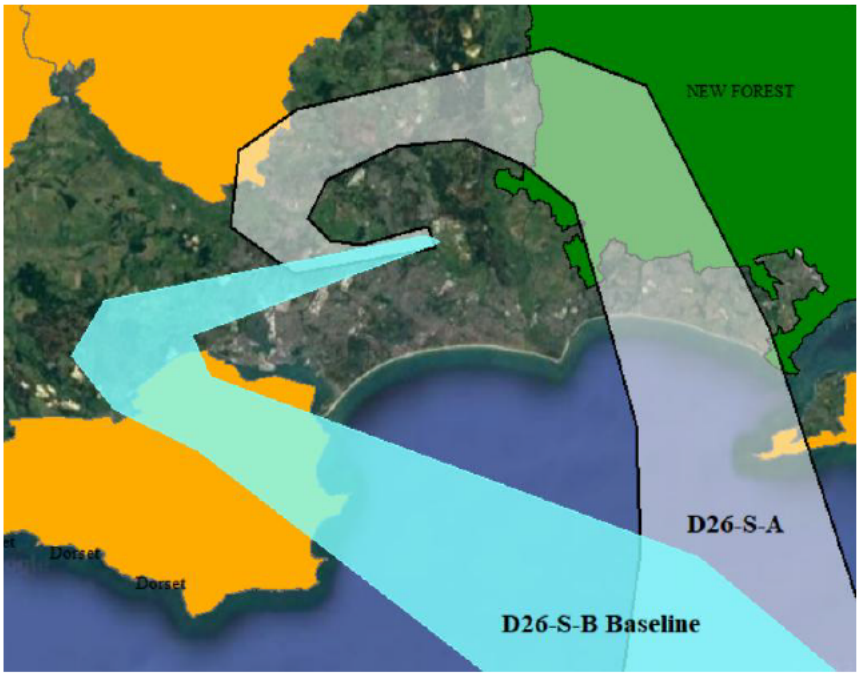
Group	Impact	Qualitative Assessment
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

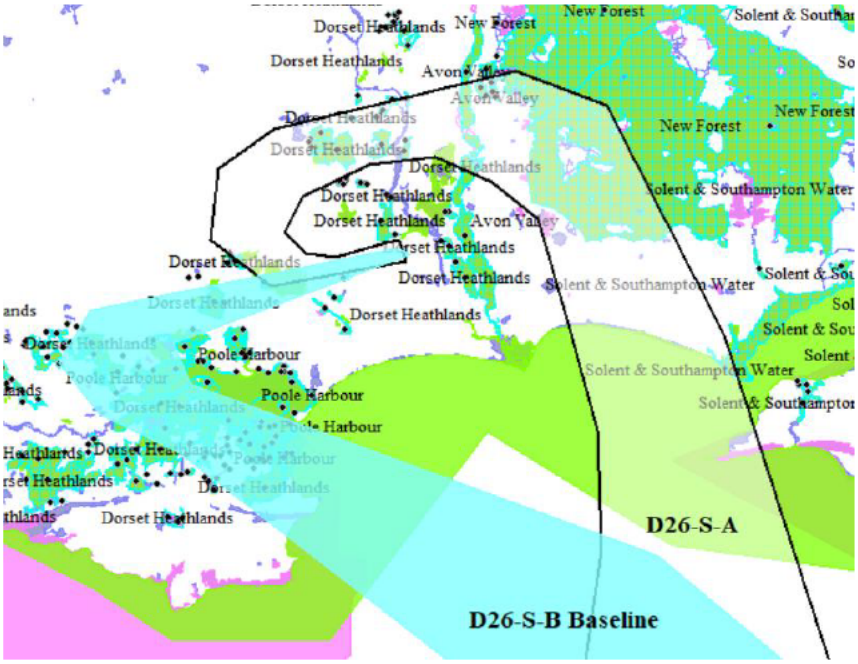
Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions.

Table 34: Option D26-S-Do Minimum

6.4.3.4. Option D26-S-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	As this design option is a wraparound and overflies more land, it therefore overflies more people than the current operation. As aircraft may need to be kept lower for longer there would be significant noise implications. Image shows the baseline (turquoise) and the option (white) with PWC overlayed. 
	Air Quality	This design option would overfly different communities than the baseline upon arrival below 1000ft, however no change in impact to local air quality.
Wider society	Greenhouse gas impact	As this design option is a wraparound there will be significantly more track miles between this option and the baseline and therefore greater impact on greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. Capacity would be decreased due to the wraparound meaning departing traffic would be crossing the final approach tracks. Traffic would also be moved closer to Southampton Airport and LTMA traffic.

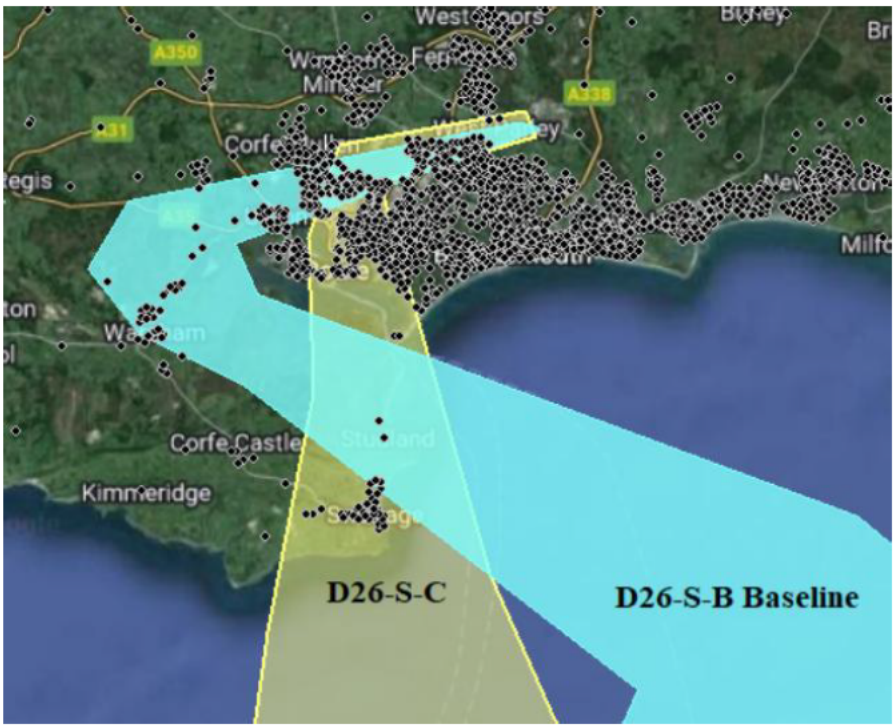
Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies Cranborne Chase AONB at the southern tip and the New Forest National Park and therefore overflies more areas of tranquillity than the baseline. However, this option avoids the Dorset AONB. Image shows the baseline (turquoise) and the option (white) with the NP (green) and AONB (orange) underneath. 

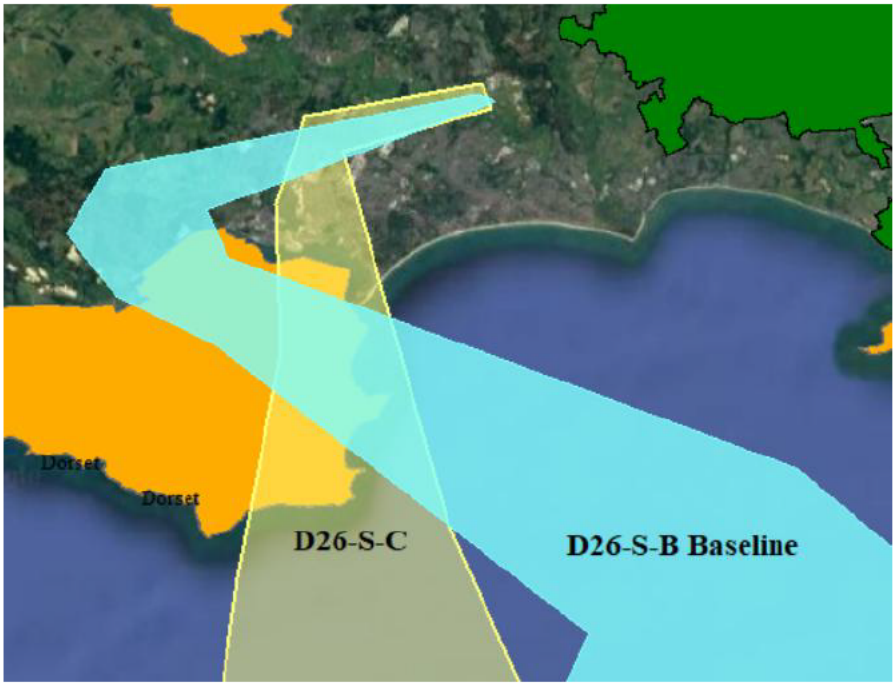
Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies different sites than the baseline after take-off, then similar amount but different sensitive sites compared to the baseline. This option overflies New Forest, Avon Valley and Dorset Heathlands in addition to the Highcliffe to Milford cliffs. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (turquoise) and option (white) flying over these sites. 
General aviation	Access	Potential increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	There are significant changes in track length and therefore a greater impact on fuel burn is anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.

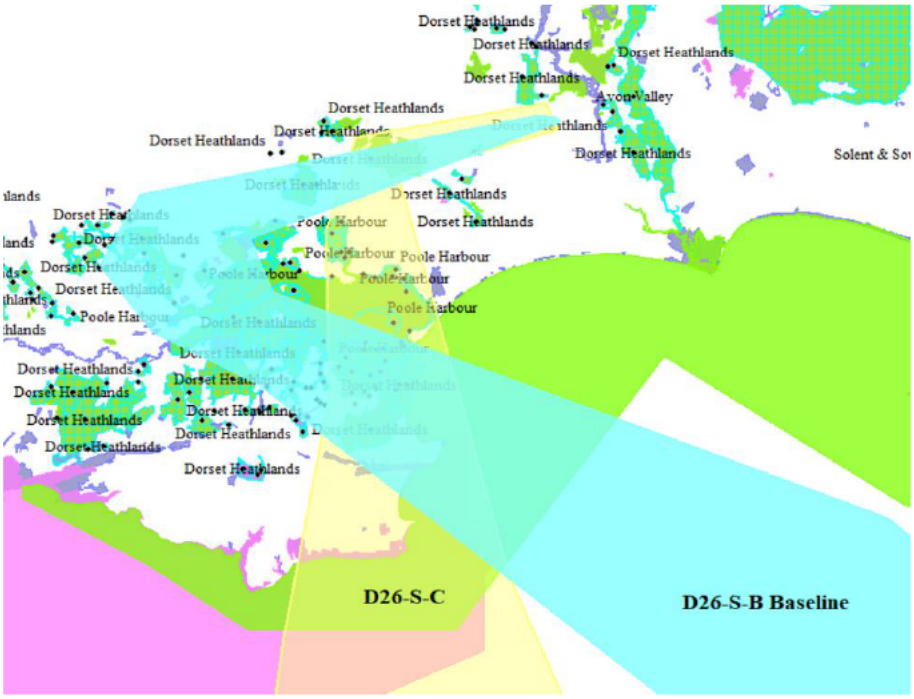
Group	Impact	Qualitative Assessment
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage. However, depending on final track placement, aircraft could be in close proximity to the Portsmouth danger areas EG D036 further along the extended route.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. This option does not contribute to the AMS objectives of simplification, improving fuel efficiency, environmental sustainability objectives or reducing noise, and considered less favourable than the baseline.
	Interdependencies, conflicts and trade offs	Option D26-S-A shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR airways traffic departing Bournemouth is reliant on a release from Southampton and may be subject to certain restrictions. Due to the wraparound nature of this swathe, there would be conflict with aircraft arriving on RWY 26 and possibly with traffic holding at the BIA.

Table 35: Option D26-S-A

6.4.3.5. Option D26-S-C

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option overflies more people that the baseline. Newly flown over areas would include Poole, Hamworthy and Upton. Image shows the baseline (turquoise) and the option (C) with PWC overlayed. 
	Air Quality	This design option would overfly more communities than the baseline on departure, however no changes below 1000ft, and therefore no change in impact to local air quality. This option does overfly the AQMA on Bournemouth road (A35) in Lower Parkstone.
Wider society	Greenhouse gas impact	Potential for a reduction in track miles as the route is more direct, therefore potential benefits to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This option is broadly similar to the baseline so limited opportunity for increased capacity is anticipated.

Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies approximately the same square miles and similar areas of the Dorset AONB as current operations, however, would not overfly the northeastern section of the AONB. Image shows the baseline (turquoise) and the option (yellow) with the AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies similar sites to the baseline immediately after take-off, then slightly less and different sections of sensitive sites. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (turquoise) and option (yellow) flying over these sites. 
General aviation	Access	An increase in controlled airspace would be required in an area of high GA activity.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	There are marginal reductions in track length anticipated. Potentially some small change in benefits and impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.

Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	Depending on final track placement this option could penetrate danger area EG D31 Portland which would cause a safety concern.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of safety, simplification or reducing noise, but may contribute to improving fuel efficiency Overall this option offers no improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option D26-S-C shares significant interdependencies with Southampton. Solent CTA sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth when both Solent and Bournemouth are operating radar. Solent arrival and departure traffic routing to and from the south will need coordinating on a tactical basis or via the established Silent Handover procedures. Possible conflict with the Military operating in D 031, operating in the vicinity of Poole HLS and over the sea to the south of Bournemouth.

Table 36: Option D26-S-C

6.5. Runway 26 Arrivals

6.5.1. For RWY 26 there are three design envelopes for arrivals, Northeast, East Southeast and South.

6.5.2. Northeast Design Envelope

6.5.2.1. In the Northeast Design Envelope for arrivals there are two options, A26-NE-A and A26-NE-B Baseline.

6.5.2.2. Option A26-NE-B Baseline

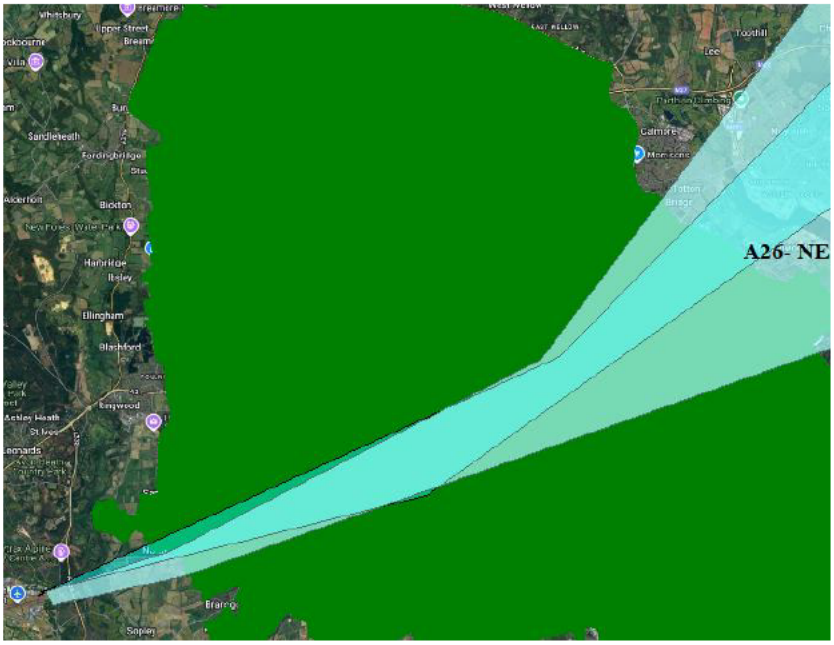
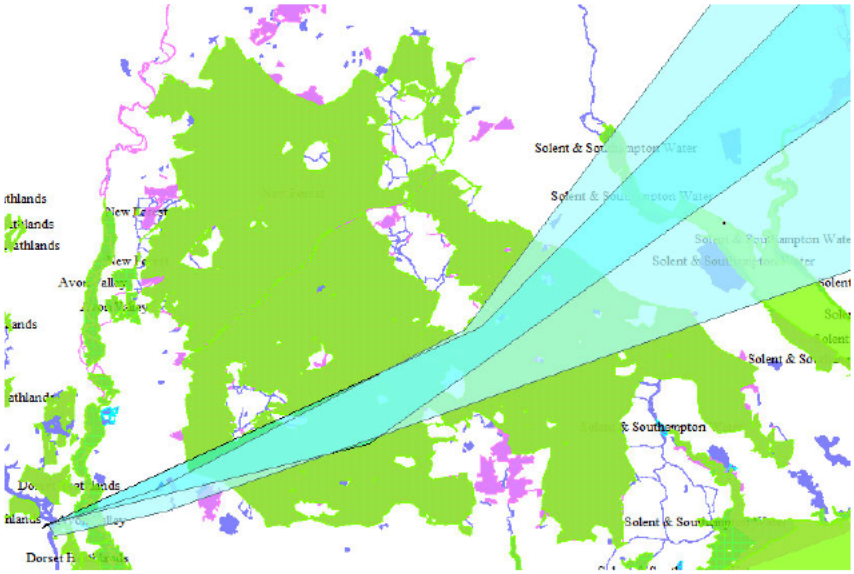
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.

Group	Impact	Qualitative Assessment
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade offs	Option A26-NE-B- Baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 37: Option A26-NE-B Baseline

6.6.1.1. Option A26-NE-Do Minimum

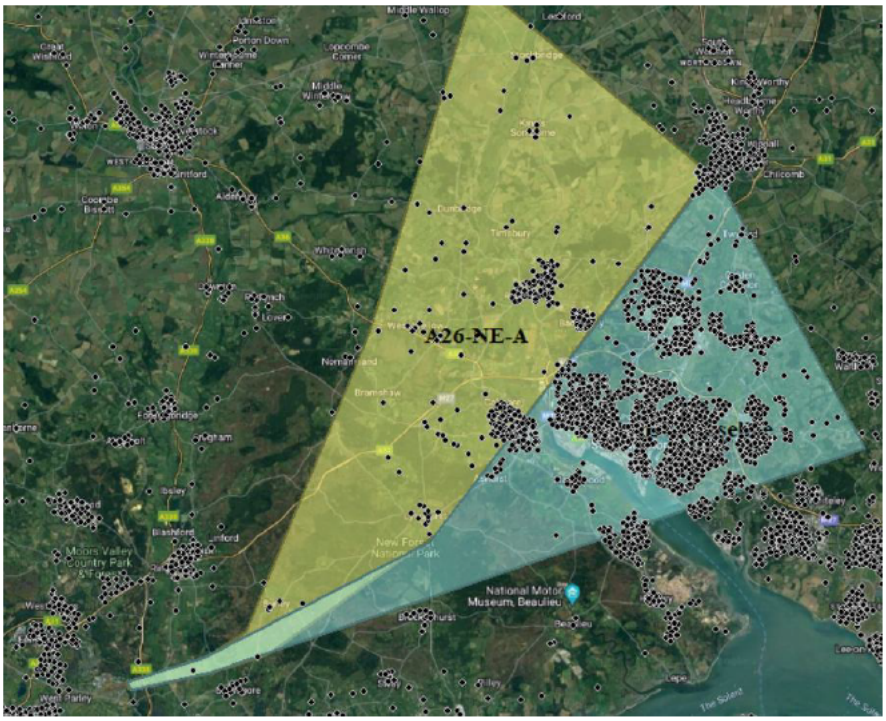
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact compared to the baseline.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

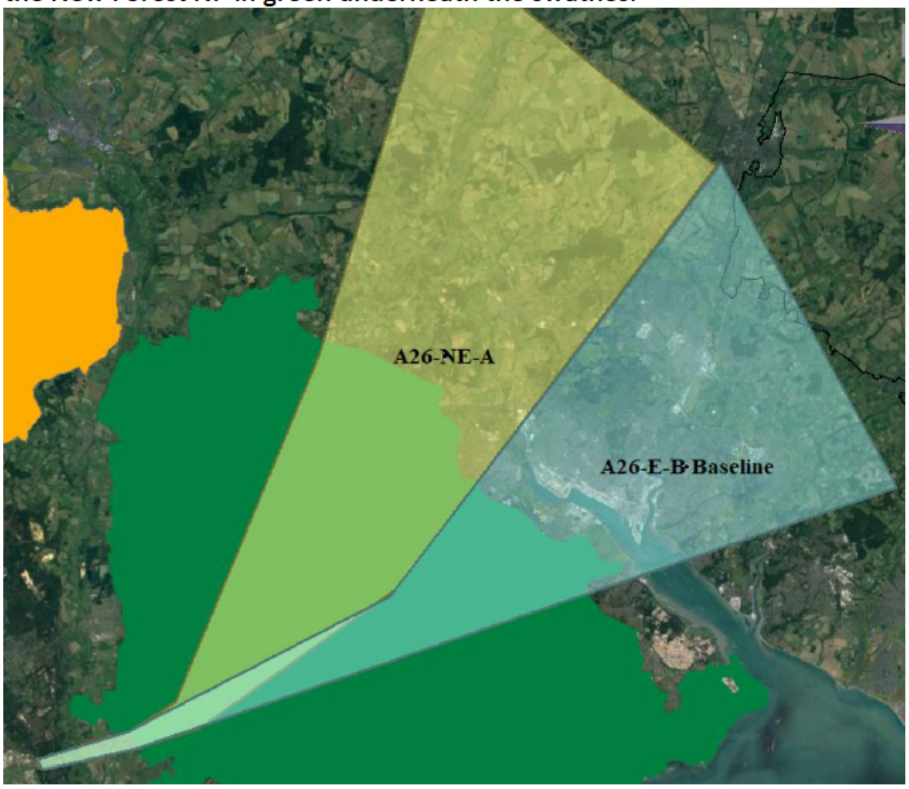
Group	Impact	Qualitative Assessment
	Tranquillity	A smaller portion of the New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the Park and its tranquillity. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.

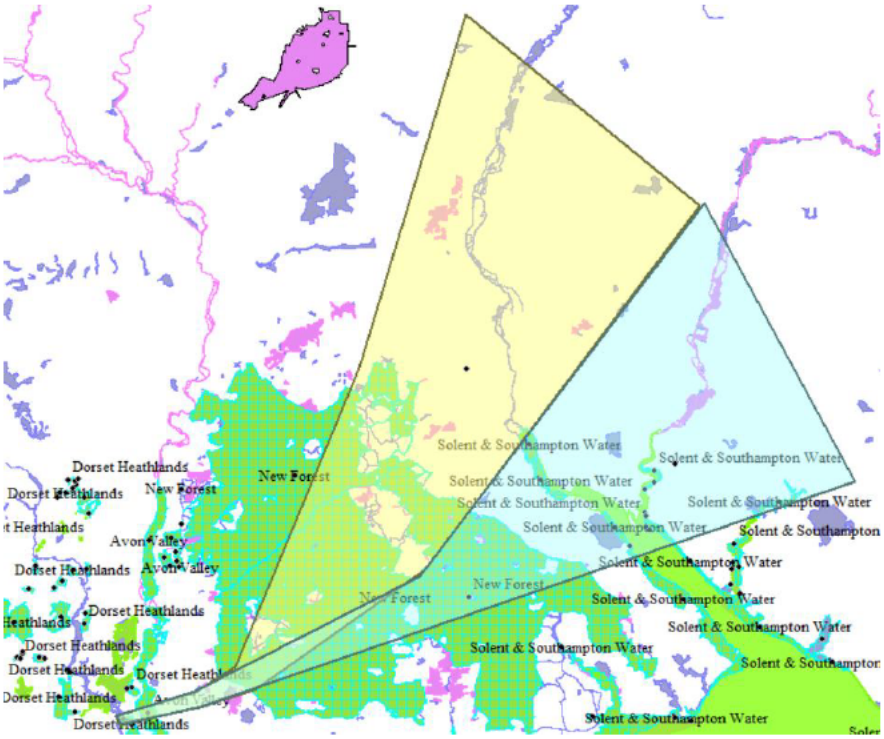
Group	Impact	Qualitative Assessment
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 38: Option A26-NE-Do Minimum

6.7.1.1. Option A26-NE-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would initially arrive over the different communities and less densely populated areas compared to the baseline. Closer to arrival, and at a lower altitude, this option overflies similar communities to the baseline. The newly overflown areas would be of lower population density than the baseline. Newly overflown communities include Lyndhurst, Calmore and North Baddesley. Image shows the baseline (blue) and the option (yellow) with PWC overlayed. 
	Air Quality	This design option would overfly the same communities as the baseline close to landing with no change in impact to local air quality.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes, as traffic is moved further north away from Southampton Airport and the congested area surrounding it associated with LTMA traffic; this could contribute to an increased capacity.

Group	Impact	Qualitative Assessment
	Tranquillity	Similar amount of the New Forest National Park will be overflown, compared with the current operations, the northeast of the park would be newly overflown and is a more tranquil area. There would therefore be a change in impact to the northeast of New Forest National Park in terms of tranquillity. Image shows option A (Yellow), option B baseline (blue) with the New Forest NP in green underneath the swathes. 

Group	Impact	Qualitative Assessment
	Biodiversity	Initially aircraft would be flying over similar amount but different sections of sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (blue) and option (yellow) flying over these sites. 
General aviation	Access	This option takes aircraft out of CAS therefore the GA community will be impacted. Additional controlled airspace and amendments to the current FUA may be required depending on final route placement within this swathe. Note: BOH already have FUA in that area it will need to be reviewed/amended for this option. Currently available 06:30-09:30 and 17:30-21:30 (Winter) and 04:45-08:30 and 16:30-20:30 9 summer).
General aviation/ commercial airlines	Economic impact from increased effective capacity	This option is broadly similar to the baseline so limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to fuel burn are anticipated.

Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. It does however meet noise and simplification objectives. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option A26-NE-A shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 39: Option A26-NE-A

6.7.2. East Southeast Design Envelope

6.7.2.1. In the East-Southeast Design Envelope for arrivals there are three options, A26-ESE-A Baseline, A26-ESE-B and A26-ESE-C.

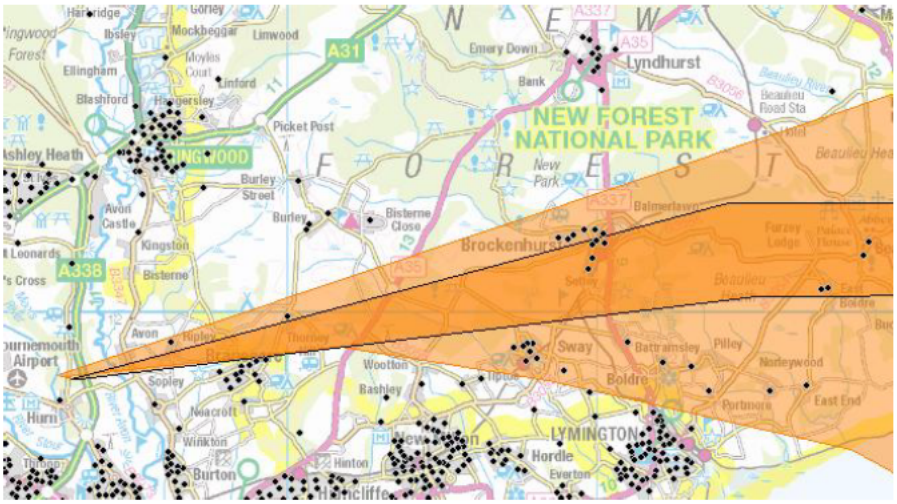
6.7.2.2. Option A26-ESE-A Baseline

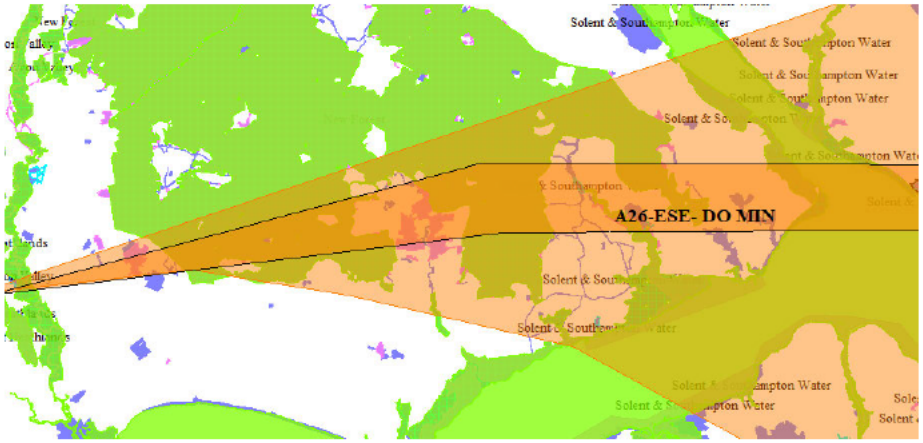
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities after take-off with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.

Group	Impact	Qualitative Assessment
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade offs	Option A26-ESE-A Baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 40: Option A26-ESE-A Baseline

6.7.2.3. A26-ESE-Do Minimum

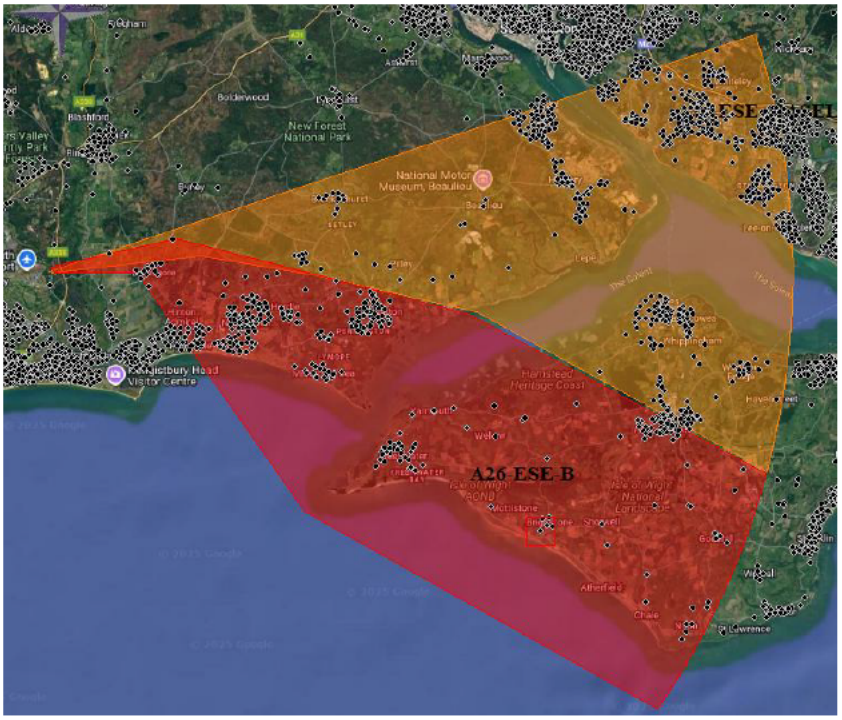
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Brockenhurst and Sway offering a small improvement over the baseline. 
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

Group	Impact	Qualitative Assessment
	Tranquillity	A smaller portion of the New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the Park and its tranquillity. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.

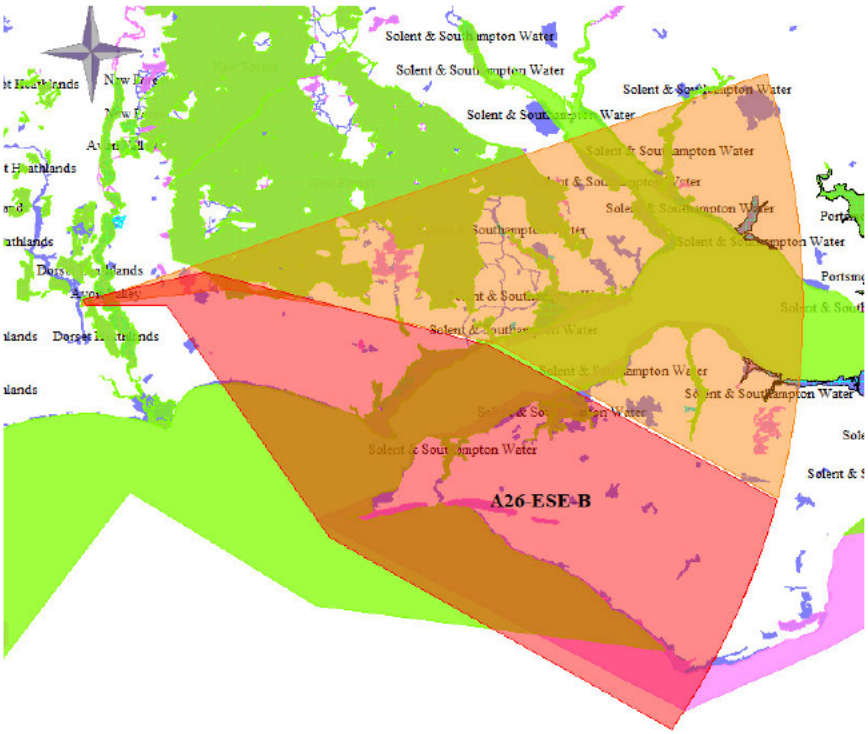
Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.
	Interdependencies, conflicts and trade offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 41: A26-ESE-Do Minimum

6.7.2.4. Option A26-ESE-B

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This design option would initially arrive over the different communities and marginally less densely populated areas compared to the baseline. However it would overfly more communities than the baseline upon arrival. Newly overflown communities include New Milton, Hordle and Barton on Sea. Before this point, this design option would overfly the Isle of Wight towns of Norton Green and Freshwater although this will likely be above 4000ft. Image shows the baseline (orange) and the option (red) with PWC overlayed. 
	Air Quality	This design option would overfly the same communities as the baseline upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to greenhouse gas and CO_2 emissions are anticipated.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. There could also be better integration with the en-route network if deconflicted with neighbouring airport routes as traffic is moved further south away from LTMA traffic. Close proximity to the Portsmouth DAs means an increase in capacity would not be anticipated.

Group	Impact	Qualitative Assessment
	Tranquillity	This option overflies a small section of the New Forest National Park, however considerably less of the Park would be overflown compared to the baseline. The Isle of Wight would be overflown upon arrival. Image shows the baseline (orange) and the option (red) with the NP (green) and AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	Initially aircraft would be flying over similar amount but different sections of sensitive sites. Closer to arrival, and at a lower altitude, this option overflies similar sites to the baseline This option overflies the Solent and Southampton Water, the Highcliffe to Milford Cliffs, Yar Estuary and Boulder and Hamstead cliffs and Compton Chine to Steephill. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (orange) and option (red) flying over these sites. 
General aviation	Access	Increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated. Increase in track miles and therefore potential increase fuel costs.
	Fuel burn	Little to no difference in track miles between this option and the baseline. No significant benefits or impacts to fuel burn are anticipated.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.

Group	Impact	Qualitative Assessment
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No initial safety concerns at this stage. However, depending on final track placement, aircraft could be in close proximity to the Portsmouth danger areas EG D037 prior to joining the arrival route.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of simplification, improving fuel efficiency, or reducing noise. This option has been assessed as offering no improvement over the baseline.
	Interdependencies, conflicts and trade offs	Option A26-ESE-B shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 42: Option A26-ESE-B

6.7.3. South Design Envelope

6.7.3.1. In the South Design Envelope for arrivals there are two options, A26-S-A and A26-S-C Baseline.

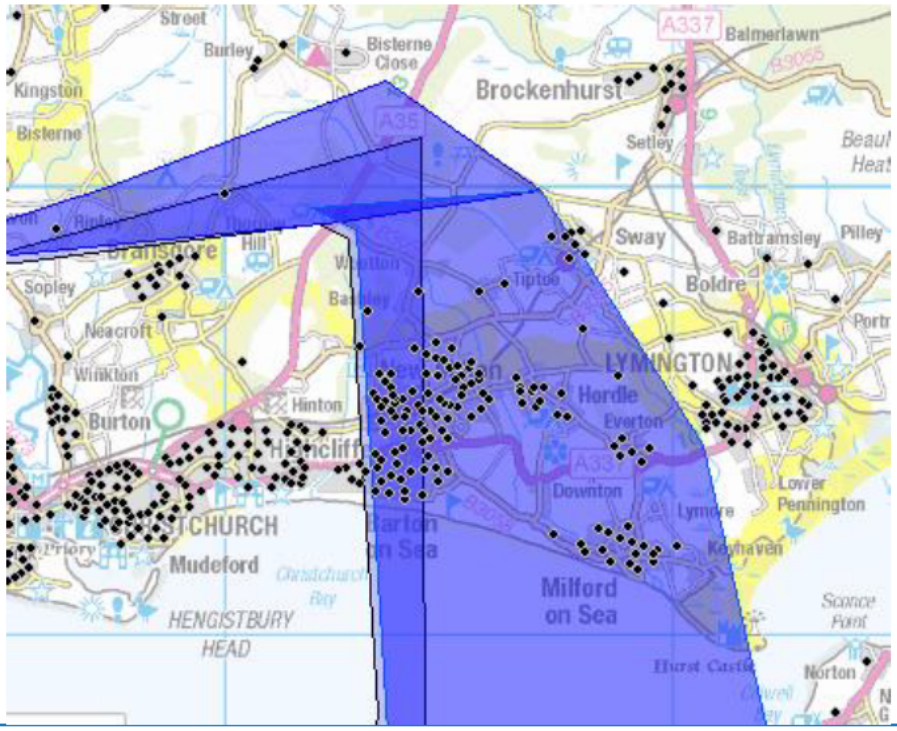
6.7.3.2. Option A26-S-C Baseline

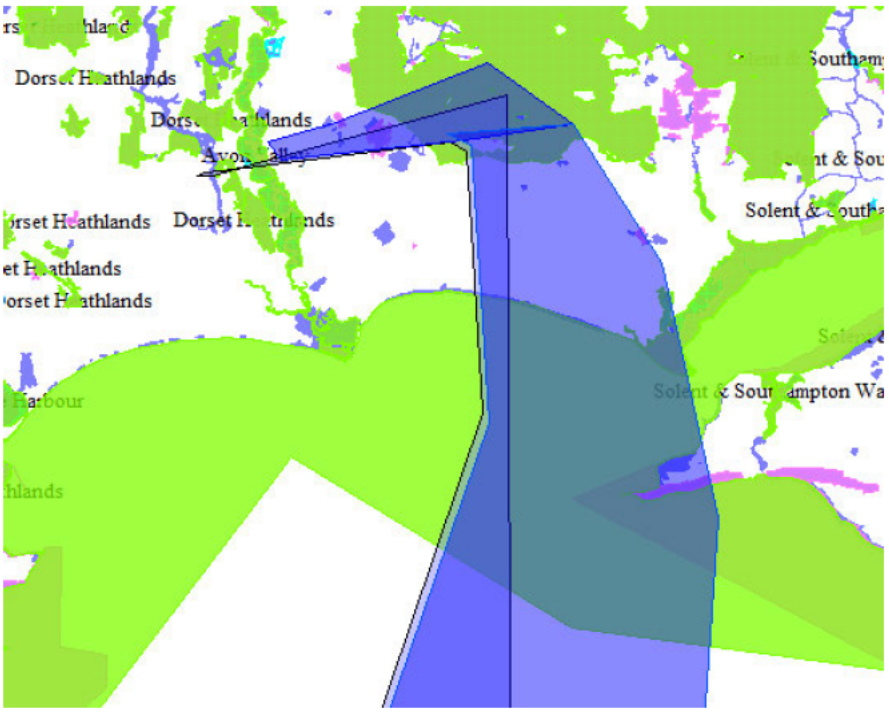
Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option would continue to overfly the same communities after take-off with no change to noise impact.
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	No opportunity to increase capacity or resilience.
	Tranquillity	The same areas of the New Forest National Park will be overflown. There would be no change in impact on New Forest National Park or tranquillity.
	Biodiversity	There are no additional biodiversity implications associated with retaining the baseline.
General aviation	Access	No change in CAS or access to it if the baseline was to be retained.
General aviation/ commercial airlines	Economic impact from increased effective capacity	No opportunity for increased capacity or benefit to economic impact should the baseline option be retained.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No training costs for airlines as there would be no new procedures if this baseline option were to be retained.
	Other costs	No commercial airline costs are anticipated should the baseline be retained.

Group	Impact	Qualitative Assessment
Airport/ Air navigation service provider	Infrastructure costs	No infrastructure costs are anticipated should the baseline be retained.
	Operational costs	No operational costs are anticipated should the baseline be retained.
	Deployment costs	No controller or assistant training will be required should the baseline be retained as procedures will not be changed.
All	Safety	No safety concerns should this baseline option be retained.
	AMS Realisation	No change and therefore no improvements to align with AMS objectives.
	Interdependencies, conflicts and trade offs	Option A26-S-C Baseline shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 43: Option A26-S-C Baseline

6.8.1.1. Option A26-S-Do Minimum

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	This option continues to overfly similar areas but may reduce direct overflight of Tiptoe, Hordle and Milford on Sea, offering a small improvement over the baseline. 
	Air Quality	This option would continue to overfly the same communities upon arrival with no change in impact to local air quality.
Wider society	Greenhouse gas impact	There would be no change in track length or altitudes. No change in benefits or impacts to greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. This may also mean better integration with the en-route network if deconflicted with neighbouring airport routes; this could contribute to an increased capacity.

Group	Impact	Qualitative Assessment
	Tranquillity	A smaller portion of the New Forest National Park would be overflown, resulting in a slight improvement in potential impacts on the Park and its tranquillity. The Isle of Wight would not be flown over. 
	Biodiversity	A smaller portion of sensitive sites would be overflown, resulting in a slight improvement in potential impacts biodiversity sensitive areas. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). 

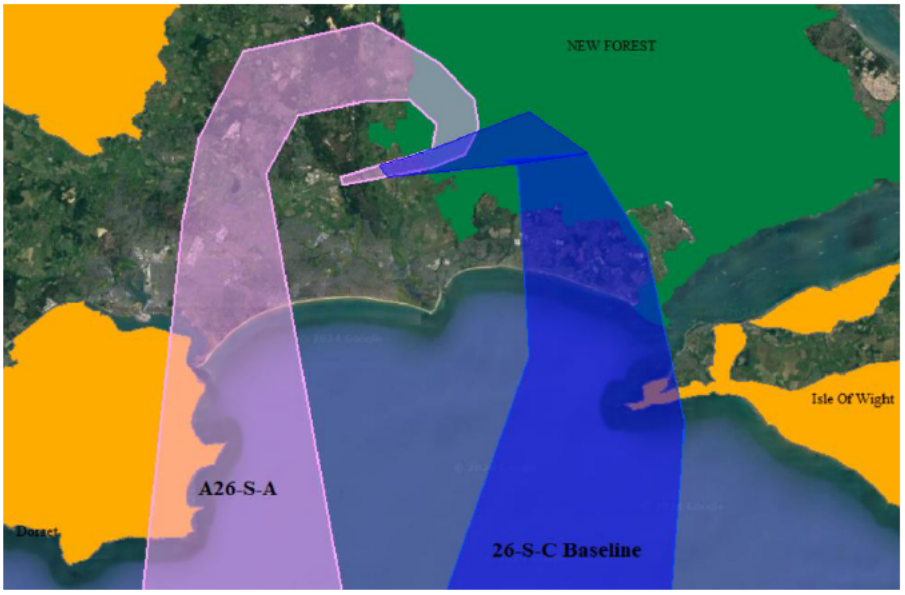
Group	Impact	Qualitative Assessment
General aviation	Access	Access to controlled airspace is expected to remain unchanged.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity is anticipated for increased capacity or benefit to economic impact should the Do Minimum be implemented.
	Fuel burn	There would be no change in track length or altitudes. No change in benefits or impacts to fuel burn.
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	No safety concerns are anticipated if the Do-Minimum option is implemented.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. It does not contribute to the AMS objectives of improving fuel efficiency. Overall this offers an improvement over the baseline.

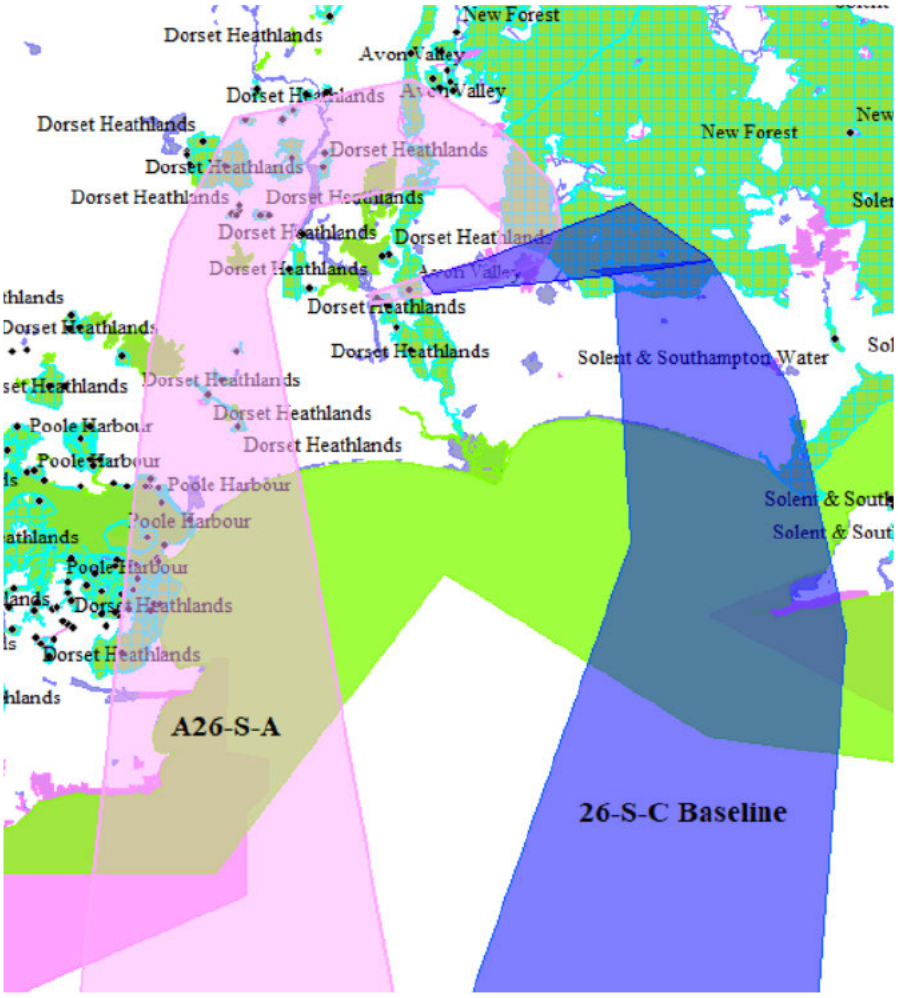
Group	Impact	Qualitative Assessment
	Interdependencies, conflicts and trade offs	Similarly to the Baseline, the Do Minimum option continues to share significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover.

Table 44: Option A26-S-Do Minimum

6.9.1.1. Option A26-S-A

Group	Impact	Qualitative Assessment
Communities	Noise impact on health and quality of life	As this design option is a wraparound turning right upon arrival it overflies significantly more people than the baseline. Newly overflown communities include Ringwood, Ashley Heath, St Ives and St Leonards. Image shows the baseline (purple) and the option (pink) with the NP (green) and AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Air Quality	This design option would overfly different communities than current operations on arrival, below 1000ft, however no change in impact to local air quality. This option does overfly AQMAs in Upper and Lower Parkstone.
Wider society	Greenhouse gas impact	As this design option is a wraparound there will be significantly more track miles between this option and the baseline and therefore greater impact on greenhouse gas and CO_2 emissions.
	Capacity/ resilience	Resilience would be increased due to the introduction of RNAV. Although traffic would be moved further away from neighbouring airports, capacity would be decreased due to the wraparound meaning departing traffic would be crossing the final approach tracks.
	Tranquillity	This option overflies less of the New Forest National Park than the baseline however will overfly a small portion of the Dorset AONB at the easterly tip. Image shows the baseline (purple) and the option (pink) with the NP (green) and AONB (orange) underneath. 

Group	Impact	Qualitative Assessment
	Biodiversity	This option overflies more and different sensitive sites than the baseline. These are Ramsar sites (turquoise hatched), SPAs (green), SACs (pink) and SSSIs (purple). Image shows baseline (purple) and option (pink) flying over these sites. 
General aviation	Access	Increase in CAS is anticipated for this option.
General aviation/ commercial airlines	Economic impact from increased effective capacity	Limited opportunity for increased effective capacity or benefit to economic impact is anticipated.
	Fuel burn	There are significant changes in track length and therefore a greater impact on fuel burn is anticipated.

Group	Impact	Qualitative Assessment
Commercial airlines	Training costs	No additional training costs for airlines are anticipated with this option. Updates to flight procedures form part of an AIRAC cycle where airlines will update their procedures and utilise training if deemed necessary as standard.
	Other costs	Implementation of the Do-Minimum option is not expected to result in any additional costs to commercial airlines.
Airport/ Air navigation service provider	Infrastructure costs	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids which results in cost savings relative to the Baseline.
	Operational costs	No operational costs are anticipated with this option for either the Airport or the ANSP.
	Deployment costs	It is anticipated that controller and assistant training will be required for the initial deployment of this option. The scope and scale of this training requirement will be assessed further during the Stage 3 Full Options Appraisal.
All	Safety	Depending on final track placement this option could penetrate danger area EG D31 Portland which would cause a safety concern.
	AMS Realisation	This option contributes to the VOR rationalisation currently ongoing within the UK as it removes reliance on ground based navigational aids with the implementation of PBN. This option does not contribute to the AMS objectives of simplification, improving fuel efficiency, environmental sustainability objectives or reducing noise and is therefore considered less favourable than the baseline.
	Interdependencies, conflicts and trade offs	Option A26-S-A shares significant interdependencies with Southampton. Solent CTA 2 borders to the east and sits above Bournemouth from 2000-5500ft with the airspace delegated to Bournemouth under certain conditions. IFR Traffic inbound from the NE would initially be controlled by Solent Radar and deconflicted with their traffic prior to transfer to Bournemouth either with coordination or by the established Silent Handover. There is a conflict with departure routes of RWY 26 crossing over the climb out and may conflict with any traffic holding at the BIA.

Table 45: Option A26-S-A

7. IOA results

7.1. This section details the results of the IOA. The RAG score key can be found in Table 6 in Section 2.3.2. The tables are by design envelope with each option compared against the assessment criteria.

7.2. For details on discounted options see Section 2.3.2.

7.3. Runway 08 Departures

7.3.1. Northeast

Group	Impact	D08-NE-B Baseline	D08-NE-Do Minimum	D08-NE-A
Communities	Noise impact on health and quality of life			
	Air Quality			
Wider society	Greenhouse gas impact			
	Capacity/ resilience			
	Tranquillity			
	Biodiversity			
General aviation	Access			
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			
Commercial airlines	Training costs			
	Other costs			

Group	Impact	D08-NE-B Baseline	D08-NE-Do Minimum	D08-NE-A
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			
	Interdependencies, conflicts and trade-offs			

Table 46: D08 Northeast IOA Results

7.3.2. East

Group	Impact	D08-E-C Baseline	D08-E-Do Minimum	D08-E-D
Communities	Noise impact on health and quality of life			
	Air Quality			
Wider society	Greenhouse gas impact			
	Capacity/ resilience			
	Tranquillity			
	Biodiversity			
General aviation	Access			

Group	Impact	D08-E-C Baseline	D08-E-Do Minimum	D08-E-D
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			
Commercial airlines	Training costs			
	Other costs			
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			
	Interdependencies, conflicts and trade-offs			

Table 47: D08 East IOA Results

7.3.3. South

Group	Impact	D08-S-B Baseline	D08-S-Do Minimum	D08-S-A
Communities	Noise impact on health and quality of life			
	Air Quality			

Group	Impact	D08-S-B Baseline	D08-S-Do Minimum	D08-S-A
Wider society	Greenhouse gas impact			
	Capacity/ resilience			
	Tranquillity			
	Biodiversity			
General aviation	Access			
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			
Commercial airlines	Training costs			
	Other costs			
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			
	Interdependencies, conflicts and trade-offs			

Table 48: D08 South IOA Results

7.4. Runway 08 Arrivals

7.4.1. Northeast

Group	Impact	A08-NE-B Baseline	A08-NE-Do Minimum	A08-NE-A	A08-NE-C
Communities	Noise impact on health and quality of life				
	Air Quality				
Wider society	Greenhouse gas impact				
	Capacity/ resilience				
	Tranquillity				
	Biodiversity				
General aviation	Access				
General aviation/ commercial airlines	Economic impact from increased effective capacity				
	Fuel burn				
Commercial airlines	Training costs				
	Other costs				
Airport/ Air navigation service provider	Infrastructure costs				
	Operational costs				
	Deployment costs				
All	Safety				

Group	Impact	A08-NE-B Baseline	A08-NE-Do Minimum	A08-NE-A	A08-NE-C
	AMS Realisation				
	Interdependencies, conflicts and trade-offs				

Table 49: A08 Northeast IOA Results

7.4.2. Southeast

Group	Impact	A08-SE-A Baseline	A08-SE-Do Minimum	A08-SE-B
Communities	Noise impact on health and quality of life			
	Air Quality			
Wider society	Greenhouse gas impact			
	Capacity/ resilience			
	Tranquillity			
	Biodiversity			
General aviation	Access			
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			

Group	Impact	A08-SE-A Baseline	A08-SE-Do Minimum	A08-SE-B
Commercial airlines	Training costs			
	Other costs			
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			
	Interdependencies, conflicts and trade-offs			

Table 50: A08 Southeast IOA Results

7.4.3. South

Group	Impact	A08-S-B Baseline	A08-S-Do Minimum	A08-S-A	A08-S-C
Communities	Noise impact on health and quality of life				
	Air Quality				
Wider society	Greenhouse gas impact				
	Capacity/ resilience				
	Tranquillity				

Group	Impact	A08-S-B Baseline	A08-S-Do Minimum	A08-S-A	A08-S-C
	Biodiversity				
General aviation	Access				
General aviation/ commercial airlines	Economic impact from increased effective capacity				
	Fuel burn				
Commercial airlines	Training costs				
	Other costs				
Airport/ Air navigation service provider	Infrastructure costs				
	Operational costs				
	Deployment costs				
All	Safety				
	AMS Realisation				
	Interdependencies, conflicts and trade-offs				

Table 51: A08 South IOA Results

7.5. Runway 26 Departures

7.5.1. East

Group	Impact	D26-E-C Baseline	D26-E-Do Minimum	D26-E-A	D26-E-D	D26-E-E
Communities	Noise impact on health and quality of life					
	Air Quality					
Wider society	Greenhouse gas impact					
	Capacity/ resilience					
	Tranquillity					
	Biodiversity					
General aviation	Access					
General aviation/ commercial airlines	Economic impact from increased effective capacity					
	Fuel burn					
Commercial airlines	Training costs					
	Other costs					
Airport/ Air navigation service provider	Infrastructure costs					
	Operational costs					
	Deployment costs					
All	Safety					

Group	Impact	D26-E-C Baseline	D26-E-Do Minimum	D26-E-A	D26-E-D	D26-E-E
	AMS Realisation					
	Interdependencies, conflicts and trade-offs					

Table 52: D26 East IOA Results

7.5.2. South

Group	Impact	D26-S-B Baseline	D26-S-Do Minimum	D26-S-A	D26-S-C
Communities	Noise impact on health and quality of life				
	Air Quality				
Wider society	Greenhouse gas impact				
	Capacity/ resilience				
	Tranquillity				
	Biodiversity				
General aviation	Access				
General aviation/ commercial airlines	Economic impact from increased effective capacity				
	Fuel burn				

Group	Impact	D26-S-B Baseline	D26-S-Do Minimum	D26-S-A	D26-S-C
Commercial airlines	Training costs				
	Other costs				
Airport/ Air navigation service provider	Infrastructure costs				
	Operational costs				
	Deployment costs				
All	Safety				
	AMS Realisation				
	Interdependencies, conflicts and trade-offs				

Table 53: D26 South IOA Results

7.6. Runway 26 Arrivals

7.6.1. Northeast

Group	Impact	A26-NE-B Baseline	A26-NE-Do Minimum	A26-NE-A
Communities	Noise impact on health and quality of life			
	Air Quality			
Wider society	Greenhouse gas impact			
	Capacity/ resilience			

Group	Impact	A26-NE-B Baseline	A26-NE-Do Minimum	A26-NE-A
	Tranquillity			
	Biodiversity			
General aviation	Access			
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			
Commercial airlines	Training costs			
	Other costs			
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			
	Interdependencies, conflicts and trade-offs			

Table 54: A26 Northeast IOA Results

7.6.2. East Southeast

Group	Impact	A26-ESE-A Baseline	A26-ESE-Do Minimum	A26-ESE-B
Communities	Noise impact on health and quality of life			
	Air Quality			
Wider society	Greenhouse gas impact			
	Capacity/ resilience			
	Tranquillity			
	Biodiversity			
General aviation	Access			
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			
Commercial airlines	Training costs			
	Other costs			
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			

Group	Impact	A26-ESE-A Baseline	A26-ESE-Do Minimum	A26-ESE-B
	Interdependencies, conflicts and trade-offs			

Table 55: A26 Southeast IOA Results

7.6.3. South

Group	Impact	A26-S-C Baseline	A26-S Do Minimum	A26-S-A
Communities	Noise impact on health and quality of life			
	Air Quality			
Wider society	Greenhouse gas impact			
	Capacity/ resilience			
	Tranquillity			
	Biodiversity			
General aviation	Access			
General aviation/ commercial airlines	Economic impact from increased effective capacity			
	Fuel burn			

Group	Impact	A26-S-C Baseline	A26-S Do Minimum	A26-S-A
Commercial airlines	Training costs			
	Other costs			
Airport/ Air navigation service provider	Infrastructure costs			
	Operational costs			
	Deployment costs			
All	Safety			
	AMS Realisation			
	Interdependencies, conflicts and trade-offs			

Table 56: A26 South IOA Results

8. Next Steps

8.1.1. Due to the high-level methodology applied within this DPE and IOA, detailed quantitative analysis to determine preferred options has not yet been undertaken. These assessments will be carried out during Stage 3 as part of the Full Options Appraisal (FOA). The FOA will quantify environmental, operational, and economic impacts to support evidence-based decision-making. The quantitative assessments will include, but are not limited to:

- Noise modelling analysis in accordance with Category D standards as defined in CAP2091
- WebTAG Assessments;
- Overflight assessments;
- Precise track miles calculations detailing fuel burn and CO_2 emission data using the Base of Aircraft Data (BADA) model;
- Detailed Controlled Airspace (CAS) requirement assessments;
- More detailed analysis of interdependencies with other airports and the en-route network;
- Monetarised commercial airline costs;
- Monetarised airport costs;
- A detailed Habitat Regulations Assessment (HRA); and
- Reference to a future forecast for year of implementation + 10 years including movement numbers and aircraft fleet.

8.1.2. The future development of options will involve coordination across multiple stakeholders within the FASI(S) programme. Interdependencies between airports, air navigation service providers, and regulatory bodies may necessitate compromises or trade-offs between operational efficiency, environmental protection, and network performance. These activities will be undertaken under the guidance of ACOG to ensure alignment with national airspace modernisation objectives.

8.1.3. During the next stage, some options presented in this document may be combined or refined to create integrated route designs that deliver improved overall performance across multiple Design Envelopes. Previously discounted options may also be revisited where they demonstrate potential operational, environmental, or safety advantages when reassessed in combination with adjacent routes. As the geographical areas have already been evaluated within this DPE, subsequent design activity will focus on aligning refined options with the en-route environment, ensuring safe connectivity and consistency within the wider network through close coordination with ACOG, NERL, and other key stakeholders.

8.1.4. A Planned Developments Annex has been included to outline known or emerging infrastructure and operational changes at Bournemouth Airport and within the wider airspace environment that may influence the design or appraisal of future options. These developments have been identified and scoped at a high level within this Stage 2 submission and will be reviewed in greater detail during Stage 3 to ensure any dependencies, constraints, or opportunities are appropriately incorporated into the Full Options Appraisal and subsequent design refinement.

A. Annex A: Planned Developments

Local Authority	Local Plan/Core Strategy/Date & Source	Location/Development Name	Development Details	Status
Bournemouth Christchurch & Poole Council	Bournemouth (2012) @ https://www.bcpcouncil.gov.uk/Planning-and-building-control/Planning-policy/Current-Local-Plans/Bournemouth/Docs/Core-Strategy-1.pdf	None provided	Housing need of 14600 dwellings between 2006-2026 + 6438 new homes in existing urban area.	No further details given
		None provided	Potential for 319 new dwellings in the Town Centre ward area by 2027.	No further details given
	Christchurch (2014) @ https://www.bcpcouncil.gov.uk/Planning-and-building-control/Planning-policy/Current-Local-Plans/Christchurch/docs/christchurch-and-east-dorset-adopted-core-strategy.pdf	Turlin Moor	400 homes, local shopping, community centre	Allocated
			300 homes	
	Poole (2018) @ https://www.bcpcouncil.gov.uk/Planning-and-building-control/Planning-policy/Current-Local-Plans/Poole/Docs/Final-version-28.11.18.pdf-for-web.pdf		330 homes	
		West of Bearwood	45 homes, school	Allocated
		Civic Centre	100 homes and/or care home	Allocated
		Land off Roberts Ln	60 homes	Allocated
		Sopers Ln	60 homes, community facilities	Allocated
		Beach Rd Car Park	55 homes (minimum)	Allocated
		Oakdale public buildings	50 homes, retail	Allocated
		Former College site	50 homes	Allocated
		Creekmoor Local Centre	40 homes	Allocated
			40 homes	
		St Mary's Maternity Hospital		Allocated
		Old Wareham Rd		Allocated
		Hillbourne		Allocated
Dorset Council	West Dorset, Weymouth & Portland Local Plan (2015) @ https://www.dorsetcouncil.gov.uk/documents/35024/327480/West+Dorset%2C+Weymouth+%26+Portland+Local+Plan+2015.pdf/e6f329e7-ec5b-52fc-7364-4a8726877184	Land @ Markham & Little Francis	320 homes, school expansion	Allocated
		Land @ Louviers Rd	100 homes	Allocated
		Land @ Wey Valley	320 homes	Allocated
		Land @ The Old Rectory	39 homes	Allocated
		Former hardy Complex	384 homes	Allocated

	North Dorset Local Plan Part 1 (2016) @ https://www.dorsetcouncil.gov.uk/documents/35024/288359/North-Dorset-Local-Plan-Part-1-Policy-1-to-21.pdf/fbfc8a47-1bf8-64d2-94f9-a3e4cd2ec450 Swanage Local Plan (2017) @ https://www.dorsetcouncil.gov.uk/documents/35024/281432/ Adopted+Swanage+Local+Plan.pdf/03066a91-1cba-5650-e977-d3496777041e	Chickerell Urban extension Land @ Red Cow Farm Land S of St George's Rd Land off Allington Ave Land @ Crossways Vearse Farm Urban Extension Land N of Broadwindsor Rd Land @ Woodberry Down Barton Farm Urban Extension Blandford Gillingham Shaftesbury Sturminster Newton Countryside (inc Stalbridge & the Villages) Northbrook Road East Northbrook Road West Land @ Prospect Farm	820 homes, primary school, local retail Unspecified no. of homes Unspecified no. of homes Unspecified no. of homes Unspecified no. of homes 760 homes, school, community facilities 120 homes 90 homes 230 homes 1200 homes 2200 homes 1140 homes 395 homes 825 homes 90 homes 90 homes 20 homes	Allocated Allocated Allocated Allocated Allocated Allocated Allocated Allocated Allocated Proposed allocation Proposed allocation Proposed allocation Proposed allocation Proposed allocation Proposed allocation Allocated Allocated Allocated
East Dorset District Council	East Dorset Local Plan (2002) @ https://www.dorsetcouncil.gov.uk/planning-buildings-land/planning-policy/adopted-local-plans/east-dorset-and-christchurch-adopted-local-plan	Victoria Rd/Old Rd Canford Bridge Brook Rd Green Worlds	15 homes 25 homes 60 homes 60 homes	No further details given No further details given No further details given Proposed for housing

New Forest District Council	Local Plan (2014) @ https://newforest.gov.uk/article/1463/Local-Plan-Part-2-Sites-and-Development-Management	Land @ Durley Farm, Hounsdown	Could accommodate 80 dwellings	Allocated for development
		Land @ Loperwood Farm	20 homes	Allocated for development
		Land @ Hanger Farm	330 homes	Allocated for development
		Land off Oleander Dr	No details provided	Allocated for development
		Land N of Michigan Way	No details provided	Allocated for development
		Land E of Brokenford Lane	48 homes	Allocated for development
		Stocklands, Calmore Dr	No details provided	Allocated for development
		Bus Depot, Salisbury Rd	No details provided	Allocated for development
		Land between Cracknore Hard Ln & Normandy Way	Could accommodate 12 dwellings	Allocated for development
		Land @ Park's Farm	100 homes, play space, allotments	Allocated for development
		Land S of Hythe Rd	15 homes, play space	Allocated for development
		Land off Mulberry Rd	12-15 homes	Allocated for development
		Land @ Forest Lodge Farm	40-45 homes	Allocated for development
		Land off Cabot Dr, Dibden	No details provided	Allocated for development
		Land adjacent to Blackfield Primary School	30 homes	Allocated for development
		Pinetops Nursery	45 homes	Allocated for development
		Land N of Alexandra Rd	80 homes, play space, allotments	Allocated for development
		Land @ Queen Katherine Rd	15 homes, play space	Allocated for development
		Land S of Ampress Ln	10 homes	Allocated for development
		Fox Pond Dairy Depot & Garage	14 homes	Allocated for development
			No details provided	Allocated for development
			30 homes, play space	Allocated for development
			15 homes, play space, allotments	Allocated for development
			20 homes	Allocated for development
			15 homes, play space	Allocated for development
			20 homes, play space, allotments	Allocated for development

		Riverside Site, Bridge Rd	54 homes, retention of woodland & pond	Allocated for development
		Land N of School Ln	90 homes	Allocated for development
		Land @ Hordle Lane Nursery	15 homes	Allocated for development
		Land S of Gore Rd, E of the Old Barn	150 homes, play space, allotments	Allocated for development
		Land W of Moore Cl		Allocated for development
		Land off Park Rd, Ashley	100 homes, allotments	
		Land E of Caird Ave, S of Carrick Way	10 homes	Allocated for development
		Land E of Caird Ave, S of Carrick Way Woodland		Allocated for development
		Land E of Fernhill Ln		Allocated for development
		Land S of Ringwood, W of Crow Ln & adjacent to Crow Arch Ln.		Allocated for development
		Land E of Whitsbury Rd, Fordingbridge		Allocated for development
		Land adjoining Jubilee Cres, Ashford		

Table 57: Planned Deveopments

B. Annex B: Tranquillity Map

B.1. The following map illustrates the Areas of Outstanding Natural Beauty (AONB) and National Parks (NP) within a 25 nm range of the airport.

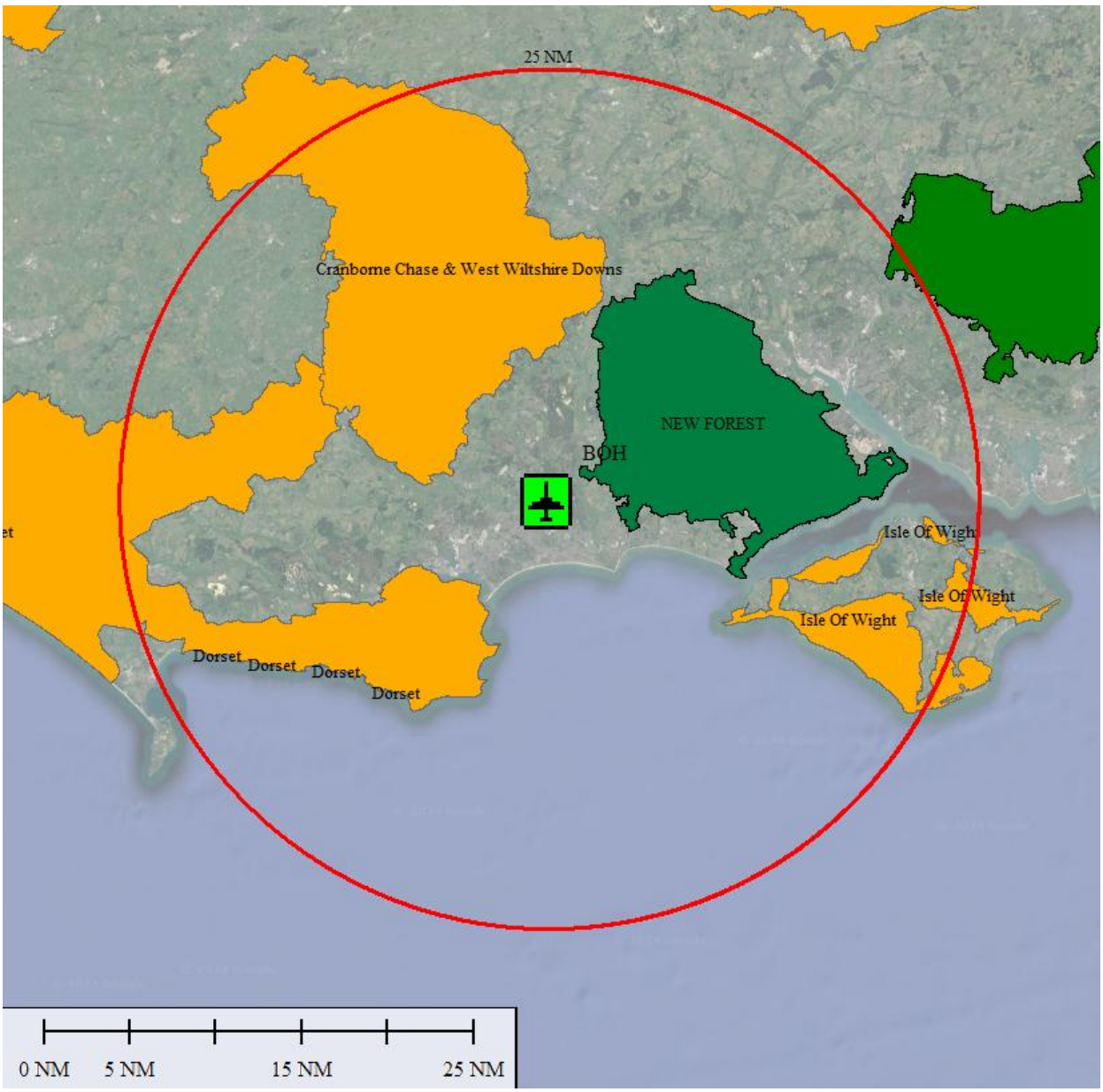


Figure 23: Tranquillity Map

C. Annex C: European Sites

C.1. Ramsar Sites

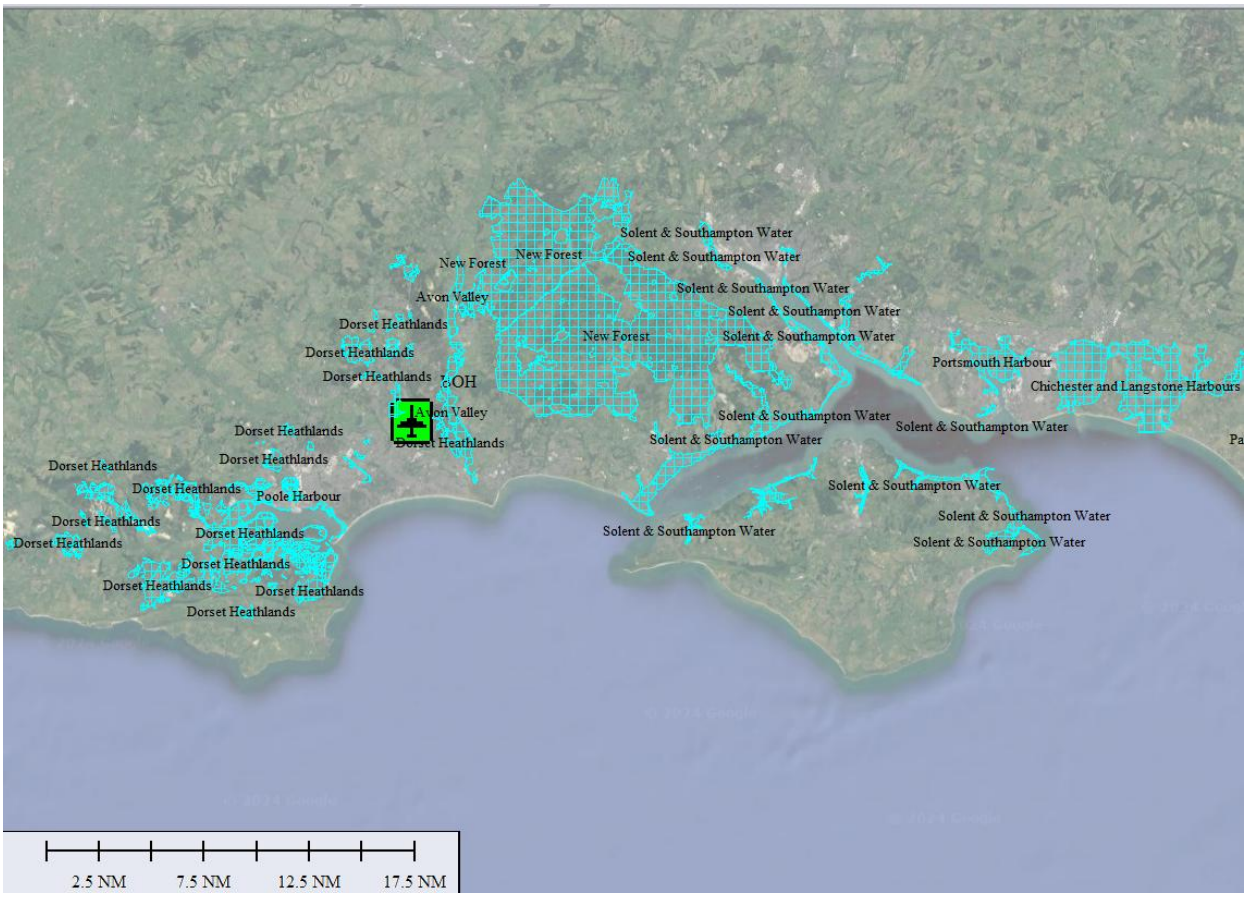


Figure 24: Ramsar Sites

C.2. Sites of Special Scientific Interest

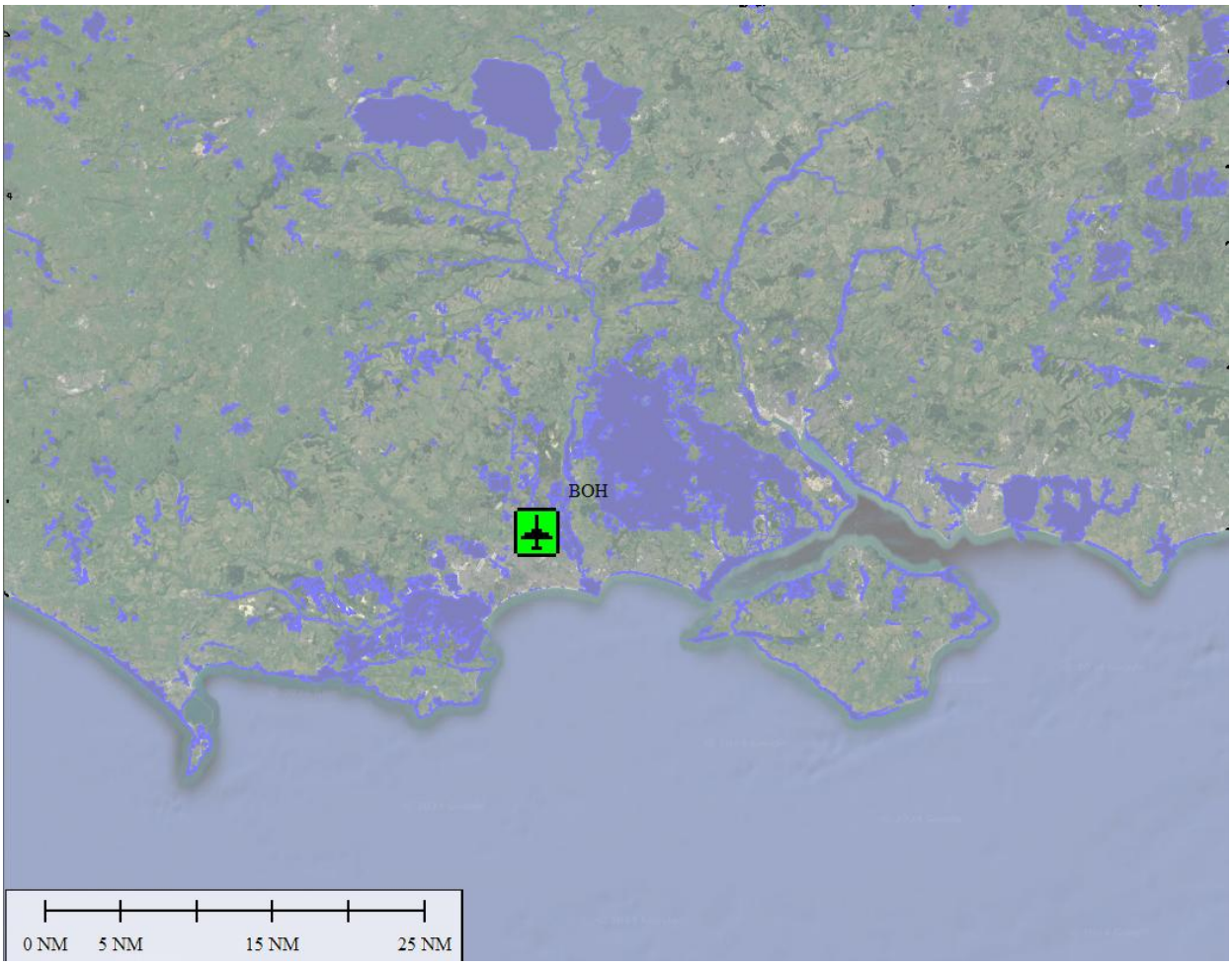


Figure 25: Sites of Special Scientific Interest

C.3. Special Areas of Conservation

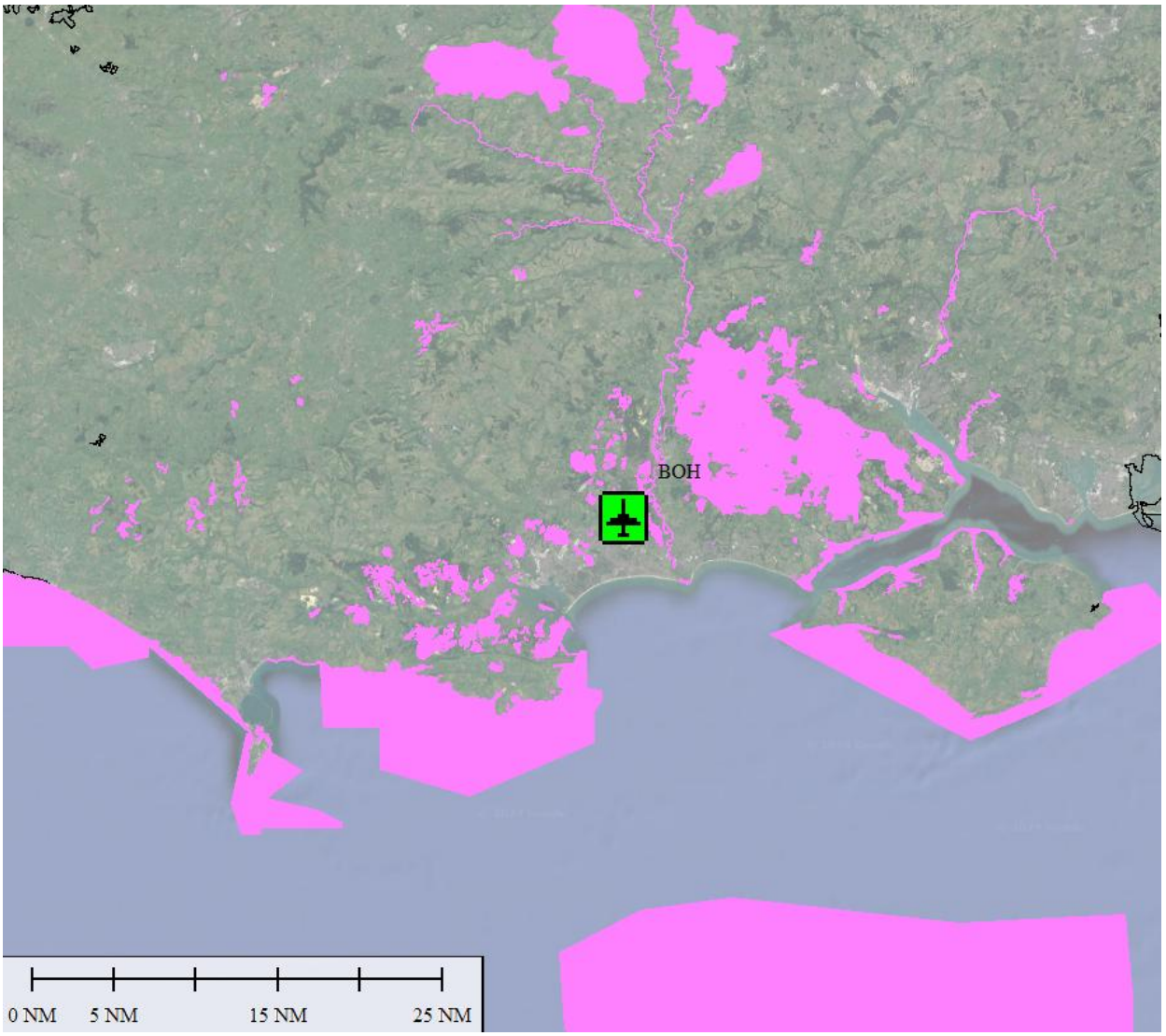


Figure 26: Special Areas of Conservation

C.4. Special Protection Areas

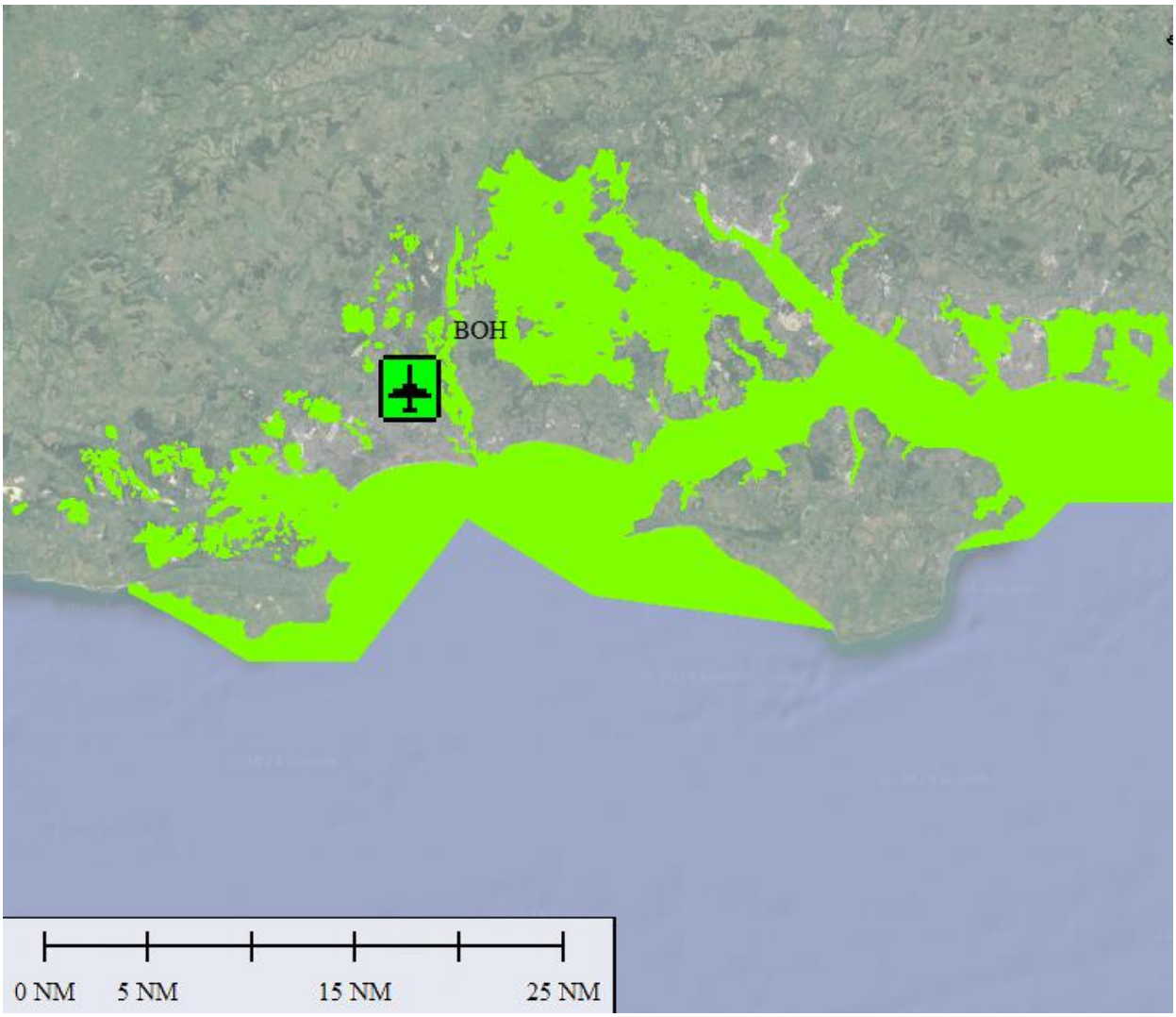


Figure 27: Special Protection Areas

D. Annex D: Population Density and Air Quality Maps

D.1. The maps show data from the Office for National Statistics (ONS) Open Geography portal [14]. Each dot represents the location of the Population Weighted Centroid (PWC) of an administrative unit. This is the traditional and most widely understood method for calculating an aggregate measure of human population density within any geographical region. A PWC is the total population by the total area (i.e. d = ΣP/ΣA). Red circle is 25 nm from BOH.

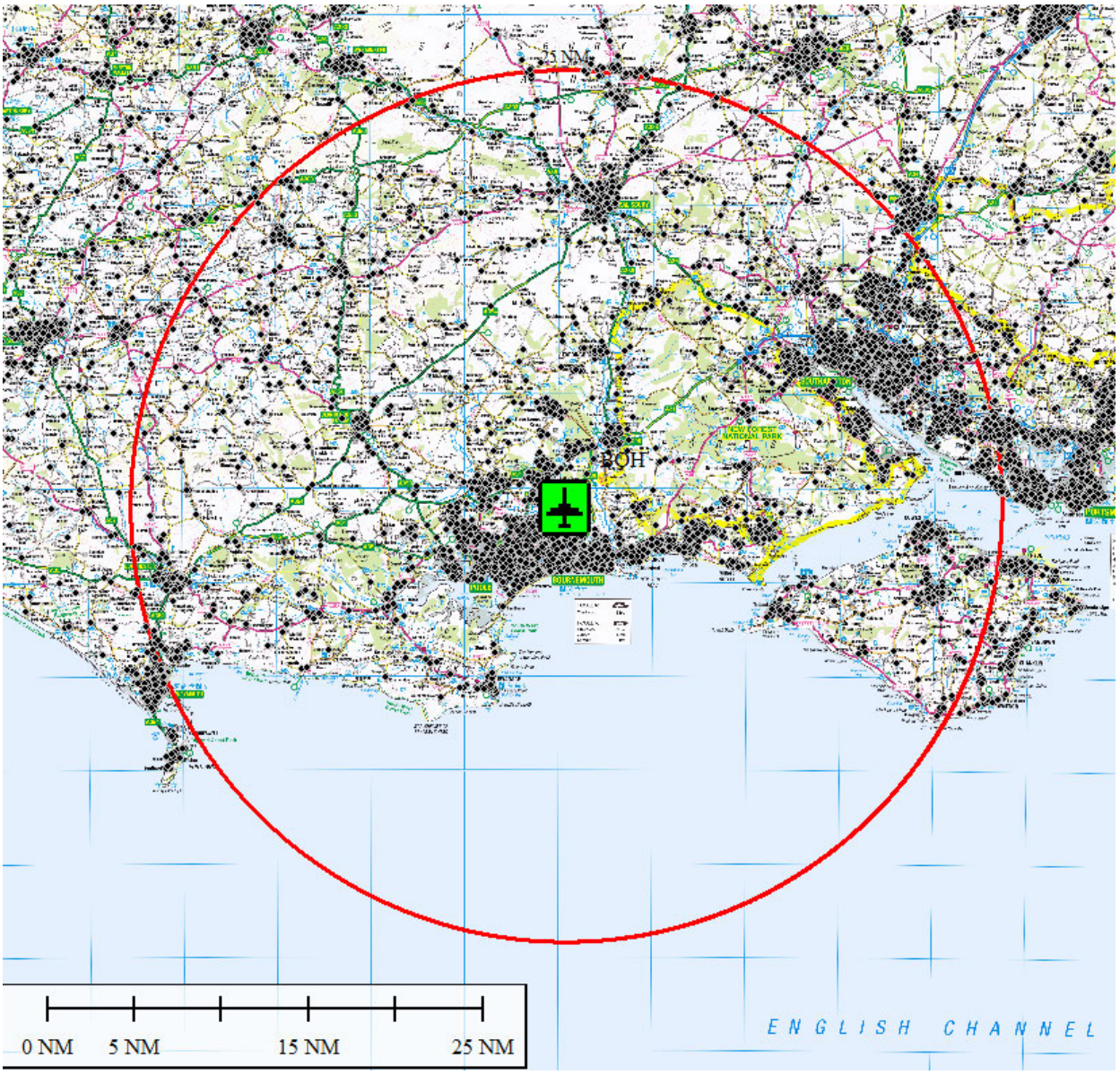


Figure 28: Population Density Map

[14] Data retrieved from Output Areas (December 2021) EW Population Weighted Centroids (V3) | Open Geography Portal

D.2. Air quality impacts are only expected to be significant close to ground level, typically below 1,000 ft AMSL. The proposed procedure changes occur above this altitude; therefore, no measurable impact on ground-level pollutant concentrations, including within any designated Air Quality Management Areas (AQMAs), is anticipated.

D.3. Air quality was assessed by identifying AQMAs around the airport using data retrieved from DEFRA's UK Air Information Resource AQMA interactive map. The yellow area is the closest AQMA and is approximately 7 nm from the airport. It is located at Ashley Road in Upper Parkstone

Figure 29: Air Quality Map

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